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April 7, 2017

VIA PRIVATE CARRIER

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

Subject: Transmittal of the Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation, August 2016 Monitoring Report
Lockheed Martin Corporation; Middle River Complex
2323 Eastern Boulevard, Middle River, Baltimore County, Maryland

Dear Mr. Carroll:

For your review please find enclosed two hard copies with a CD of the above-referenced document. This document presents the data for the second round of indoor-air-quality and sub-slab-vapor monitoring for calendar year 2016 at Lockheed Martin's Middle River Complex in Middle River, Maryland. If possible, we respectfully request to receive MDE's comments by May 11, 2017.

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

Sincerely,

Lynnette Drake
Remediation Analyst, Environmental Remediation

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Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation, August 2016 Monitoring Report Lockheed Martin Middle River Complex 2323 Eastern Boulevard Middle River, Maryland

Prepared for:

Lockheed Martin Corporation

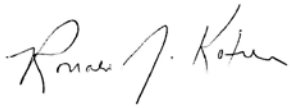
Prepared by:

Tetra Tech, Inc.

April 2017



Michael Martin, P.G.
Regional Manager



Ronald Kotun
Project Manager

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ACRONYMS

AF	attenuation factor
BCK	background
ca	carcinogenic
COC	chemical(s) of concern
DCA	dichloroethane
DCE	dichloroethene
DUP	duplicate
°F	degrees Fahrenheit
Freon 22	chlorodifluoromethane
GAC	granular activated-carbon
GC/MS	gas chromatograph/mass spectrometer
HAPSITE	*h*azardous *a*ir *p*ollutants on-*site*
HVAC	heating/ventilation/air-conditioning
in. Hg	inch(es) of mercury
IA	indoor air
IAQ	indoor air quality
J	compound positively identified, but quantitation is estimated
lb(s)	pound(s)
lb(s)/day	pound(s) per day
lb(s)/month	pound(s) per month
Lockheed Martin	Lockheed Martin Corporation
MDE	Maryland Department of the Environment
µg/m^3	microgram(s) per cubic meter
mph	mile(s) per hour
MPL	mechanical prototype laboratory
MRAS	MRA Systems, Inc.
MRC	Middle River Complex
MST	Mission Systems & Training
MTBE	methyl-tertiary-butyl ether
nc	noncarcinogenic
OSHA	(federal) Occupational Safety and Health Administration
PCE	tetrachloroethene

PEL	permissible exposure limit
RMS	Rotary and Mission Systems
RSL	regional screening-level
SSD	sub-slab depressurization
SSDS	sub-slab-depressurization system
SV	sub-slab vapor
Tetra Tech	Tetra Tech, Inc.
TCA	trichloroethane
TCE	trichloroethene
TMB	trimethylbenzene
TO-15	Toxic Organic-15
U	not detected
USEPA	United States Environmental Protection Agency
VC	vinyl chloride
VI	vapor intrusion
VMP	vapor monitoring point
VOC	volatile organic compound

Section 1
Introduction

Tetra Tech, Inc. (Tetra Tech) has prepared this report on behalf of Lockheed Martin Corporation (Lockheed Martin) to document the second round of indoor-air-quality (IAQ) and sub-slab-vapor (SV) monitoring for calendar year 2016 at Lockheed Martin's Middle River Complex (MRC) in Middle River, Maryland. This report contains the Round 21 (August 2016) monitoring results for Buildings A, B, and C, and background sampling locations. This report also includes a status update of the two sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems originally installed at the Middle River Complex in 2008: one beneath the Building A plating shop, and the other beneath the southern portion of the Building C basement. This monitoring is part of an ongoing investigation to evaluate whether volatile organic compounds (VOCs) in sub-slab vapors (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air at Middle River Complex facilities. The second monitoring round for calendar year 2016 continues investigations previously described in the following reports:

- *Indoor-Air-Quality Investigation of Buildings A, B, C, and the (Vertical-Launch System) VLS (Facility), Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2007)
- *Indoor-Air-Quality Investigation Round 3, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2008a)
- *Indoor-Air-Quality Investigation 2008 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2008b)
- *November 2008 Sub-Slab Sampling Report, Sub-Slab-Depressurization Systems, Buildings A and C, Lockheed Martin Corporation Middle River Complex, Middle River, Maryland* (Tetra Tech, 2008c)
- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation 2009 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2010a)
- *Indoor-Air-Quality Investigation August 2010 Summary Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2010b)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2010 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2011a)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2011 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2011b)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2012 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2012a)

- *Vapor Intrusion Management Plan, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2012b)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2012 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2013a)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2013 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2013c)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2013 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2014a)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2014 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2014b)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation September 2014 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2015a)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2015 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2015b)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation August 2015 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2015c)

- *Vapor Intrusion Investigation and Sub-Slab-Depressurization-System Operation February 2016 Monitoring Report, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard Middle River, Maryland* (Tetra Tech, 2016)

This report is organized as follows:

Section 2—Round 21 Indoor-Air-Quality and Vapor Intrusion Investigation: Briefly describes the sampling methodology used for the current investigation round.

Section 3—Round 21 Results: Discusses the Round 21 results, including results exceeding screening levels, relevant data trends, and comparison of sampling results to background concentrations.

Section 4—Sub-Slab-Depressurization-System Data Analysis: Analyzes relevant data and evaluates sub-slab-depressurization-system performance.

Section 5—Conclusions and Recommendations: Presents conclusions based on the Round 21 sampling results and recommends future work at the site related to vapor intrusion.

Section 6—References: Lists the references used in this report.

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Section 2
Round 21 Indoor-Air-Quality and Vapor Intrusion Investigation

2.1 INVESTIGATION APPROACH AND GUIDANCE

The indoor-air-quality (IAQ) and sub-slab-vapor (SV) investigation described herein is designed to evaluate whether volatile organic compounds (VOCs) associated with soil and groundwater contamination at the site might be moving into indoor air (IA) at Middle River Complex (MRC) facilities. Initial sampling locations for Buildings A, B, and C were chosen during a 2006 site reconnaissance by Tetra Tech industrial hygienists. Additional sampling locations have been selected periodically, based on subsequent monitoring results.

Two sub-slab-depressurization (SSD) vapor-intrusion-mitigation systems (one beneath the Building A plating shop, and the other beneath the southern portion of the Building C basement) were originally installed at the Middle River Complex in 2008. However, occasional detections of trichloroethene (TCE) in IA that exceeded the screening level have been observed over time in the Building A basement (which is not continuously occupied). Three air-purifying filters were installed in the Building A basement in January 2015 to address these TCE exceedances. Investigations into SV, IA, and groundwater contamination in the Building A basement are ongoing.

The sampling plan for Round 21 is based on historical detections and information obtained during site reconnaissance and review of historical information and reports. IA and SV samples were collected from Buildings A, B, and C during Round 21 sampling. Relevant guidance from the United States Environmental Protection Agency [USEPA] (USEPA, 1996, 2004, 2012 and 2015) and the Maryland Department of the Environment [MDE] (MDE, 2006) were used to develop the investigation methodology.

2.2 INVESTIGATION PROCEDURES

IAQ and SV sampling within Buildings A, B, and C was conducted in accordance with the work plan (Tetra Tech, 2015d). Background outdoor air samples were collected from the same sampling locations as had been used for Round 20 (Figure 2-1). Not all existing monitoring points inside the subject buildings were sampled during Round 21. As in previous rounds, samples were collected selectively, in or adjacent to areas where contaminants had been detected previously, or in areas where contaminants are currently suspected of being present.

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

Round 21 sampling was performed on August 16–17, 2016. Seventy-four samples (and eight duplicates) were collected and submitted for analysis:

- four background ambient air samples (collected at the same locations used in the previous round)
- 41 IAQ samples (and four duplicates) from Buildings A, B, and C:
  - 16 IAQ samples (and two duplicates) from Building A
  - Three IAQ samples from Building B
  - 22 IAQ samples (and two duplicates) from Building C
- 29 SV samples (and four duplicates) from Buildings A, B, and C:
  - 13 SV samples (and two duplicates) from Building A
  - Two SV samples from Building B
  - 14 SV samples (and two duplicates) from Building C

The “-A”, “-B”, and “-C” suffixes in the sampling location designations correspond with Buildings A, B, and C, respectively.

One IAQ sample (from location 060-C) was collected but not analyzed because an insufficient volume was collected in the canister; therefore, only results for 40 IAQ samples were analyzed.

One SV sample (from location 131-C) and its duplicate were collected, but not analyzed, due to insufficient volume; therefore, only results for 28 SV samples were analyzed. Five IAQ samples from Building C (144-C through 146-C, 150-C, and 152-C) were collected in the machine shop in the Lockheed Martin Rotary and Mission Systems (RMS), formerly Lockheed Martin Mission Systems & Training (MST), mechanical prototype laboratory (MPL). Monitoring continues in this area because TCE was detected in IA at a concentration greater than its screening level during Round 15 (August 2013). The five sampling locations that provide data for possible worker exposure areas within the MPL are:

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

The sub-slab-depressurization systems (SSDSs) in the Building C basement area and the Building A plating shop were shut down approximately 24 hours before sampling began. The SSDSs were restarted within one hour after sampling had been completed in Buildings A and C; this is consistent with previous monitoring episodes. The following observations were recorded during the August 2016 sampling:

- Mean outdoor ambient temperature during the sampling period was 84 degrees Fahrenheit (°F) on August 16 and 17, 2016. Barometric pressure decreased during the sampling period, from 30.20 inches of mercury (in. Hg) to 30.05 in. Hg. Wind direction on August 16 was from the south–southeast, and average wind speed ranged from calm to 16 miles per hour (mph). Wind direction on August 17 was from the west–southwest, with wind speeds ranging from six to 16 mph and gusts up to 22 mph. Skies were mostly cloudy on August 16 and August 17.

- No precipitation was recorded on August 16; 0.96 inches of rain was recorded on August 17.

- Water was in the flush-mounted vault at sampling location SV-018A, so a sample could not be collected. An alternate sample was collected at nearby location SV-116A.

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

- Sampling location 015-A is in the former plating shop area. Subsequent to the August 2015 sampling round, this area has undergone construction and redevelopment. A new floor was installed and the area is now an extension of the bond layup room. IA and SV samples from

015-A were collected in this newly expanded bond layup room (the former plating shop), where a positive-pressure air-conditioning system was operating.

- Sampling location 076-A was approximately 20 feet away from a flammable materials storage cabinet and hazardous waste drum containing rags.

- The air-purifying units in the Building A basement were operating when IA/SV-093-A and IA/SV-138-A were sampled.

- Building A is a one-story building, except for a basement corridor under an open-air loading dock on its western side. Roof vents approximately 50 feet above the work floor were open in Building A during Round 21 sampling. The large doors at the loading docks on the western side of the building were also open to permit movement of carts, forklifts, personnel, and equipment. Increased ventilation associated with the open doors and roof vents might have affected sample concentrations on the first floor of Building A. No personnel or other activities were observed in the Building A basement.

- The bay doors across the southern end of Building B were open during sampling. The automatic bay door at the southeastern corner of Building B was opened and closed quickly to allow carts and equipment to pass. These open doors might have affected the concentrations collected from the southernmost sampling locations (IA-100-B and IA-101-B). Open roof vents were also observed in Building B during sampling.

- Sampling location IA-130C/SV-130C (in the museum storage area) was covered by a large airplane engine and therefore could not be sampled; an alternate sample was collected at nearby location IA-131C/SV-131C, farther south within the museum's caged area.

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

- IA-005-C was collected approximately 80 feet from a bay door that opened to the outside intermittently.

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

- Insufficient volume was collected in the Summa® canister for sample IA-060-C due to a faulty regulator. This sample was not analyzed by the laboratory due to insufficient sample volume/integrity.

- The Building C basement is generally accessed via two doors on the eastern side and one on the southern side. These are automatic rolling doors that open and close quickly to allow carts and forklifts to pass. The automatic rolling door approximately 40 feet east of sampling location 141-C was opened and closed intermittently during the day. The bay doors at the southern and southeastern sides of the Building C basement were open during the sampling period. This might have influenced indoor air concentrations in the samples collected from location 001-C, 004-C, and 005-C.

- The southern end of the Building C basement is now vacant and has been cleared of stored materials, workstations, and equipment. These items have been relocated to the drop-hammer building at MRC.

- Samples IA-060-C and SV-131-C/SV-DUP01-C, which were not analyzed by the laboratory, were not deemed critical and therefore were not resampled. No additional resampling was required, as no TCE concentrations were detected above its industrial screening level of 8.8 micrograms per cubic meter ($\mu g/m^3$) in August 2016.

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

- The pressure gauges on most Summa® canisters responded instantaneously upon opening the valve by dropping to between ~28 and ~30 in. Hg. The pressure gauges for samples SV-131-C/SV-DUP01-C (constricted by water) did not drop in the field and stayed at −30 in. Hg. Of the remaining Summa® canisters, all but three pressure gauges had a remaining pressure between zero and ~5 in. Hg: sample IA-076-A had a remaining pressure of ~15 in. Hg; sample IA-065-C had a remaining pressure of −6 in. Hg; and sample SV-100-B had a remaining pressure of −6 in. Hg. These three canisters, despite the elevated remaining pressure, did have adequate volume and were analyzed by the laboratory. The laboratory reported inadequate sample volumes had been collected to analyze samples SV-131-C/SV-DUP01-C, as described above, so they were not analyzed. Pressure readings for the Summa® canisters are recorded on the chain of custody forms (Appendix A).

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

- benzene
- carbon tetrachloride
- chlorodifluoromethane (Freon 22)
- chloroform
- dichlorodifluoromethane
- 1,1-dichloroethane (1,1-DCA)
- 1,2-dichloroethane (1,2-DCA)
- 1,1-dichloroethene (1,1-DCE)
- *cis*-1,2-dichloroethene (*cis*-1,2-DCE)
- *trans*-1,2-dichloroethene (*trans*-1,2-DCE)
- ethylbenzene
- naphthalene
- tetrachloroethene (PCE)
- toluene
- 1,2,4-trichlorobenzene
- 1,1,1-trichloroethane (1,1,1-TCA)
- 1,2,3-trimethylbenzene (1,2,3-TMB)
- 1,2,4-trimethylbenzene (1,2,4-TMB)
- 1,3,5-trimethylbenzene (1,3,5-TMB)
- trichloroethene (TCE)
- 1,1,2-trichloroethane (1,1,2-TCA)
- vinyl chloride (VC)

- methyl-tertiary-butyl ether (MTBE)
- methylene chloride
- xylenes (total)

All samples collected during Round 21 were submitted to TestAmerica in Knoxville, Tennessee for analysis via gas chromatograph/mass spectrometer (GC/MS) using cryogenic concentration (as described in Sections 9 and 10 of USEPA Method [Toxic Organic-15] TO-15 [USEPA, 1999]). This method was used because of its low detection limit (in the parts-per-billion by volume range), and because it can quantify all VOCs of concern. TestAmerica is certified in USEPA Method TO-15 analysis and meets all quality assurance/quality control requirements specified in the TO-15 methodology.

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

Analytical data were qualified in accordance with USEPA *National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA, 2014). Attaching data qualifiers to analytical results signifies a quality-control noncompliance. During Round 21, the following data qualifiers were applied to nonconforming data (i.e., data affected by technical limitations during laboratory analysis) after validation:

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

No results were rejected during data validation.



MARTIN STATE AIRPORT

FIGURE 2-1

IAQ BACKGROUND SAMPLING LOCATIONS ROUND 21, AUGUST 2016

LEGEND

- BACKGROUND SAMPLING LOCATION
- HISTORIC BACKGROUND SAMPLING LOCATION
- WATER

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

Lockheed Martin Middle River Complex
Middle River, Maryland

0 200 400 Feet

N

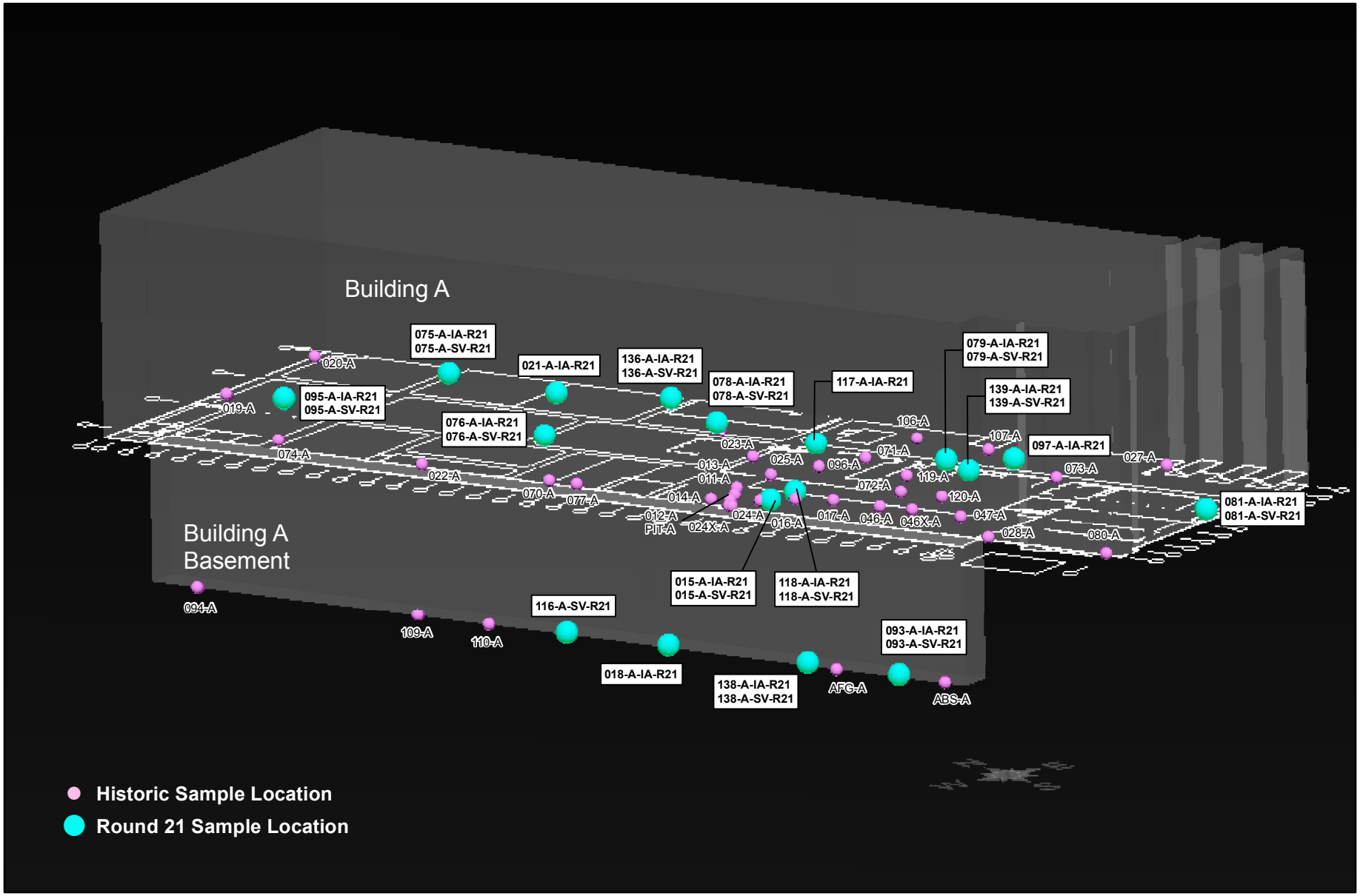
DATE MODIFIED: 10/26/16

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\iaq_background_samples_rnd21.mxd)
10/26/16 JEE

Figure 2-2
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building A, Round 21, August 2016



PGH P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\BLDG_A_RND21_LOCS_3D.MXD 10/25/16 SP

Figure 2-3
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building B, Round 21, August 2016

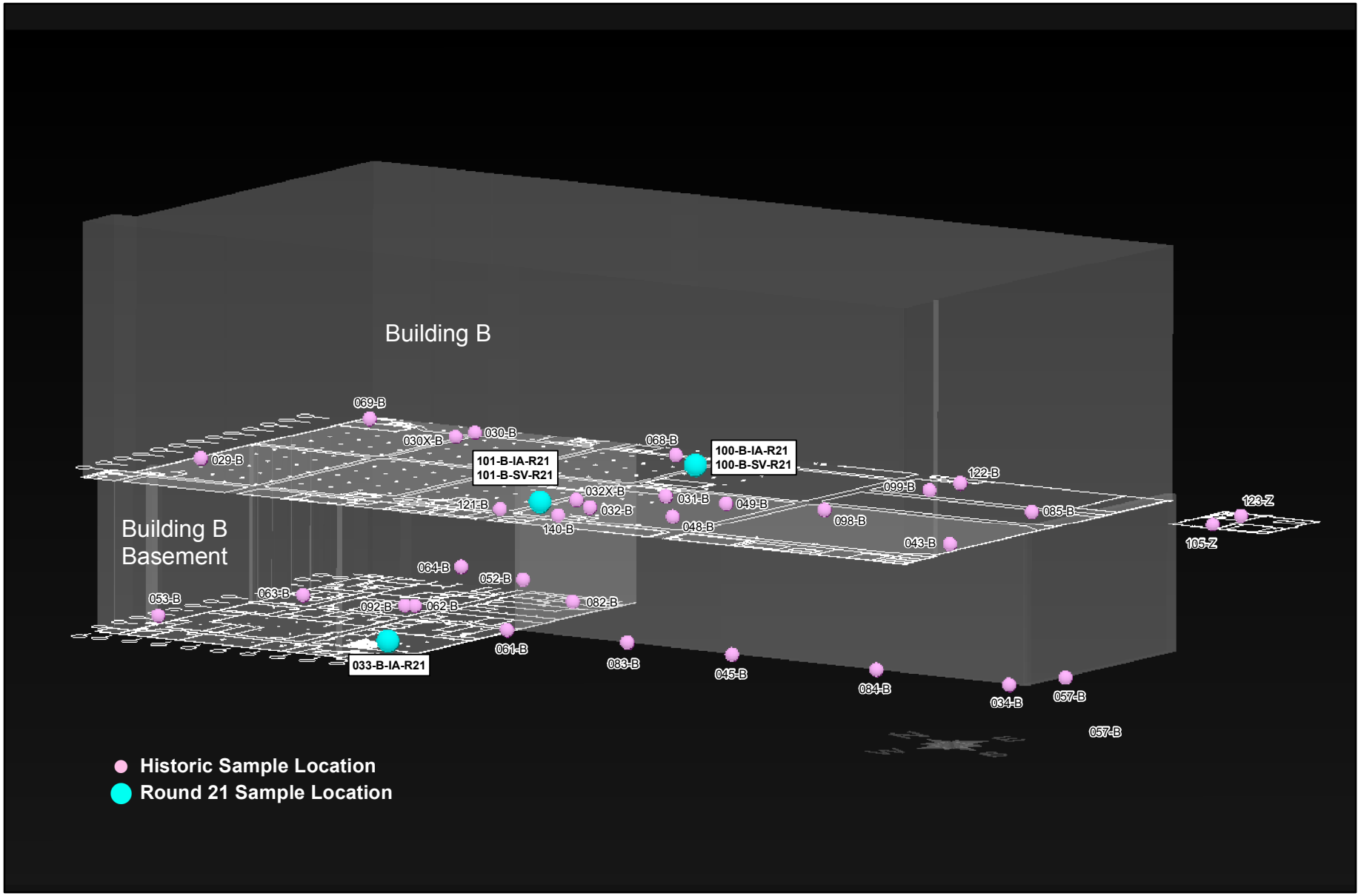


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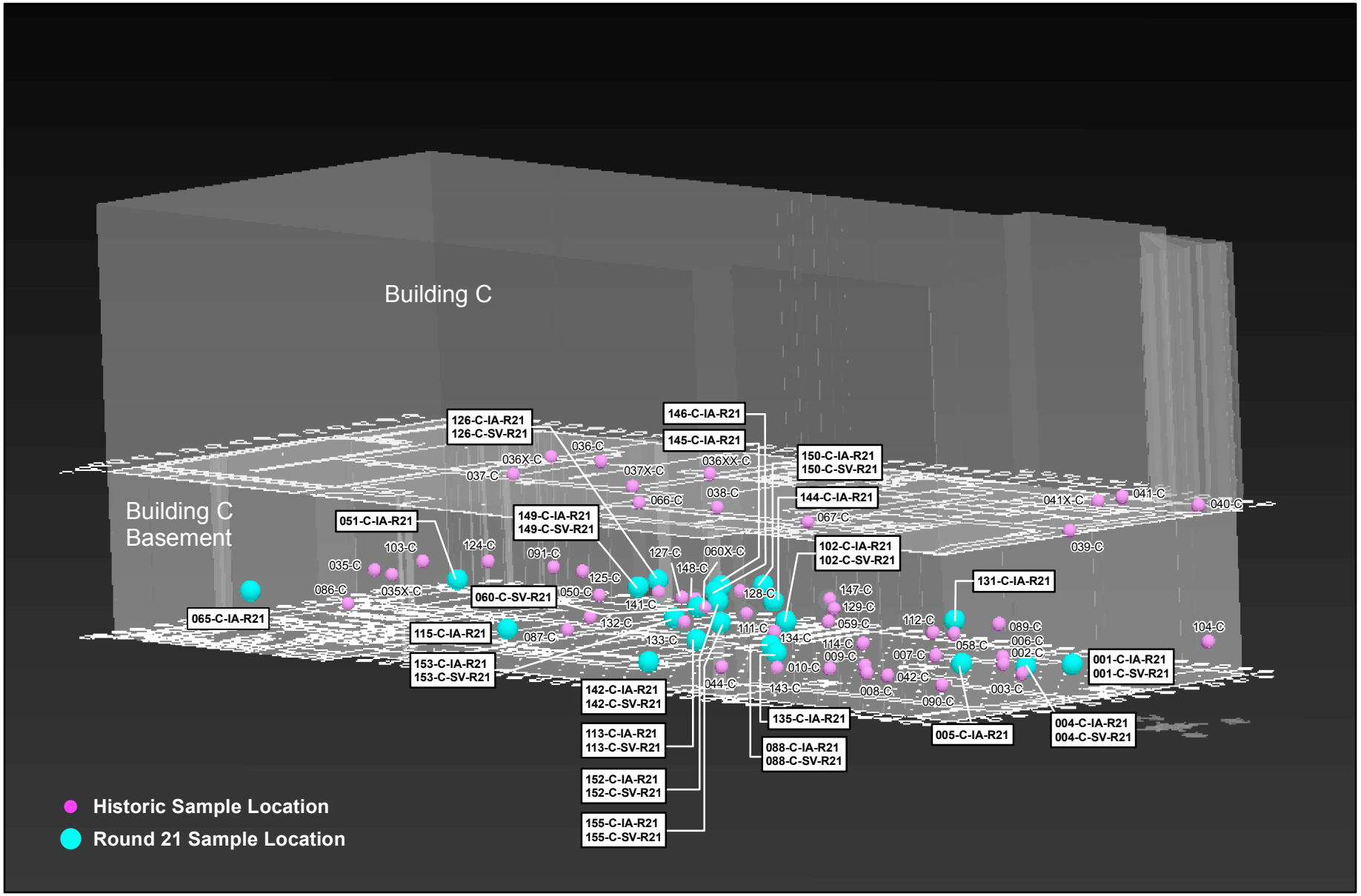
Figure 2-4
Indoor Air and Sub-Slab Vapor Monitoring Locations
for Building C, Round 21, August 2016



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Section 3
Round 21 Results

All analytical results for indoor-air-quality (IAQ) and background (ambient air) samples were compared to screening levels for industrial air; these levels are based on United States Environmental Protection Agency (USEPA) *Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites* (USEPA, 2016). Screening the chemicals of concern (COC) uses the lower of the carcinogenic (*c*) or noncarcinogenic (*nc*) values. Carcinogenic values are based on a 1×10^{-5} (i.e., a one-in-100,000 probability) excess cancer-risk, whereas the noncarcinogenic values are based on a hazard quotient of 1 (i.e., the "no adverse effect" level).

These risk benchmarks were selected in accordance with Maryland Department of the Environment (MDE) requirements. The screening level for 1,2,3-trimethylbenzene was used as a surrogate for 1,3,5-trimethylbenzene, because USEPA has not published an industrial-air RSL for this chemical. Analytical results were also compared to (federal) Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Alternate values, such as the "Threshold Limit Values" published by the American Council of Governmental Industrial Hygienists, were used for chemicals without published permissible exposure limits.

Sub-slab-vapor (SV) sampling results were compared to SV screening values derived in accordance with the methods discussed in Appendix D of USEPA guidance for evaluating vapor intrusion (USEPA, 2002) and were calculated by dividing indoor air (IA) screening levels by a conservative attenuation factor (AF) of 0.03. The attenuation factor represents the adjustment applied to IA screening levels to account for concentration reductions due to diffusive, advective, and/or other attenuating mechanisms as vapor migrates from the sub-slab to indoor air. Simply stated, SV is expected to dilute upon movement into IA; the AF is the ratio of the IA concentration to its SV concentration, under a conservative vapor intrusion (VI) scenario. The most recent USEPA guidance (USEPA, 2015) confirms that an AF of 0.03 is appropriate; this value results in higher SV screening values, as compared to those used for sampling rounds before August 2012,

when an earlier USEPA AF of 0.1 was used. USEPA further acknowledges that applying the AF of 0.03 to industrial buildings is conservative, since the value was developed based on residential vapor intrusion studies, and does not account for industrial buildings that generally have thicker building slabs and stronger heating/ventilation/air-conditioning (HVAC) systems than residential homes.

3.1 ROUND 21 DATA ANALYSIS

The sampling-round designation (R21) is not included when identifying samples or sampling locations in the following text or tables, because all data discussed in this section are from Round 21. For example, an IA sample collected from VMP 076 (e.g., sample IA-076-A-R21) is referred to as "076-A." If comparisons are made to specific samples from previous sampling rounds, they will be identified as such in the text or by using the round-designation suffix (e.g., R06 for Round 6).

Descriptive statistics for Round 21 IAQ and SV samples are shown in Tables 3-1 and 3-2, respectively. Summary statistics for trichloroethene (TCE and naphthalene in IA over time are shown in Tables 3-3 and 3-4, respectively. Figures 3-1, 3-2, and 3-3 show Round 21 exceedances in Buildings A, B, and C, respectively. The following chemicals were detected in Round 21 IAQ and/or SV samples at concentrations exceeding their respective MDE industrial risk-management benchmarks:

- ***IA—***naphthalene
- ***SV—***TCE and vinyl chloride (VC)

Building A—Tables 3-5 and 3-6 present Building A IAQ and SV results, respectively. Locations with exceedances are shown in Figure 3-1. Naphthalene in IA exceeded its screening level (3.6 µg/m^3) at location 018-A in both the original and duplicate sample (12 and 15 µg/m^3, respectively). No other IA concentrations exceeded screening levels during Round 21.

TCE has periodically been detected in IA in the Building A basement, beginning with Round 15, at concentrations greater than the IA screening level of 8.8 µg/m^3. TCE was detected in each of the Round 21 Building A sampling locations 093-A (6.0 µg/m^3) and 138-A (2.7 µg/m^3), but at concentrations less than its screening level.

TCE SV exceeded its screening level (293 µg/m^3) at two locations, 118-A (890 µg/m^3) and 136-A (850 µg/m^3), in the central portion of Building A. TCE SV exceedances were also observed at these two locations during Rounds 18 through 20. TCE concentrations detected during Round 21 are less than those detected during Round 20, at some locations by an order of magnitude (i.e., a power of 10) or more.

Building B—Tables 3-7 and 3-8 present Building B IAQ and SV results, respectively. No IA or SV exceedances were noted in Building B during Round 21.

Building C—Tables 3-9 and 3-10 present Building C IAQ and SV results, respectively. No IA exceedances were detected in Round 21 samples. TCE exceedances in SV were noted for three locations: 001-C (900 µg/m^3); 113-C (320 µg/m^3); and 126-C (890 µg/m^3). A VC exceedance (5,000 µg/m^3), as compared to its screening level (933 µg/m^3), also occurred at 126-C. TCE at location 001-C also exceeded its screening level during Round 20, and the concentration detected at this location during Round 21 exceeds that detected during Round 20 (350 µg/m^3). VC exceedances were also noted in SV at location 126-C during Rounds 18 through 20: Round 18 at 1,310 µg/m^3, Round 19 at 16,000 µg/m^3, and Round 20 at 3,100 µg/m^3. TCE SV exceedances in Building C during Round 21 are sporadic, and do not follow an observable pattern. However, VC exceedances in SV have consistently been observed at location 126-C during recent sampling rounds (i.e., in Rounds 12–21).

3.2 BACKGROUND AMBIENT-AIR SAMPLES

Outdoor-air-quality (i.e., background) samples provide baseline concentrations for COC that can be compared to interior concentrations. Comparison to background indicates whether chemicals detected in IA are more likely associated with an exterior (i.e., background) or interior source (e.g., chemicals used in the workplace, past spills of chemicals absorbed to above-slab building materials, or sub-slab sources). Analytical results for Round 21 ambient (background) air samples are shown in Table 3-11. Figure 2-1 shows the background sampling locations used for Round 21; these locations are sufficiently far from site operations to avoid any possible site influence.

Table 3-12 lists chemicals detected in background samples and compares IA concentrations to the maximum detected background concentration. All chemicals detected in background samples were also detected in IA samples. All background concentrations were below their respective screening

criteria. Table 3-12 evaluates whether or not chemical concentrations detected in IA are possibly due to interior sources, or if they simply reflect background conditions, using the following logic:

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

In Round 21, only two IA concentrations of naphthalene (a sample and duplicate at one location) exceeded the MDE risk-management benchmark. Naphthalene was not detected in background samples and its SV concentrations were less than the VI screening level. Therefore, naphthalene in IA is more likely to be due to indoor air sources. SV concentrations of TCE and VC exceed risk-management benchmarks. VC was not detected in IA during Round 21, and concentrations of TCE detected in IA do not exceed benchmarks. TCE and VC were not detected in background samples, indicating that any concentrations of these chemicals detected in indoor air are not likely attributable to background.

Although concentrations of TCE in IA in the Building A basement are less than screening levels, this VOC in IA may be due to vapor intrusion or indoor air sources. The SV concentrations for all remaining IA contaminants are less than screening levels; their IA concentrations span a range above and below background concentrations. As presented in Table 3-12, chemicals with the majority of detections below background (chlorodifluoromethane, dichlorodifluoromethane, methylene chloride, and toluene) are likely influenced by ambient background sources. The remaining IA contaminants might be due to indoor air sources and/or ambient background conditions, but in any case, were below screening levels during Round 21.

TABLE 3-1

DESCRIPTIVE STATISTICS OF INDOOR AIR QUALITY RESULTS, ALL BUILDINGS, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Parameter	Frequency of detection[1]	Minimum detected value[1]	Maximum detected value[1]	Location with maximum detected value	Sample with maximum detected value	Minimum non-detect value[2]	Maximum non-detect value[2]	Average of detected values[1]	Average of all values[1][3]	Standard deviation[1][3]	Average of detected background values	Maximum background value	Number of detects above maximum background value[1][4]	Adjusted USEPA RSL for industrial air[5]	Number of samples above adjusted industrial RSL[1][4]	OSHA PEL[6]	Number of samples above OSHA PEL[1][4]
Volatile Organic Compounds (µg/m^3)																	
BENZENE	27/40	0.37 J	5.1	IA-139-A	IA-139-A-21	0.37	0.37	0.925	0.684	0.984	0.39	**0.39**	26	16 ca	0	31,900	0
CARBON TETRACHLORIDE	28/40	0.47 J	0.78 J	IA-021-A	IA-021-A-21	0.47	0.47	0.559	0.462	0.165	0.63	**0.7**	1	20 ca	0	62,900	0
CHLORODIFLUOROMETHANE	38/40	1.3 J	100	IA-065-C	IA-065-C-21	0.27	0.27	14.5	13.7	21.8	1.53	**1.7**	28	220000 nc	0	3,540,000[N]	0
CHLOROFORM	19/40	0.37 J	1.2 J	IA-149-C, IA-153-C	IA-149-C-21, IA-153-C-21	0.37	0.37	0.659	0.410	0.277	2.07	2.7	0	5.3 ca	0	240,000	0
DICHLORODIFLUOROMETHANE	40/40	2.2	3.9	IA-142-C	IA-142-C-21	-	-	2.79	2.79	0.39	2.80	**2.9**	12	440 nc	0	4,950,000	0
1,1-DICHLOROETHENE	3/40	0.56 J	1.2 J	IA-018-A	IA-018-A-21	0.28	0.28	0.81	0.19	0.19	ND	ND	3	880 nc	0	--	--
ETHYLBENZENE	32/40	0.63 J	6.6	IA-139-A	IA-139-A-21	0.59	0.59	1.799	1.498	1.413	0.71	**0.71**	28	49 ca	0	435,000	0
NAPHTHALENE	6/40	1.1	15	IA-018-A	IA-018-A-21-D	1	1	3.542	0.956	2.082	ND	ND	6	3.6 ca	1	50,000	0
TETRACHLOROETHENE	7/40	0.56 J	2.1 J	IA-102-C	IA-102-C-21	0.54	0.54	1.13	0.42	0.41	ND	ND	7	180 nc	0	678,000	0
TOLUENE	38/40	2.4	38	IA-081-A	IA-081-A-21	2.3	2.3	9.87	9.438	8.190	3.43	**5.9**	22	22000 nc	0	754,000	0
1,1,1-TRICHLOROETHANE	22/40	0.43 J	120	IA-152-C	IA-152-C-21	0.33	0.33	10.43	5.812	20.38	ND	ND	22	22000 nc	0	1,900,000	0
TRICHLOROETHENE	7/40	0.67 J	6	IA-093-A	IA-093-A-21	0.38	0.38	2.1	0.5	1.0	ND	ND	7	8.8 nc	0	537,000	0
1,2,4-TRIMETHYLBENZENE	21/40	0.62 J	2.4	IA-139-A	IA-139-A-21-D	0.61	0.61	1.005	0.672	0.494	ND	ND	21	31 nc	0	123,000[N]	0
1,3,5-TRIMETHYLBENZENE	2/40	0.65 J	0.68 J	IA-139-A	IA-139-A-21	0.64	0.64	0.58	0.333	0.059	ND	ND	2	22 nc[7]	0	123,000[N]	0
TOTAL XYLENES	37/40	1.2 J	36	IA-139-A	IA-139-A-21	0.52	0.52	8.595	7.970	7.754	2.43	**3.8**	27	440 nc	0	435,000	0

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

A bolded chemical name indicates that the chemical exceeds background and the industrial air RSL based on an HQ of 0.1 or an ILCR of 1×10^{-6}.

A bolded/shaded chemical name indicates the chemical exceeds background and the industrial air RSL based on an HQ of 1 or an ILCR of 1×10^{-5}

Footnotes:

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

2 - Values presented are sample-specific quantitation limits.

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

4 - Exceedance counts are based on detected results only.

5 - USEPA Regional Screening Levels (RSLs) for Chemical Contaminants at Superfund Sites, May 2016. RSLs for carcinogens were adjusted to be based on a lifetime cancer risk of 1E-05. RSLs for noncarcinogens were not adjusted and represent a hazard quotient (HQ) of 1.

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

7 - The value for 1,2,3-trimethylbenzene is presented for 1,3,5-trimethylbenzene.

Definitions:

ca = screening value based on 1×10^{-5} carcinogenic risk
HQ - hazard quotient
ILCR - incremental lifetime cancer risk
J - estimated value
µg/m^3 - micrograms per cubic meter
N = National Institute for Occupational Safety and Health Recommer
NA - not applicable/not available
nc = noncarcinogenic screening values based on noncarcinogenic haz
ND - not detected
OSHA - Occupational Safety and Health Administration
PEL - permissable exposure limit
RSL - regional screening level
USEPA - United States Environmental Protection Agency

TABLE 3-2

DESCRIPTIVE STATISTICS OF SUB-SLAB VAPOR RESULTS, ALL BUILDINGS, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Parameter	Frequency of detection[1]	Minimum detected value[1]	Maximum detected value[1]	Location with maximum detected value	Sample with maximum detected value	Minimum non-detect value[2]	Maximum non-detect value[2]	Average of detected values[1]	Average of all values[1][3]	Standard deviation[1][3]	Adjusted USEPA RSL for industrial air [value divided by 0.03[4]]	Number of samples above adjusted industrial RSL[1][5]
Volatile Organic Compounds (µg/m³)												
BENZENE	18/28	0.37 J	290	SV-126-C	SV-126-C-21	0.37	1.8	17.1	11.13	54.7	533 ca	0
CARBON TETRACHLORIDE	18/28	0.47 J	32	SV-100-B	SV-100-B-21	0.47	9.4	2.72	2.10	5.98	667 ca	0
CHLORODIFLUOROMETHANE	27/28	1.3 J	49	SV-150-C	SV-150-C-21	5.3	5.3	7.6	7.5	11.0	7,333,333 nc	0
CHLOROFORM	22/28	0.4 J	50	SV-136-A	SV-136-A-21	0.37	7.3	6.2	5.1	10.6	177 ca	0
DICHLORODIFLUOROMETHANE	25/28	2.4	6	SV-101-B	SV-101-B-21	3.3	13	3.01	3.03	1.08	14,667 nc	0
1,1-DICHLOROETHANE	9/28	0.22 J	19	SV-015-A	SV-015-A-21	0.2	4	5.8	2.01	4.8	2,567 ca	0
1,1-DICHLOROETHENE	9/28	0.33 J	1,100	SV-126-C	SV-126-C-21	0.28	1.1	147	47.3	208	29,333 nc	0
CIS-1,2-DICHLOROETHENE	10/28	1.5 J	530	SV-126-C	SV-126-C-21	0.48	1.2	99	35	107	NA	--
TRANS-1,2-DICHLOROETHENE	8/28	0.56 J	60	SV-001-C	SV-001-C-21	0.4	2	15	4.3	13.6	NA	--
ETHYLBENZENE	23/28	0.65 J	190	SV-060-C	SV-060-C-21	0.59	12	12.35	10.40	36.1	1,633 ca	0
METHYLENE CHLORIDE	24/28	2.7 J	19	SV-113-C	SV-113-C-21	9	45	7.35	7.7	4.8	86,667 nc	0
NAPHTHALENE	18/28	1 J	110 J	SV-075-A, SV-102-C	SV-075-A-21, SV-102-C-21	1	5.2	21.0	13.9	30.1	120 ca	0
TETRACHLOROETHENE	17/28	0.57 J	74	SV-101-B	SV-101-B-21	0.54	11	7.13	4.70	13.8	6,000 nc	0
TOLUENE	21/28	2.3	13	SV-136-A	SV-136-A-21	2.3	45	5.3	5.5	4.6	733,333 nc	0
1,1,1-TRICHLOROETHANE	23/28	0.48 J	260	SV-101-B	SV-101-B-21	0.33	6.5	16.0	13.3	49	733,333 nc	0
TRICHLOROETHENE	27/28	0.4 J	900	SV-001-C	SV-001-C-21	0.94	0.94	178	172	306	293 nc	5
1,2,3-TRIMETHYLBENZENE	12/28	0.86 J	530	SV-081-A	SV-081-A-21	0.84	17	58.4	25.7	99.9	733 nc	0
1,2,4-TRIMETHYLBENZENE	18/28	0.68 J	90	SV-081-A	SV-081-A-21	0.61	12	15.6	10.4	22.1	1,033 nc	0
1,3,5-TRIMETHYLBENZENE	10/28	0.69 J	47	SV-076-A	SV-076-A-21	0.64	13	13.4	5.34	10.7	733 nc[6]	0
VINYL CHLORIDE	1/28	5,000	5,000	SV-126-C	SV-126-C-21	0.37	1.9	5,000	179	945	933 ca	1
TOTAL XYLENES	24/28	1.2 J	1200	SV-060-C	SV-060-C-21	0.52	10	76.7	66.0	231	14,667 nc	0

A bolded chemical name indicates that the chemical exceeds the industrial air RSL divided by 0.03 (based on an HQ of 0.1 or an ILCR of 1×10^{-6}).

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

Footnotes:

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

2 - Values presented are sample-specific quantitation limits.

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

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

5 - Exceedance counts are based on detected results only.

6 - The value for 1,2,3-trimethylbenzene is presented for 1,3,5-trimethylbenzene.

Definitions:

-- = no criterion available

ca = screening value based on carcinogenic effects

HQ = hazard quotient

ILCR = incremental lifetime cancer risk

J = estimated value

NA = not available

nc = screening value based on noncarcinogenic effects

RSL = regional screening level

TABLE 3-3

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

Building level or background	Dataset	Minimum detected value[1]	Maximum detected value[1]	Minimum non-detect value[1][2]	Maximum non-detect value[1][2]	Average of all values[3][4]	Average of detected values[3]	Frequency of detection[1]	Number of detections > 8.8 µg/m^3 [5][6]	95% UCL[3]
Basement	All Buildings 2006-August 2016	0.077 J	36 [7]	0.075	20	1.1	1.9	258/505	12	1.5
	All Buildings August 2016	0.82 J	6	0.38	0.38	0.71	2.4	6/25	0	1.3
	Building A 2006-August 2016	0.15 J	26.2	0.36	0.96	3.7	3.9	70/75	9	4.7
	Building A August 2016	2.1	6	-	-	3.6	3.6	3/3	0	NA[8]
	Building B 2006-August 2016	0.078 J	2.5	0.075	2.7	0.60	0.68	54/78	0	0.70
	Building B August 2016	NA	NA	0.38	0.38	-	-	0/1	0	-
	Building C 2006-August 2016	0.077 J	36 [7]	0.075	20	0.71	1.3	134/352	4	1.0
	Building C August 2016	0.82 J	1.3	0.38	0.38	0.32	1.07	3/21	0	0.60
First Floor	All Buildings 2006-August 2016	0.081 J	34	0.075	12	1.1	1.8	166/343	5	1.6
	All Buildings August 2016	0.67 J	0.67 J	0.38	0.38	0.22	0.67	1/15	0	NA[9]
	Building A 2006-August 2016	0.086 J	34	0.075	12	1.3	2.0	122/238	4	2.0
	Building A August 2016	0.67 J	0.67 J	0.38	0.38	0.23	0.67	1/13	0	NA[9]
	Building B 2006-August 2016	0.081 J	5.1	0.075	11	0.82	0.85	37/83	0	0.63
	Building B August 2016	NA	NA	0.38	0.38	-	-	0/2	0	-
	Building C 2006-August 2016	0.5 J	7.2	0.21	2.7	1.0	2.3	7/22	0	2.1
Background	2006-August 2016	0.48 J	11.9	0.075	2.7	0.68	3.3	9/74	1	1.1
	August 2016	NA	NA	0.38	0.38	-	-	0/4	0	-

All results are in µg/m^3.

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

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

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

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

(5) Value is the non-carcinogenic industrial air regional screening level corresponding to HI = 1 (USEPA, May 2016).

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

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

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

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

Definitions:

HI - hazard index
ILCR - incremental lifetime cancer risk
J - estimated value
µg/m^3 - micrograms per cubic meter
NA - not applicable/not available
UCL - upper confidence limit
USEPA - United States Environmental Protection Agency

A benchmark of 8.8 µg/m^3 corresponds to HI = 1.

TABLE 3-4

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

Building level or background	Dataset	Minimum detected value[1]	Maximum detected value[1]	Minimum non-detect value[1][2]	Maximum non-detect value[1][2]	Average of all values[3][4]	Average of detected values[3]	Frequency of detection[1]	Number of detections > 3.6 µg/m^3 [5][6]	95% UCL[3]
Basement	All Buildings 2006-August 2016	0.2 J	15	0.19	96.7	1.6	2.2	248/440	50	1.8
	All Buildings August 2016	1.2 J	15	1	1	1.2	4.0	5/25	1	3.1
	Building A 2006-August 2016	0.47 J	15	0.19	4	2.6	3.7	47/70	19	3.4
	Building A August 2016	12	15	1	1	4.8	13.5	1/3	1	NA[7][8]
	Building B 2006-August 2016	0.23 J	5	0.19	5.6	1.1	1.6	32/51	3	1.4
	Building B August 2016	-	-	1	1	-	-	0/1	0	-
	Building C 2006-August 2016	0.2 J	6.9	0.19	96.7	1.4	1.9	169/319	28	1.5
	Building C August 2016	1.2 J	3 J	1	1	0.72	1.7	4/21	0	1.2
First Floor	All Buildings 2006-August 2016	0.19 J	6.5 J	0.19	31	1.2	1.5	102/243	6	0.95
	All Buildings August 2016	1.1	1.1	1	1	0.54	1.1	1/15	0	NA[7]
	Building A 2006-August 2016	0.19 J	4.8	0.19	31	1.0	1.5	76/187	4	0.95
	Building A August 2016	1.1	1.1	1	1	0.5	1.1	1/13	0	NA[7]
	Building B 2006-August 2016	0.26 J	6.5 J	0.19	24	1.7	1.5	26/56	2	1.3
	Building B August 2016	-	-	1	1	-	-	0/2	0	-
Background	2006-August 2016	0.2 J	8.1 J	0.19	3.8	0.92	1.5	24/58	1	1.1
	August 2016	-	-	1	1	-	-	0/4	0	-

All results are in µg/m^3.

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

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

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

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

(5) Value is the carcinogenic industrial air regional screening level corresponding to 1×10^{-5} risk level (USEPA, May 2016).

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

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

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

Definitions:

HI - hazard index

ILCR - incremental lifetime cancer risk

J - estimated value

µg/m^3 - micrograms per cubic meter

UCL - upper confidence limit

USEPA - United States Environmental Protection Agency

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-015-A IA-015-A-21 20160817	AIR-018-A IA-018-A-21 20160817	AIR-018-A IA-018-A-21-D 20160817	AIR-021-A IA-021-A-21 20160817	AIR-075-A IA-075-A-21 20160817
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	1.4	0.39 J	0.55 J	0.4 J	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.54 J	0.47 U	0.78 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	1.7	1.7	1.3 J	2.6	3
CHLOROFORM	240,000	5.3	ca	0.59 J	0.87 J	0.61 J	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.3	2.5	2.2	2.8	2.6
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	1.2 J	1.1 J	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	2.4	1.6 J	1.4 J	0.59 U	0.79 J
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	8.1	6.4 J	16 J	9.1	7.4
NAPHTHALENE	50,000	3.6	ca	1 U	12	15	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	1.6 J	0.54 U
TOLUENE	754,000	22,000	nc	12	3.9	2.6	5.6	7.9
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.56 J	0.43 J	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	2.3	2.1	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.72 J	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	13	8.7	8.7	0.52 U	3.3 J

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

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-076-A IA-076-A-21 20160817	AIR-078-A IA-078-A-21 20160817	AIR-079-A IA-079-A-21 20160817	AIR-081-A IA-081-A-21 20160817	AIR-093-A IA-093-A-21 20160817
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	0.42 J	0.37 U	0.97 J	1.6	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.49 J	0.53 J	0.47 U	0.55 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	1.5	1.5	1.6	4.7	1.6
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.82 J	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.5	2.7	2.8	2.2	2.5
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.71 J
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	1.5 J	0.59 U	2.2	3.4	0.59 U
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	13	5.9	9.1	7.4	6.1
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.57 J	0.6 J	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	17	4.1	4.4	38	4.5
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.67 J	0.38 U	0.38 U	6
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.62 J	0.61 U	0.72 J	0.74 J	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	6.3	1.2 J	13	17	3 J

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

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-095-A IA-095-A-21 20160817	AIR-097-A IA-097-A-21 20160817	AIR-117-A IA-117-A-21 20160817	AIR-118-A IA-118-A-21 20160817	AIR-136-A IA-136-A-21 20160817
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	0.37 U	1.7	0.42 J	4.2	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.51 J	0.52 J	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	1.3 J	1.7	1.5	2.8	1.9
CHLOROFORM	240,000	5.3	ca	0.77 J	0.37 U	0.59 J	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.5	2.7	2.8	2.7	2.7
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	3.6	2.3	6.4	0.59 U
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	9.7	8.6	6.9	6.1	7
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1.1	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	1.6 J
TOLUENE	754,000	22,000	nc	2.3 U	14	3.1	12	2.4
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.61 U	1.3 J	0.61 U	2.2	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.65 J	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	0.52 U	20	14	35	1.7 J

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

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-5

INDOOR AIR QUALITY SAMPLING RESULTS, BULIDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 4 OF 4

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-138-A IA-138-A-21 20160817	AIR-139-A IA-139-A-21 20160817	 IA-139-A-21-D 20160817
Volatile Organic Compounds ($\mu g/m^3$)						
BENZENE	31,900	16	ca	0.37 U	5.1	4.9
CARBON TETRACHLORIDE	62,900	20	ca	0.55 J	0.57 J	0.52 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	1.4 J	2.9	2.9
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.5	3.1	3.2
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.56 J	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.72 J	6.6	5.8
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	8.5	14	14
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	8	12	12
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	2.7	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.61 U	2.3	2.4
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.68 J	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	4.2	36	33

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

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-015-A SV-015-A-21 20160817	AIR-075-A SV-075-A-21 20160817	AIR-076-A SV-076-A-21 20160817	AIR-078-A SV-078-A-21 20160817	AIR-079-A SV-079-A-21 20160817	AIR-081-A SV-081-A-21 20160817
Volatile organic compounds ($\mu g/m^3$)								
BENZENE	533	ca	4 J	0.37 U	0.37 U	0.44 J	0.78 J	3.8
CARBON TETRACHLORIDE	667	ca	2.4 U	0.49 J	0.55 J	0.47 U	0.47 U	1.2 U
CHLORODIFLUOROMETHANE	7,333,333	nc	3.2 J	5.1	3.7	1.6	2.6	12
CHLOROFORM	177	ca	1.8 U	0.54 J	0.83 J	0.56 J	0.8 J	4.9
DICHLORODIFLUOROMETHANE	14,667	nc	3.3 U	2.8	4.2	3	2.7	3.7 J
1,1-DICHLOROETHANE	2,567	ca	19	0.2 U	0.2 U	0.2 U	0.2 U	0.51 U
1,2-DICHLOROETHANE	157	nc	1.9 U	0.38 U	0.38 U	0.38 U	0.38 U	0.96 U
1,1-DICHLOROETHENE	29,333	ca	50	0.28 U	0.28 U	0.28 U	0.28 U	0.69 U
CIS-1,2-DICHLOROETHENE	--	--	7.2 J	0.48 U	0.48 U	0.48 U	0.48 U	1.2 U
TRANS-1,2-DICHLOROETHENE	--	--	2 U	0.4 U	0.4 U	0.4 U	0.4 U	0.99 U
ETHYLBENZENE	1,633	ca	3.5 J	0.92 J	3.5	1.1 J	10	4 J
METHYL TERT-BUTYL ETHER	15,667	ca	6.1 U	1.2 U	1.2 U	1.2 U	1.2 U	3.1 U
METHYLENE CHLORIDE	86,667	nc	11 U	7.9	8.1	4.2	3.5	12
NAPHTHALENE	120	ca	5.2 U	110 J	4.6 J	1 UJ	1 J	9.5 J
TETRACHLOROETHENE	6,000	nc	2.7 U	0.54 U	0.54 U	0.62 J	7.4	2.1 J
TOLUENE	733,333	nc	11 U	2.5	3.5	2.3	8.3	11
1,2,4-TRICHLOROBENZENE	293	nc	7.2 U	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ	3.6 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	15	0.63 J	1.5 J	1.4 J	2.2	9.2
1,1,2-TRICHLOROETHANE	29	nc	2.9 U	0.57 U	0.57 U	0.57 U	0.57 U	1.4 U
TRICHLOROETHENE	293	nc	35	2.9	6.4	13	120	0.94 U
1,2,3-TRIMETHYLBENZENE	733	nc	4.2 U	37	69	0.84 U	0.84 U	530
1,2,4-TRIMETHYLBENZENE	1,033	nc	3.1 U	73	37	0.68 J	1 J	90
1,3,5-TRIMETHYLBENZENE	733	nc[2]	3.2 U	29	47	0.64 U	0.64 U	21
VINYL CHLORIDE	933	ca	1.9 U	0.37 U	0.37 U	0.37 U	0.37 U	0.93 U
TOTAL XYLENES	14,667	nc	6.1 J	8.4	26	8.4	44	20

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

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

$\mu g/m^3$ = micrograms per cubic meter

-- = not available

J = estimated value

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-093-A SV-093-A-21 20160817	AIR-095-A SV-095-A-21 20160817	AIR-116-A SV-116-A-21 20160817	AIR-116-A SV-116-A-21-D 20160817	AIR-118-A SV-118-A-21 20160817	AIR-136-A SV-136-A-21 20160817
Volatile organic compounds ($\mu g/m^3$)								
BENZENE	533	ca	0.42 J	0.55 J	0.48 J	0.37 U	1.8 U	1.8
CARBON TETRACHLORIDE	667	ca	0.47 J	0.61 J	0.5 J	0.48 J	2.4 U	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	1.3 J	3	1.3 J	1.3 J	2.8 J	2
CHLOROFORM	177	ca	0.37 U	0.37 U	1.9 J	1.4 J	1.8 U	50
DICHLORODIFLUOROMETHANE	14,667	nc	2.6	2.8	2.4	2.4	3.3 U	2.5
1,1-DICHLOROETHANE	2,567	ca	0.28 J	0.2 U	0.2 U	0.2 U	17	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U	0.38 U	0.38 U	1.9 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.85 J	0.28 U	1.7	1.6	150	0.48 J
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	0.48 U	0.48 U	70	4.5
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U	0.4 U	5 J	0.56 J
ETHYLBENZENE	1,633	ca	0.59 U	1.6 J	1.1 J	0.59 U	5.4 J	1.6 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U	1.2 U	6.1 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	5.6	5	3.4 J	2.7 J	11 U	5.9
NAPHTHALENE	120	ca	1 U	66 J	1.8	1.7	5.2 U	1 UJ
TETRACHLOROETHENE	6,000	nc	0.62 J	1.1 J	0.57 J	0.54 U	2.7 U	0.54 U
TOLUENE	733,333	nc	2.3 U	9	2.5	2.3 U	11 U	13
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	1.4 U	1.4 U	7.2 U	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.48 J	0.33 U	0.33 U	3.6 J	0.33 U
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U	0.57 U	2.9 U	0.57 U
TRICHLOROETHENE	293	nc	7.2	10	21	21	**890**	**850**
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	20	0.86 J	1.1 J	4.2 U	0.84 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	23	0.94 J	1 J	3.8 J	0.95 J
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	13	0.64 U	0.64 U	3.2 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U	0.37 U	1.9 U	0.37 U
TOTAL XYLENES	14,667	nc	1.2 J	9.9	4.6	2.6 J	49	7.9

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

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

$\mu g/m^3$ = micrograms per cubic meter

-- = not available

J = estimated value

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-6

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING A, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-138-A SV-138-A-21 20160817	AIR-139-A SV-139-A-21 20160817	AIR-139-A SV-139-A-21-D 20160817
Volatile organic compounds ($\mu g/m^3$)					
BENZENE	533	ca	0.69 J	0.99 J	1 J
CARBON TETRACHLORIDE	667	ca	0.52 J	0.56 J	0.57 J
CHLORODIFLUOROMETHANE	7,333,333	nc	1.4 J	1.9	2.2
CHLOROFORM	177	ca	0.65 J	1.5 J	0.67 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.8	2.5	2.8
1,1-DICHLOROETHANE	2,567	ca	3.7	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	18	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	11	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.57 J	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	5.5	5.4
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.5	6.4	4
NAPHTHALENE	120	ca	2.6	4 J	13 J
TETRACHLOROETHENE	6,000	nc	2 J	5.1	5.3
TOLUENE	733,333	nc	2.3 U	2.6	2.3 U
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	0.33 U	0.59 J	0.57 J
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	150	1.5	1.6
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	14	14
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.61 U	5.2	5.2
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	6.4	6.5
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	0.52 U	30	30

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

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

$\mu g/m^3$ = micrograms per cubic meter

-- = not available

J = estimated value

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-7

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING B, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-033-B IA-033-B-21 20160817	AIR-100-B IA-100-B-21 20160817	AIR-101-B IA-101-B-21 20160817
Volatile Organic Compounds ($\mu g/m^3$)						
BENZENE	31,900	16	ca	0.4 J	0.37 J	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.47 J	0.47 U	0.47 U
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	57	9.4	8.6
CHLOROFORM	240,000	5.3	ca	0.62 J	0.37 U	0.37 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.8	2.5	2.5
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	1.9	0.71 J	2.3
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	14	12	6.7
NAPHTHALENE	50,000	3.6	ca	1 U	1 U	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.89 J
TOLUENE	754,000	22,000	nc	15	16	5.7
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.62 J	0.61 U	0.64 J
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	9.6	3.3 J	12

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

-- = not available

J = estimated value

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-8

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING B, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 1

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-100-B SV-100-B-21 20160817	AIR-101-B SV-101-B-21 20160817
Volatile organic compounds ($\mu g/m^3$)				
BENZENE	533	ca	0.37 U	0.37 U
CARBON TETRACHLORIDE	667	ca	32	4.6
CHLORODIFLUOROMETHANE	7,333,333	nc	2.3	5.8
CHLOROFORM	177	ca	9.1	0.75 J
DICHLORODIFLUOROMETHANE	14,667	nc	4.5	6
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	0.59 U	0.7 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	3.9	12
NAPHTHALENE	120	ca	1 UJ	5.8 J
TETRACHLOROETHENE	6,000	nc	5.7	74
TOLUENE	733,333	nc	4	4.4
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 UJ
1,1,1-TRICHLOROETHANE	733,333	nc	3.6	260
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	38	120
1,2,3-TRIMETHYLBENZENE	733	nc	5.6	15
1,2,4-TRIMETHYLBENZENE	1,033	nc	4	26
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.71 J	10
VINYL CHLORIDE	933	ca	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	3.7	5.9

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

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

$\mu g/m^3$ = micrograms per cubic meter

-- = not available

J = estimated value

U = nondetect

UJ = non-detected value is estimated

ca = screening value based on carcinogenic effects

nc = screening value based on noncarcinogenic effects

(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.

(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 5

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-001-C IA-001-C-21 20160816	AIR-004-C IA-004-C-21 20160816	AIR-005-C IA-005-C-21 20160816	AIR-051-C IA-051-C-21 20160816	AIR-065-C IA-065-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	0.42 J	0.37 U	0.59 J	0.47 J	0.42 J
CARBON TETRACHLORIDE	62,900	20	ca	0.58 J	0.47 U	0.53 J	0.47 J	0.62 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	2.7	2.7	3.1	28	100
CHLOROFORM	240,000	5.3	ca	0.78 J	0.37 U	0.37 U	0.37 U	0.69 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.3	2.9	2.5	2.7	3.3
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.68 J	0.76 J	2.1
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	18	4.7	100	6.1	20
NAPHTHALENE	50,000	3.6	ca	1 U	1 UJ	1 U	1 UJ	1 UJ
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	4	2.4	4.7	8.7	35
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	0.57 J	0.82 J	1.6 J	0.72 J	0.64 J
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.61 U	0.61 U	0.61 U	0.61 U	0.64 J
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	2.6 J	2.7 J	3.6	4	10

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

-- = not available

J = estimated value

UJ = non-detected value is estimated

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 5

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-088-C IA-088-C-21 20160816	AIR-102-C IA-102-C-21 20160816	AIR-113-C IA-113-C-21 20160816	AIR-115-C IA-115-C-21 20160816	AIR-126-C IA-126-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	0.37 U	0.57 J	0.81 J	0.48 J	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.56 J	0.49 J	0.53 J	0.63 J	0.47 U
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	0.27 U	6.7	7.5	6.9	6.4
CHLOROFORM	240,000	5.3	ca	0.83 J	0.4 J	0.37 U	0.37 U	0.61 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.7	2.9	3.5	3.5	2.6
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.88 J	2.3	2.5	0.99 J	0.59 U
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	2.6 J	20	7.5	7.1	4.3
NAPHTHALENE	50,000	3.6	ca	1 U	1 UJ	1 UJ	1 UJ	1 U
TETRACHLOROETHENE	678,000	180	nc	0.54 U	2.1 J	0.56 J	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	4.1	23	16	7.4	2.3 U
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	7.1	5.2	2.6	1.1 J	5
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	1.1	0.38 U	0.82 J
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.61 U	1.1 J	1 J	0.96 J	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	4.6	10	11	5.9	0.52 U

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

-- = not available

J = estimated value

UJ = non-detected value is estimated

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 5

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-131-C IA-131-C-21 20160816	AIR-131-C IA-131-C-21-D 20160816	AIR-135-C IA-135-C-21 20160816	AIR-142-C IA-142-C-21 20160816	AIR-144-C IA-144-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	0.4 J	0.42 J	0.46 J	0.37 U	0.51 J
CARBON TETRACHLORIDE	62,900	20	ca	0.52 J	0.52 J	0.53 J	0.7 J	0.67 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	4.2	4.5	0.27 U	9.8	49
CHLOROFORM	240,000	5.3	ca	0.37 U	0.37 U	0.37 U	0.41 J	0.67 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.8	3	2.6	3.9	3.3
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.72 J	0.73 J	0.63 J	0.76 J	1.7
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	6.4	7	4.2	8.8	11
NAPHTHALENE	50,000	3.6	ca	1 UJ	1 UJ	1 U	1 UJ	1.4 J
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	9.7 J	2.9 J	4.1	9.9	8.7
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	5.2	4.5	3.1	2.6	54
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.61 U	0.61 U	0.61 U	0.84 J	1.4 J
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	4.2	3.8	3.4 J	4.2	10

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

-- = not available

J = estimated value

UJ = non-detected value is estimated

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 4 OF 5

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-145-C IA-145-C-21 20160816	AIR-146-C IA-146-C-21 20160816	AIR-149-C IA-149-C-21 20160816	AIR-150-C IA-150-C-21 20160816	AIR-152-C IA-152-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	31,900	16	ca	0.46 J	0.37 U	0.51 J	0.37 U	0.46 J
CARBON TETRACHLORIDE	62,900	20	ca	0.61 J	0.47 U	0.64 J	0.61 J	0.63 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	53	39	11	50	44
CHLOROFORM	240,000	5.3	ca	0.49 J	0.37 U	1.2 J	0.69 J	0.4 J
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	3.3	2.2	2.5	3.2	3.1
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	1.2 J	0.65 J	0.85 J	1.5 J	1.5 J
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	7.2	8.2	5.7	6	10
NAPHTHALENE	50,000	3.6	ca	1 UJ	1 U	1.4	1 UJ	3 J
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	8.4	3.5	6.7	20	6.7
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	5.2	2.8	2.1 J	3.8	120
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	1.3	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.71 J	0.61 U	0.62 J	0.78 J	1.2 J
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	6.6	3.3 J	4.4	8.4	8.4

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

-- = not available

J = estimated value

UJ = non-detected value is estimated

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-9

INDOOR AIR QUALITY SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 5 OF 5

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	AIR-153-C IA-153-C-21 20160816	AIR-153-C IA-153-C-21-D 20160816	AIR-155-C IA-155-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)						
BENZENE	31,900	16	ca	0.45 J	0.61 J	0.52 J
CARBON TETRACHLORIDE	62,900	20	ca	0.47 U	0.62 J	0.56 J
CHLORODIFLUOROMETHANE	3,540,000[N]	220,000	nc	7.9	10	8.2
CHLOROFORM	240,000	5.3	ca	1.2 J	0.5 J	0.37 U
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.8	3.5	3
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.67 J	0.99 J	1.1 J
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2,600	nc	5.8	8	3.5
NAPHTHALENE	50,000	3.6	ca	1 UJ	1.2 J	1 UJ
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22,000	nc	4.2	5.3	5.9
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	1,900,000	22,000	nc	1.2 J	1.6 J	3.8
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.67 J	1.2 J	1 J
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	3.8	6	6.2

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

-- = not available

J = estimated value

UJ = non-detected value is estimated

U = not detected

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

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

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

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

USEPA = United States Environmental Protection Agency

A = American Council of Governmental Industrial Hygenists Theshold Limit Value

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

(1) Value is for 1,2,3-trimethylbenzene.

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-001-C SV-001-C-21 20160816	AIR-004-C SV-004-C-21 20160816	AIR-060-C SV-060-C-21 20160816	AIR-088-C SV-088-C-21 20160816	AIR-102-C SV-102-C-21 20160816	AIR-113-C SV-113-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)								
BENZENE	533	ca	1.5 U	0.37 J	0.37 U	0.47 J	0.93 J	0.37 U
CARBON TETRACHLORIDE	667	ca	1.9 U	3.4	0.47 U	0.59 J	0.47 J	0.51 J
CHLORODIFLUOROMETHANE	7,333,333	nc	2.8 J	1.7	17	7.1	14	5.9
CHLOROFORM	177	ca	24	20	3.1	1.4 J	0.37 U	2.5
DICHLORODIFLUOROMETHANE	14,667	nc	2.9 J	2.6	2.9	2.4	2.5	3
1,1-DICHLOROETHANE	2,567	ca	0.81 U	0.2 U	3.2	0.23 J	1.4 J	0.2 U
1,2-DICHLOROETHANE	157	nc	1.5 U	0.38 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	1.1 U	0.69 J	0.28 U	0.28 U	0.33 J	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	230	79	1.5 J	17	0.48 U	36
TRANS-1,2-DICHLOROETHENE	--	--	60	5.1	0.96 J	1 J	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	2.4 J	0.59 U	190	1.4 J	42	0.65 J
METHYL TERT-BUTYL ETHER	15,667	ca	4.9 U	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	9 U	5.7	11	3.7	4.8	19
NAPHTHALENE	120	ca	4.2 UJ	1.1 J	13 J	4	110 J	3.1 J
TETRACHLOROETHENE	6,000	nc	8.8 J	2.4 J	1.2 J	0.54 U	0.54 U	0.54 U
TOLUENE	733,333	nc	9 U	2.3 U	4.8	3.2	11	2.3
1,2,4-TRICHLOROBENZENE	293	nc	5.8 U	1.4 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	2.2 J	0.9 J	3.9	1.3 J	1.4 J	1 J
1,1,2-TRICHLOROETHANE	29	nc	2.3 U	0.57 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	**900**	250	70	76	0.4 J	**320**
1,2,3-TRIMETHYLBENZENE	733	nc	3.3 U	0.84 U	1.2 J	1.5 J	5.6	0.89 J
1,2,4-TRIMETHYLBENZENE	1,033	nc	2.5 U	0.61 U	5.2	1.8 J	5.1	1.1 J
1,3,5-TRIMETHYLBENZENE	733	nc[2]	2.6 U	0.64 U	4.2	0.69 J	1.9 J	0.64 U
VINYL CHLORIDE	933	ca	1.5 U	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	2.1 U	0.52 U	1200	16	340	4

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.
(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 2 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-126-C SV-126-C-21 20160816	AIR-142-C SV-142-C-21 20160816	AIR-149-C SV-149-C-21 20160816	AIR-150-C SV-150-C-21 20160816	AIR-152-C SV-152-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)							
BENZENE	533	ca	290	0.37 U	0.6 J	0.73 J	1.3
CARBON TETRACHLORIDE	667	ca	9.4 U	0.69 J	0.54 J	0.62 J	0.47 U
CHLORODIFLUOROMETHANE	7,333,333	nc	5.3 U	4.2	3.7	49	38
CHLOROFORM	177	ca	7.3 U	10	0.84 J	0.61 J	0.4 J
DICHLORODIFLUOROMETHANE	14,667	nc	13 U	2.5	2.7	3	2.8
1,1-DICHLOROETHANE	2,567	ca	4 U	0.22 J	0.2 U	6.9	0.2 U
1,2-DICHLOROETHANE	157	nc	7.7 U	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	1100	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	530	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	43	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	12 U	0.93 J	1.8	1.8	1.8
METHYL TERT-BUTYL ETHER	15,667	ca	25 U	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	45 U	9.4	12	4.1	12
NAPHTHALENE	120	ca	28 J	2	1 UJ	1 UJ	5 J
TETRACHLOROETHENE	6,000	nc	11 U	1.3 J	0.57 J	0.54 U	0.54 U
TOLUENE	733,333	nc	45 U	2.3	7.4	6.3	5.5
1,2,4-TRICHLOROBENZENE	293	nc	29 U	1.4 U	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	6.5 U	0.86 J	0.86 J	56	0.84 J
1,1,2-TRICHLOROETHANE	29	nc	11 U	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	**890**	10	5.3	0.55 J	0.48 J
1,2,3-TRIMETHYLBENZENE	733	nc	17 U	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	12 U	0.61 U	0.61 U	0.61 U	0.79 J
1,3,5-TRIMETHYLBENZENE	733	nc[2]	13 U	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	**5000**	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	10 U	7.4	12	10	7.9

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.
(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-10

SUB-SLAB VAPOR SAMPLING RESULTS, BUILDING C, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND
PAGE 3 OF 3

LOCATION SAMPLE ID SAMPLE DATE	Target Shallow Soil Gas Concentration ($\mu g/m^3$)[1]	Key	AIR-153-C SV-153-C-21 20160816	AIR-153-C SV-153-C-21-D 20160816	AIR-155-C SV-155-C-21 20160816
Volatile Organic Compounds ($\mu g/m^3$)					
BENZENE	533	ca	0.38 J	0.37 U	0.37 U
CARBON TETRACHLORIDE	667	ca	0.49 J	0.47 U	1.4 J
CHLORODIFLUOROMETHANE	7,333,333	nc	6.7	7.1	5.7
CHLOROFORM	177	ca	0.57 J	0.47 J	1.7 J
DICHLORODIFLUOROMETHANE	14,667	nc	2.6	2.8	2.5
1,1-DICHLOROETHANE	2,567	ca	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	157	nc	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	29,333	ca	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	--	--	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	--	--	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	1,633	ca	1.6 J	1.4 J	1.2 J
METHYL TERT-BUTYL ETHER	15,667	ca	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	86,667	nc	15 J	8 J	3.3 J
NAPHTHALENE	120	ca	1 UJ	1 UJ	2 J
TETRACHLOROETHENE	6,000	nc	2.9	1.4 J	5.7
TOLUENE	733,333	nc	4.9	3.7	2.4
1,2,4-TRICHLOROBENZENE	293	nc	1.4 U	1.4 U	1.4 U
1,1,1-TRICHLOROETHANE	733,333	nc	0.57 J	0.68 J	0.96 J
1,1,2-TRICHLOROETHANE	29	nc	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	293	nc	12	13	1.4
1,2,3-TRIMETHYLBENZENE	733	nc	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	1,033	nc	0.83 J	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	733	nc[2]	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	933	ca	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	14,667	nc	11	9.8	8.6

Notes: All sample concentrations are in micrograms per cubic meter ($\mu g/m^3$)
Shaded cells indicate a concentration greater than risk-based screening level
$\mu g/m^3$ = micrograms per cubic meter
-- = not available
J = estimated value
U = nondetect
UJ = non-detected value is estimated
ca = screening value based on carcinogenic effects
nc = screening value based on noncarcinogenic effects
(1) Screening values derived in accordance with Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (November 2002). Screening values are equal to United States Environmental Protection Agency (USEPA) Industrial Air Screening Values divided by an attenuation factor of 0.03, and correspond to a target cancer risk level of 1×10^{-5}.
(2) Value is for 1,2,3-trimethylbenzene.

TABLE 3-11

AMBIENT AIR (BACKGROUND) SAMPLING RESULTS, AUGUST 2016
LOCKHEED MARTIN MIDDLE RIVER COMPLEX
MIDDLE RIVER, MARYLAND

LOCATION SAMPLE ID SAMPLE DATE	OSHA PEL ($\mu g/m^3$)	Industrial Air Screening Level ($\mu g/m^3$)	Key	BCK-1 BCK-1-21 20160816	BCK-2 BCK-2-21 20160816	BCK-3 BCK-3-21 20160816	BCK-4 BCK-4-21 20160816
Volatile organic compounds ($\mu g/m^3$)							
BENZENE	31,900	16	ca	0.39 J	0.37 U	0.37 U	0.37 U
CARBON TETRACHLORIDE	62,900	20	ca	0.59 J	0.7 J	0.53 J	0.69 J
CHLORODIFLUOROMETHANE	3,540,000	220000	nc	1.7	1.6	1.4	1.4 J
CHLOROFORM	240,000	5.3	ca	0.37 U	2	1.5 J	2.7
DICHLORODIFLUOROMETHANE	4,950,000	440	nc	2.9	2.9	2.7	2.7
1,1-DICHLOROETHANE	400,000	77	ca	0.2 U	0.2 U	0.2 U	0.2 U
1,2-DICHLOROETHANE	198,360	4.7	ca	0.38 U	0.38 U	0.38 U	0.38 U
1,1-DICHLOROETHENE	--	880	nc	0.28 U	0.28 U	0.28 U	0.28 U
CIS-1,2-DICHLOROETHENE	790,000	--	--	0.48 U	0.48 U	0.48 U	0.48 U
TRANS-1,2-DICHLOROETHENE	790,000	--	--	0.4 U	0.4 U	0.4 U	0.4 U
ETHYLBENZENE	435,000	49	ca	0.59 U	0.59 U	0.71 J	0.59 U
METHYL TERT-BUTYL ETHER	180,000[A]	470	ca	1.2 U	1.2 U	1.2 U	1.2 U
METHYLENE CHLORIDE	87,000	2600	nc	9.4	7.8	7.8	5.6
NAPHTHALENE	50,000	3.6	ca	1 UJ	1 UJ	1 UJ	1 UJ
TETRACHLOROETHENE	678,000	180	nc	0.54 U	0.54 U	0.54 U	0.54 U
TOLUENE	754,000	22000	nc	2.8	2.7	5.9	2.3
1,2,4-TRICHLOROBENZENE	40,000[N]	8.8	nc	1.4 UJ	1.4 UJ	1.4 UJ	1.4 UJ
1,1,1-TRICHLOROETHANE	1,900,000	22000	nc	0.33 U	0.33 U	0.33 U	0.33 U
1,1,2-TRICHLOROETHANE	45,000	0.88	nc	0.57 U	0.57 U	0.57 U	0.57 U
TRICHLOROETHENE	537,000	8.8	nc	0.38 U	0.38 U	0.38 U	0.38 U
1,2,3-TRIMETHYLBENZENE	123,000[N]	22	nc	0.84 U	0.84 U	0.84 U	0.84 U
1,2,4-TRIMETHYLBENZENE	123,000[N]	31	nc	0.61 U	0.61 U	0.61 U	0.61 U
1,3,5-TRIMETHYLBENZENE	123,000[N]	22	nc[(1)]	0.64 U	0.64 U	0.64 U	0.64 U
VINYL CHLORIDE	2,560	28	ca	0.37 U	0.37 U	0.37 U	0.37 U
TOTAL XYLENES	435,000	440	nc	1.8 J	1.7 J	3.8	0.52 U

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

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

Industrial Air Screening Levels from USEPA Regional Screening Levels for Chemical Contaminants at Superfund Sites May 2016

(1) Value is for 1,2,3-trimethylbenzene.

-- = not available

A = American Council of Governmental Industrial Hygienists Theshold Limit Value

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

J = estimated value

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

nc = screening value based on noncarcinogenic hazard index = 1

OSHA PEL = Occupational Safety and Health Administration Pemissible Exposure Limit

U = not detected

UJ = non-detected value is estimated

USEPA = United States Environmental Protection Agency

TABLE 3-12

ANALYTE CONCENTRATIONS IN BACKGROUND AIR SAMPLES COMPARED TO INDOOR AIR SAMPLES - AUGUST 2016 LOCKHEED MARTIN CORPORATION MIDDLE RIVER COMPLEX MIDDLE RIVER, MARYLAND

Analyte	Maximum Background Concentration ($\mu g/m^3$)	Maximum Sample Concentration ($\mu g/m^3$)[1]	Number of Samples with Detects[1]	Number of Detects < Background[1][2]	Number of Detects = Background[1][2]	Number of Detects > Background[1][2]
BENZENE	0.39	5.1	27	5	0	22
CARBON TETRACHLORIDE	0.7	0.78	28	0	1	28
CHLORODIFLUOROMETHANE	1.7	100	38	36	3	2
CHLOROFORM	2.7	1.2	19	0	0	19
DICHLORODIFLUOROMETHANE	2.9	3.9	40	40	2	0
ETHYLBENZENE	0.71	6.6	32	13	1	19
METHYLENE CHLORIDE	9.4	100	40	38	0	2
TOLUENE	5.9	38	38	37	1	1
TOTAL XYLENES	3.8	36	37	28	0	9

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

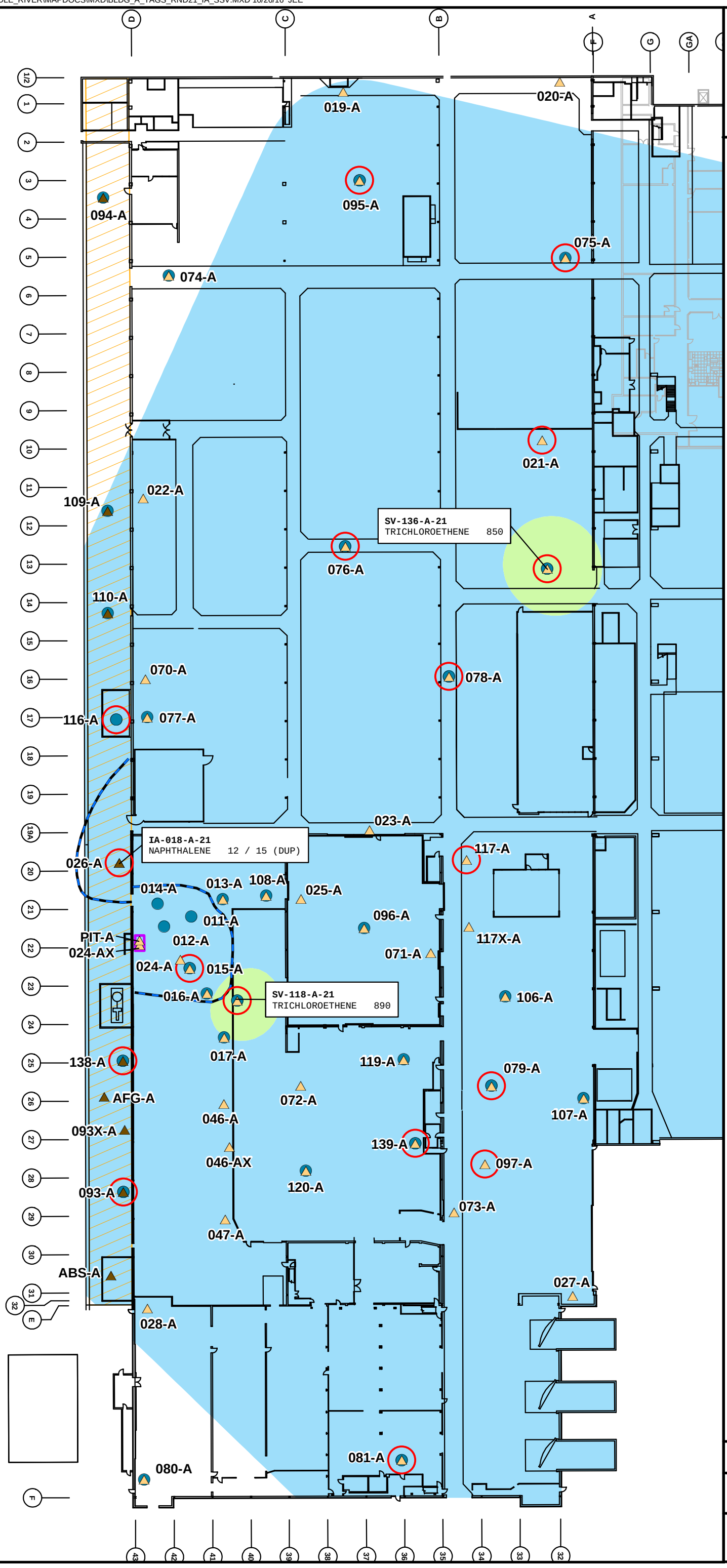
(2) If one sample in a duplicate pair was greater/equal to background and the other sample in the duplicate pair was less than background, the maximum detected concentration in the field duplicate pair was used to represent the field duplicate pair.

There are a total of four background samples and 40 indoor air samples for Round 21.

PGH P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\BLDG_A_TAGS_RND21_IA_SSV.MXD 10/26/16 JEE

FIGURE 3-1

ROUND 21 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING A



Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 21 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building A Basement
- Building B and C Basement
- Excavation Area
- SSD Treatment Unit

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

X - moved from original location once.

Screening Levels Exceeded

Chemical	Indoor Air	Soil Vapor
Naphthalene	3.6	NA
Trichloroethene	NA	293

NA – Not applicable

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

August 2016 Sub-Slab Vapor TCE Concentration

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

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED: 10/26/16

CREATED BY: JEE

TETRA TECH

PGH P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\BLDG_B_TAGS_RND21_IA_SSV.MXD 10/26/16 JEE

FIGURE 3-2

ROUND 21 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING B

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

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

Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 21 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building B and C Basement
- Tunnel
- SSD Treatment Unit

X - moved from original location once.

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

August 2016 Sub-Slab Vapor TCE Concentration

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

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

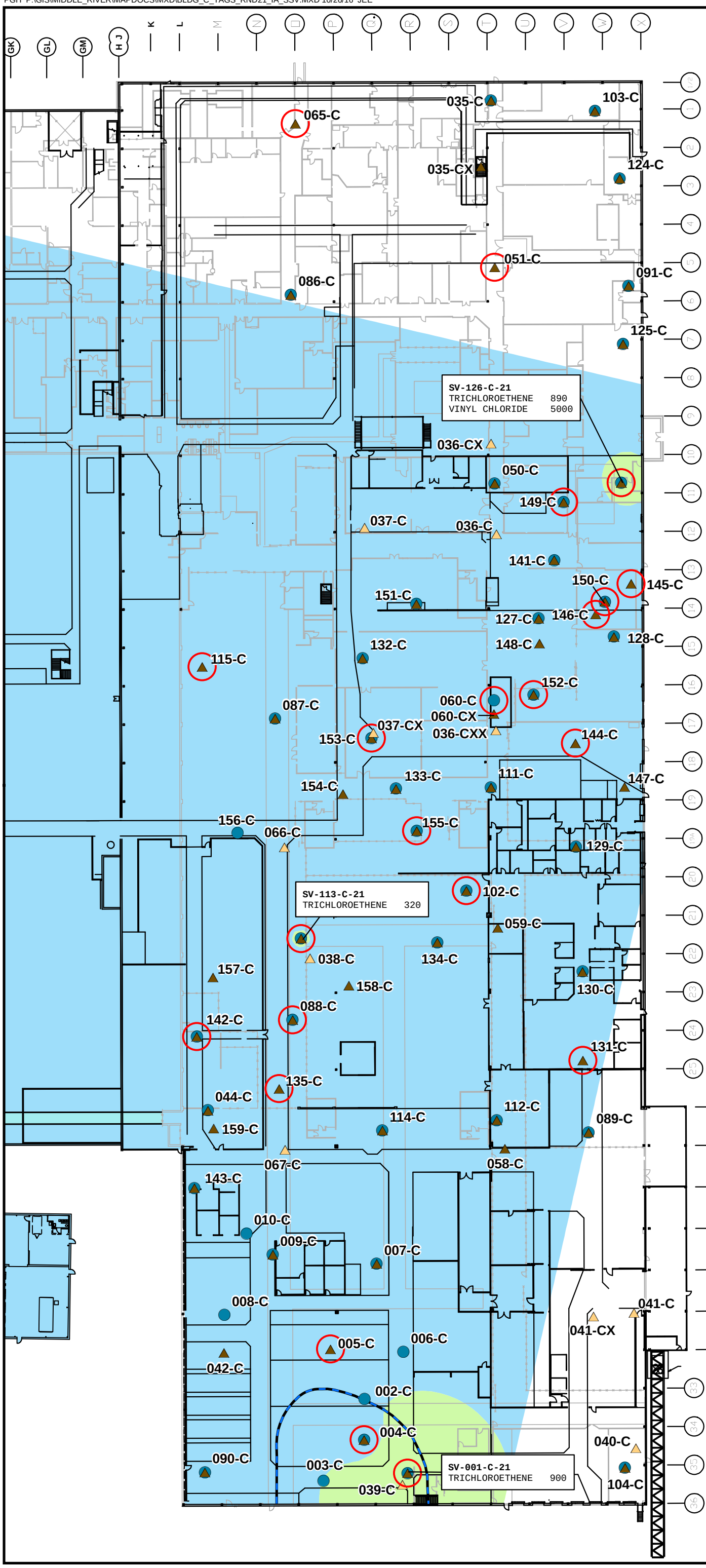
DATE MODIFIED:	CREATED BY:
10/26/16	JEE

TETRA TECH

PGH P:\GIS\MIDDLE_RIVER\MAPDOCS\MXD\BLDG_C_TAGS_RND21_IA_SSV.MXD 10/26/16 JEE

FIGURE 3-3

ROUND 21 INDOOR AIR AND SUB-SLAB VAPOR SAMPLING RESULTS GREATER THAN SCREENING LEVELS BUILDING C



Legend

- IAQ, 1st Floor
- IAQ, Basement
- SV
- Round 21 Sampling Locations
- SSD Radius of Influence
- Buildings A, B and C
- Building B and C Basement
- Tunnel
- SSD Treatment Unit

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

X - moved from original location once.

Screening Levels Exceeded

	Indoor Air	Soil Vapor
Chemical		
Trichloroethene	NA	293
Vinyl Chloride	NA	933

NA – Not applicable

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

August 2016 Sub-Slab Vapor TCE Concentration

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

N

0 32 64 Feet

Lockheed Martin Middle River Complex
Middle River, Maryland

DATE MODIFIED: 10/26/16

CREATED BY: JEE

TETRA TECH

Section 4
Sub-Slab-Depressurization-System Data Analysis

This section summarizes the operation and monitoring activities for the sub-slab-depressurization (SSD) systems in Buildings A and C for the reporting period from April 1 to September 30, 2016. A detailed account of these activities is in the October 14, 2016 remedial action progress report (Appendix E). The location and layout of the SSD systems, and associated sub-slab-vapor (SV) extraction points and vapor monitoring points (VMPs), are shown in Figures 1, 2, and 4 of Appendix E. This section discusses SV sampling results, extraction points, system influent, vacuum influence, and performance of the SSD systems.

4.1 SUB-SLAB-VAPOR MONITORING POINTS

Tables 4-1 and 4-2 summarize the concentrations of target volatile organic compounds (VOCs) detected at SV monitoring points to date in the Building A lay-up room (the former plating shop on the main floor), basement, and eastern area (on the main floor), and in the Building C basement, respectively. VMPs 079-A and 136-A, both in the eastern area of Building A, recently were added to Table 4-1, as they are in the area of the Building A SSD-system second-phase expansion that was completed in April 2016.

4.1.1 Building A

SV samples collected to date near the Building A SSD-system are listed in Table 4-3. SV VMP 015-A (on the main floor of Building A) and 018-A (in the basement) have been sampled regularly as part of the facility-wide semiannual sub-slab and indoor-air monitoring program (see Figure 2 in Appendix E), but VMP 018-A has not been sampled since February 2014 because water had collected in the flush-mounted vault. Both 015-A and 018-A are within the measured SSD-system radius of influence.

The highest trichloroethene (TCE) concentrations detected at SV VMPs 015-A and 018-A, 079-A, and 136-A before and after the SSD-systems began operation are shown in Table 4-4. The concentrations detected in August 2016 at these VMPs are one to three orders of magnitude (i.e., 10–1,000 times) lower than the concentrations detected before the systems began operation.

While a significant decline has been observed at 015-A overall, TCE concentrations continue to fluctuate over time. For example, TCE was detected at an estimated 112 micrograms per cubic meter air ($\mu g/m^3$) in February 2015, but at 1,300 $\mu g/m^3$ in August 2015 (Figure 4-1). VOC-impacted groundwater likely provides a continuing VOC source in soil vapor at 015-A. Similar fluctuations have also occurred at 018-A, where SV TCE was detected at the following concentrations between August 2011 and February 2014 (Figure 4-2):

- 7.2 $\mu g/m^3$ in August 2011
- 800,000 $\mu g/m^3$ in October 2011
- 95,000 $\mu g/m^3$ in February 2013
- 28,000*J* $\mu g/m^3$ (estimated) in August 2013
- 174 $\mu g/m^3$ in February 2014

Concentrations observed after SSD startup are generally lower than concentrations detected before the system began operation. VOC reductions at 018-A (in the basement) might be more limited than those observed at the main floor VMPs, because the shallow groundwater table (frequently less than one foot below the basement slab) possibly impedes vapor flow. VMPs near new system-extraction points were sampled in August 2016 for the first time since system expansion; each showed significant VOC-concentration decreases since the May 2016 startup in comparison to February 2016 (pre-startup) results. The results of future sampling rounds will be used to determine if this decrease is due to SSD-system operation.

4.1.2 Building C

SV samples collected to date near the Building C SSD-system are listed in Table 4-5. These points are within 100 feet of the Building C SSD-system extraction points in the basement; most of the following sampling locations:

- 001-C
- 113-C
- SSD-4-C
- 127-C
- 060-C
- 133-C

- 135-C
- 149-C
- 152-C
- 153-C
- 155-C
- 156-C

are within the vacuum influence of SSD-system operations. SV VMPs 001-C and SSD-4-C (in the southern basement area) and the following locations were sampled in August 2016 (see Figure 4 in Appendix E):

- 060-C
- 088-C
- 152-C
- 126-C
- 149-C
- 155-C (in the mid-basement area)
- 153-C
- 113-C

The highest TCE concentrations were observed at VMPs near the SSD system before it began operation. The most recent concentrations (sampled during SSD-system operation) are summarized in Table 4-6. The August 2016 TCE concentrations are lower than the concentrations measured before SSD-system startup. Compared to the concentrations measured in the previous semiannual event (February 2016), VMP 060-C has a lower TCE concentration, and the following VMPs have higher TCE concentrations (see Table 4-2):

- 001-C
- SSD-4-C
- 088-C
- 113-C
- 126-C
- 149-C
- 152-C
- 153-C
- 155-C

Concentrations of vinyl chloride (VC) observed at 126-C have also decreased since the SSD-system expansion (see Figure 4-3). VC concentrations in sub-slab vapor at 126-C have varied over time, as shown on Figure 4-3. The reason for these fluctuations is difficult to determine. VC has not been detected in SSD-system-influent samples or in groundwater samples collected from a nearby well pair (MW-88A/B).

4.2 SUB-SLAB-VAPOR EXTRACTION POINTS

The Building A and Building C sub-slab-vapor extraction points are not sampled as part of the semiannual monitoring program, as the combined influent for the Building A system is sampled monthly and every two months for the Building C system. Figure 2 in Appendix E shows the locations of the Building A extraction points: North, South, Basement North, and Basement South horizontal-extraction laterals, and vertical extraction points SSD-34-A, SSD-35-A, SSD-36-A,

SSD-37-A, and SSD-38-A. Figure 4 in Appendix E shows the Building C extraction points, all vertical: SSD-21-C, SSD-23-C, SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C.

During this reporting period, the new extraction points in Building A (SSD-34-A, SSD-35-A, SSD-36-A, SSD-37-A, and SSD-38-A) were sampled in April 2016 as part of the second-phase expansion start-up. TCE concentrations at these extraction points were as follows:

- SSD-34-A = 8,900 $\mu g/m^3$
- SSD-35-A = 13,320 $\mu g/m^3$
- SSD-36-A = 36 $\mu g/m^3$
- SSD-37-A = 85 $\mu g/m^3$
- SSD-38-A = 55 $\mu g/m^3$

4.3 VACUUM INFLUENCE

Induced vacuum levels over time for sub-slab VMPs in the targeted areas are shown on the following figures in Appendix E:

- Figure 6
  (Building A lay-up room and basement)
- Figure 7
  (Building A eastern area)
- Figure 8
  (Building C southern basement area)
- Figure 9
  (Building C mid-basement area)

Representative vacuum measurements from the September 7, 2016 monitoring episode are indicated on plan views on Figures 10, 11, 12, and 13 of Appendix E. Vacuum influence associated with SSD-system VMPs is checked biweekly. The target vacuum is 0.01 inches of water column or greater. As indicated in the October 2016 progress report (Appendix E), extraction trenches near the Building A lay-up room induce a vacuum equal to or greater than 0.01-inches water column over an approximately 3,800-square-foot area; this area encompasses all SV monitoring points that had high levels of VOCs before system startup. The trenches in the Building A basement induce a vacuum over an approximately 2,000-square-foot area that encompasses two of four VMPs used to measure the SSD-system-induced vacuum in the basement. Induced vacuum has not been consistent at the other basement points, possibly because of high groundwater levels (typically one foot or less below the slab). The extraction wells in the eastern area of Building A induce a vacuum over an approximately 6,100-square-foot-area, and encompass nine of 14 VMPS used to measure the SSD-system-induced vacuum in that area.

The Building C basement wells induce vacuum influence over an approximately 4,000-square-foot area in the southern end of the basement, whereas the extraction wells in the mid-basement area induce vacuum influence over an approximately 32,000-square-foot area. In the mid-basement, 14 of 21 monitoring points are within the target area shown to have vacuum influence. Vacuum influence has not been observed at the northern end of the mid-basement area; possible reasons include high groundwater levels, subsurface preferential pathways, short-circuiting, and/or blockages. However, VOC concentrations at VMP 126-C (outside the area of demonstrated vacuum influence) have decreased by more than 85% since the system was expanded in May 2013.

4.4 INFLUENT-VAPOR SAMPLES

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

Tables 4-7A and 4-7B summarize the influent-vapor concentrations of target VOCs in samples over time (from system startup in March 2008 through September 2016). These results are displayed graphically on Figures 14 and 15 in Appendix E. Tables 4-3A and 4-3B provide average influent-concentrations for the current (April to September 2016) and previous (October 2015 to March 2016) reporting periods. The six-month average-influent VOC concentrations in Buildings A and C during the current reporting period (1,913 µg/m^3 and 146 µg/m^3, respectively) are similar to those observed during the previous semiannual reporting period (1,679 µg/m^3 and 89 µg/m^3, respectively). Overall, influent VOC concentrations for both SSD systems have been relatively stable or slowly decreasing since 2009 (see Figures 14 and 15 in Appendix E).

The key goal of the SSD systems is to maintain a negative pressure below the slab (relative to the room space), thus minimizing the migration of VOCs from the sub-slab soil into indoor air. VOC-mass removal occurs while vapor is drawn out to maintain the vacuum. VOC removal rates for SSD-system influent-mass in Building A ranged from 0.032 to 0.081 pounds per day (lbs/day); these rates are higher than the removal rates (0.013 to 0.027 lbs/day) observed in the previous semiannual reporting period, most likely due to the second-phase system expansion. The Building A system has removed 8.3 pounds (lbs) of VOCs during this reporting period, 3.7 lbs in the previous reporting period, and 141 lbs since system startup in March 2008.

VOC removal rates in Building C during the current reporting period ranged between 0.060 lbs/month and 0.096 lbs/month; these rates are higher than the removal rates (0.026 to 0.088 lbs/month) observed during the previous semiannual reporting period. The Building C SSD-system has removed 0.45 lbs of VOCs this reporting period, 0.25 lbs in the previous reporting period, and 11 lbs since system startup in March 2008.

4.5 SYSTEM PERFORMANCE

In general, flow rates and induced vacuums for the SSD-systems are performing as designed, except for a lack of induced vacuum near SSD-136-A in the eastern area of Building A, and near SSD-29-C and SSD-34-C in the northern portion of the mid-basement area of Building C. We will continue to monitor system induced-vacuum performance; however, due to heterogeneous structure and water accumulation expected in the subsurface of old structures, it is not unusual that some localized areas are not amenable to induced vacuum. The induced-vacuum influence of the Building A system is at least 0.05-inches water column over 3,800-square-feet on the main floor (encompassing the lay-up room), 2,000-square-feet in the basement, and 6,100-square-feet in the eastern area. The induced-vacuum influence of at least 0.05-inches water column of the Building C SSD-system extends over an approximately 4,000-square-foot area in the southern basement, and over approximately 32,000-square-feet in the mid-basement area.

TABLE 4-1

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
SSD-11-A	1,1-DICHLOROETHENE	8070	NS	NS	NS	3900	1900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	BENZENE	257 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	CHLOROFORM	10.7 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	CIS-1,2-DICHLOROETHENE	163000 J	NS	NS	NS	79000	31000	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	ETHYLBENZENE	75.9	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	METHYL TERT-BUTYL ETHER	425 J	NS	NS	NS	-	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TETRACHLOROETHENE	387	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TOLUENE	309	NS	NS	NS	500	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TOTAL XYLENES	227	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TRANS-1,2-DICHLOROETHENE	1980 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	TRICHLOROETHENE	2150 J	NS	NS	NS	2800	850	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	VINYL CHLORIDE	727 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-11-A	**TOTAL VOCs**	**177,619 J**	NS	NS	NS	**86,200**	**33,750**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-11-A is also referenced as SV-11-A																										
SSD-12-A	1,1-DICHLOROETHENE	26900	NS	NS	NS	1800	9900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	BENZENE	60.6 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CARBON TETRACHLORIDE	7.9 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CHLOROFORM	54.5 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	CIS-1,2-DICHLOROETHENE	18800	NS	NS	NS	1200	2900	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	ETHYLBENZENE	44 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	METHYL TERT-BUTYL ETHER	206 J	NS	NS	NS	-	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TETRACHLOROETHENE	181 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TOLUENE	119 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TOTAL XYLENES	340 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TRANS-1,2-DICHLOROETHENE	240 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	TRICHLOROETHENE	81400	NS	NS	NS	3500	6800	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	VINYL CHLORIDE	42 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-12-A	**TOTAL VOCs**	**128,395 J**	NS	NS	NS	**6,500**	**19,600**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-12-A is also referenced as SV-12-A																										
SSD-13-A	1,1-DICHLOROETHANE	17900	9360	11000	NS	200	-	3400	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	BENZENE	61.2 J	88.3	-	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	CHLOROFORM	59.1 J	95.6 J	64.5 J	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	CIS-1,2-DICHLOROETHENE	230000 J	242000	292000	NS	3800	47	15463	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	METHYL TERT-BUTYL ETHER	155 J	-	-	NS	NA	NA	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TETRACHLOROETHENE	215	195	166 J	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TOLUENE	69.5	-	-	NS	-	170	1093	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TOTAL XYLENES	82.9 J	-	-	NS	-	15	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TRANS-1,2-DICHLOROETHENE	1190 J	3470	4650	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	TRICHLOROETHENE	270000 J	369000	326000	NS	4700	46	806	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-13-A	VINYL CHLORIDE	182 J	701	549	NS	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SV-13-A	**TOTAL VOCs**	**519,915 J**	**624,910 J**	**634,430 J**	**NS**	**8,700**	**278**	**20,762**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-13-A is also referenced as SV-13-A																										

TABLE 4-1

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
015-A	1,1,1-TRICHLOROETHANE	-	-	-	-	9800	2500	-	-	-	-	1200	380	-	1100	840	940	140	460	280	112	NS	45.6 J	1300	41 J	15
015-A	1,1-DICHLOROETHANE	-	2160	6010	7690 J	320	480	5666 J	1.2	0.43 J	120	58	12	1.7	51	65 J	92	13	170	45	14.6	NS	4.6 J	56	70 J	19
015-A	1,1-DICHLOROETHENE	27700 J	-	-	-	3400	6400	-	3.2	3.4	2800	1200	150	12	1100	780 J	1600	490	3100	1100 J	473	NS	71.4 J	1200	190	50
015-A	1,2,3-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.85	1.3	1.1	-	NS	-	13 J	-	-
015-A	1,2-DICHLOROETHANE	-	-	-	-	-	-	-	0.082 J	-	-	-	-	-	0.53	-	-	-	0.66	0.7	-	NS	-	-	-	-
015-A	1,3,5-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.75	1	-	NS	-	12 J	-	-
015-A	BENZENE	50.6	21.7	-	-	-	-	-	-	-	-	-	0.4	-	-	1.1	-	-	0.32	0.49	0.64	NS	0.64	-	-	4 J
015-A	CARBON TETRACHLORIDE	6.3 J		-	-	-	-	-	0.48 J	-	-	-	-	0.64	0.96	-	-	0.77 J	-	0.83 J	-	NS	-	-	-	-
015-A	CHLORODIFLUOROMETHANE	-	-	-	-	-	-	-		-	-	6.5 J	-	-		4	3.4 J	-	0.93	1.7	5.8 J	NS	3 J	-	-	3.2 J
015-A	CHLOROFORM	63.4 J	67.7	109	-	-	-	-	0.46	-	6.1 J	5.5 J	0.9 J	1.1	5.2	1.4 J	23 J	6.8	26	19	93.6	NS	13.8 J	9.4 J	-	-
015-A	CIS-1,2-DICHLOROETHENE	118000 J	83800	167000	190312 J	7800	20000	134804 J	83	36	4400	1800	200	320	1800	1100 J	2400	1300	7000	2700	1260	NS	195	900	130	7.2 J
015-A	DICHLORODIFLUOROMETHAN	-	-	-	-	-	-	-	2.2	3.2 J	-	-	2	2.7	2.2	2.3 J	-	2.7	2.4	2.8	2.3 J	NS	2.2	7.2 J	-	-
015-A	ETHYLBENZENE	794 J	-	-	-	-	-	-	1.2	4.6	-	-	2	3.6	0.79	19 J	-	2.3 K	4.5	7.5	-	NS	1 J	18	40 J	3.5 J
015-A	M+P-XYLENES	-	-	-	-	-	-	-	3.3	11	-	-	-	20	4.1	-	-	8.8 J	23	47	3.1 J	NS	6.9 J	-	-	-
015-A	METHYL TERT-BUTYL ETHER	1050 J	18.8 J	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	-
015-A	METHYLENE CHLORIDE	-	-	-	-	-	-	-	0.94	-	-	-	-	0.92	0.6	-	-	0.74	-	0.99	31.6 J	NS	8.7	-	160 J	-
015-A	NAPHTHALENE	-	-	-	-	-	-	-	0.65 J	-	-	-	-	4	-	-	-	0.8	-	2.1 J	-	NS	2.1 J	-	-	-
015-A	O-XYLENE	-	-	-	-	-	-	-	1.2	2.9 J	-	-	-	7.9	1.8	-	-	8.5	8.8	10	1.6 J	NS	6.1 J	-	-	-
015-A	TETRACHLOROETHENE	346 J	54.9 J	98.5	-	-	-	-	0.26 J	-	-	-	-	-	1.4	-	-	-	1.2	3.9	-	NS	-	-	-	-
015-A	TOLUENE	431 J	16 J	14.8 J	-	-	480	-	64	210	10 J	14	27	28	15	440 J	11 J	14	160	240 J	7.1	NS	1.3	-	-	-
015-A	TOTAL XYLENES	5150 J	-	-	-	-	310	-	-	-	-	-	10	-	-	120 J		-	-	-	-	NS	-	120	210	6.1 J
015-A	TRANS-1,2-DICHLOROETHENE	1370	1430	4660	3212 J	-	-	2101 J	1	-	150	99	13	2.7	46	46 J	84	23	160	79	37.7	NS	7.4 J	110	22 J	-
015-A	TRICHLOROETHENE	154000 J	161000	326000	225718 J	17000	12000	155853 J	16	8.1	3200	1300	340	18	3400	2400 J	3000	710	8800	1600	619	NS	112 J	1300	540 J	35
015-A	VINYL CHLORIDE	100 J	210	491	-	-	-	-	0.078 J	-	11 J	9.8	0.8	0.26	4	-	13	1.4	12	7.5 J	1.5 J	NS	-	-	-	-
015-A	**TOTAL VOCs**	**309,061 J**	**248,779 J**	**504,383 J**	**426,932 J**	**38,320**	**42,170**	**298,424 J**	**179 J**	**280 J**	**10,697 J**	**4,493 J**	**758 J**	**424**	**6,434**	**4,979 J**	**7,226 J**	**2,584 J**	**19,472**	**5,871 J**	**2,552 J**	**NS**	**482 J**	**5,046 J**	**1,403 J**	**143**
SSD-16-A	1,1,1-TRICHLOROETHANE	-	NS	NS	NS	67	420	NS	NS	NS	NS	5.7 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	1,1-DICHLOROETHANE	-	NS	NS	NS	180	1400	NS	NS	NS	NS	52	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	1,1-DICHLOROETHENE	42700 J	NS	NS	NS	2100	18000	NS	NS	NS	NS	890	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	BENZENE	46.1 J	NS	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CARBON TETRACHLORIDE	10.7 J	NS	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CHLORODIFLUOROMETHANE	-	NS	NS	NS	-	-	NS	NS	NS	NS	3.8 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CHLOROFORM	47.4 J	NS	NS	NS	-	-	NS	NS	NS	NS	2.5 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	CIS-1,2-DICHLOROETHENE	5820	NS	NS	NS	710	3000	NS	NS	NS	NS	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	METHYL TERT-BUTYL ETHER	1490 J	NS	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TETRACHLOROETHENE	514 J	NS	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TOLUENE	7.9 J	NS	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TOTAL XYLENES	68.1 J	NS	NS	NS	-	-	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TRANS-1,2-DICHLOROETHENE	297 J	NS	NS	NS	-	-	NS	NS	NS	NS	11	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	TRICHLOROETHENE	6870	NS	NS	NS	1300	3700	NS	NS	NS	NS	160	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	VINYL CHLORIDE	124 J	NS	NS	NS	-	63	NS	NS	NS	NS	7.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-16-A	**TOTAL VOCs**	**57,995 J**	**NS**	**NS**	**NS**	**4,357**	**26,583**	**NS**	**NS**	**NS**	**NS**	**1,242 J**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-16-A is also referenced as 016-A																										

TABLE 4-1

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

Location	VOC (µg/m³)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
017-A	1,1-DICHLOROETHANE	-	-	-	-	NS	47	-	21	6.7	8.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	1,1-DICHLOROETHENE	5.6	-	-	-	NS	38	-	17	6	6.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	1,2-DICHLOROETHANE	-	-	-	-	NS		-	-	0.13 J	0.084 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	BENZENE	0.9 J	-	-	-	NS	-	-	0.59 J	0.41	0.14 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CARBON TETRACHLORIDE	0.8 J	-	-	-	NS	-	-	0.57 J	0.53	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CHLOROFORM	1.1 J	-	-	-	NS	78	-	81	27	7.2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	CIS-1,2-DICHLOROETHENE	43.8	-	-	-	NS	8	-	6.2	2.4	1.8	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	DICHLORODIFLUOROMETHAN	2.8	-	-	-	NS	-	-	2.6	2.8	2	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	ETHYLBENZENE	-	-	-	-	NS	-	-	-	3.3	0.13 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	M+P-XYLENES	-	-	-	-	NS		-	1.8	9.3	0.37	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	METHYL TERT-BUTYL ETHER	0.7 J	-	-	-	NS	NA	-	-	0.51 J	0.24 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	METHYLENE CHLORIDE	-	-	-	-	NS		-	43	2.5	1.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	O-XYLENE	-	-	-	-	NS		-	0.56 J	2	0.14 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TETRACHLOROETHENE	0.7 J	-	-	-	NS	-	-	1.2 J	0.81	0.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TOLUENE	2.3	-	-	-	NS	-	-	14	58	0.54	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TOTAL XYLENES	1.7 J	-	-	-	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TRANS-1,2-DICHLOROETHENE	0.7 J	-	-	-	NS	-	-	0.52 J	0.2 J	0.18 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	TRICHLOROETHENE	60.4	-	-	-	NS	310	-	170	67	56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	VINYL CHLORIDE	-	-	-	-	NS	-	-	-	0.1 J	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
017-A	**TOTAL VOCs**	**122 J**	**-**	**-**	**-**	NS	**481**	**-**	**360 J**	**190 J**	**86 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
018-A	1,1,1-TRICHLOROETHANE	-	-	-	NA	NS	-	-	-	-	-	280 J	-	-	730	300 J	160 J	270	240 J	65 J	-	NS	NS	NS	NS	NS
018-A	1,1-DICHLOROETHANE	-	1750	78600	76901 J	NS	44000	76901 J	1100	-	280	660	3	-	2200	1300	1200	410	1400 J	430 J	3.2	NS	NS	NS	NS	NS
018-A	1,1-DICHLOROETHENE	9550 J	-	-	-	NS	1500000	-	43000	-	12000	32000	48	2.9	130000	69000	42000	54000	67000 J	24000 J	230	NS	NS	NS	NS	NS
018-A	1,2,4-TRIMETHYLBENZENE	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	0.85	0.75	1.7 J	NS	NS	NS	NS	NS
018-A	1,2-DICHLOROETHANE	-	-	-	-	NS	-	-	-	-	-	750	-	-	62	-	-	44	29 J	7.4 J	-	NS	NS	NS	NS	NS
018-A	1,3,5-TRIMETHYLBENZENE	-	-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1.4 J	NS	NS	NS	NS	NS
018-A	BENZENE	1.5 J	-	-	-	NS	-	-	-	-	24000 J	-	1	0.58	7.8	-	-	23	10 J	2	0.96	NS	NS	NS	NS	NS
018-A	CARBON TETRACHLORIDE	1.8 J	17.3	337	-	NS	-	-	-	-	-	-	-	-	6.7	-	-	7	2.7	3.5 J	-	NS	NS	NS	NS	NS
018-A	CHLORODIFLUOROMETHANE		-	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-		2.6	8.9	NS	NS	NS	NS	NS
018-A	CHLOROFORM	5.7	8.8 J	316	-	NS	-	-	-	-	-	-	0.6 J	0.65 J	14	-	-	15 J	8.3 J	2.9	1.7 J	NS	NS	NS	NS	NS
018-A	CIS-1,2-DICHLOROETHENE	2040 J	6270	232000	249784 J	NS	170000	249784 J	4400	-	1400	3200	17	1.3	23000	6700	8200	3800	5200	1700 J	16.3	NS	NS	NS	NS	NS
018-A	DICHLORODIFLUOROMETHAN	-	-	-	-	NS	-	-	-	-	150 J	-	2	2.5	2.2	-	-	2.8	2.4	3.3	2.2	NS	NS	NS	NS	NS
018-A	ETHYLBENZENE	-	-	-	-	NS	-	-	-	-	8100 J	-	1	2.6	0.97	-	-		0.79	1.1	-	NS	NS	NS	NS	NS
018-A	M+P-XYLENES	-	-	-	-	NS	-	-	-	-	28000 J	-	-	11	1.1 J	-	-	0.62 J	3.2 J	4	2 J	NS	NS	NS	NS	NS
018-A	METHYL TERT-BUTYL ETHER	14.4	5.3 J	-	-	NS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS
018-A	METHYLENE CHLORIDE	-	-	-	-	NS	-	-	520	-	-	-	-	0.81	-	-	-	-	-	1.7 J	19.8	NS	NS	NS	NS	NS
018-A	NAPHTHALENE	-	-	-	-	NS	-	-	-	-	-	-	-	11 J	-	-	450 J		2.7 J	7.1	3.1	NS	NS	NS	NS	NS
018-A	O-XYLENE	-	-	-	-	NS	-	-	-	-	3600 J	-	-	3.9	0.53 J	-	-	-	0.97	1.1	-	NS	NS	NS	NS	NS
018-A	TETRACHLOROETHENE	9.9	91.2 J	4470	-	NS	-	-	-	-	-	-	-	-	120	-	-	110	64 J	17 J	-	NS	NS	NS	NS	NS
018-A	TOLUENE	-	2.1 J	29.6 J	-	NS	-	-	300 J	-	1900 J	-	4	32	19	-	-	4.1	82 J	27 J	2.6	NS	NS	NS	NS	NS
018-A	TOTAL XYLENES	2.5 J	-	-	-	NS	-	-	-	-	-	-	5	-	-	-	-	-	-	-	-	NS	NS	NS	NS	NS
018-A	TRANS-1,2-DICHLOROETHENE	15.4	113	4160	-	NS	-	-	-	-	-	-	-	-	71	-		66	56 J	17 J	-	NS	NS	NS	NS	NS
018-A	TRICHLOROETHENE	20900 J	162000	6200000	3869448 J	NS	2700000	3869448 J	63000	-	19000	64000	160	7.2	800000	83000	69000	95000	96000 J	28000 J	174	NS	NS	NS	NS	NS
018-A	VINYL CHLORIDE	7	91.2	1850	-	NS	-	-	-	-	-	-	-	-	550	300 J	180 J	170	310 J	40	0.59	NS	NS	NS	NS	NS
018-A	**TOTAL VOCs**	**32,548 J**	**170,349 J**	**6,521,763 J**	**4,196,133 J**	NS	**4,414,000**	**4,196,133 J**	**112,320 J**	**-**	**98,430 J**	**100,890 J**	**242 J**	**76 J**	**956,785 J**	**160,600 J**	**121,190 J**	**153,923 J**	**170,413 J**	**54,333 J**	**468 J**	NS	NS	NS	NS	NS

TABLE 4-1

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Nov-07	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Oct-11	Feb-12	Aug-12	Feb-13	Mar-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
079-A	1,1,1-TRICHLOROETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.2
079-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.0 J
079-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.78 J
079-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.6
079-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13	0.80 J
079-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,400	-
079-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.7
079-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	10
079-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	3.5
079-A	NAPHTHALENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.0
079-A	TETRACHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9.9 J	7.4
079-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	8.3
079-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	44
079-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	300	-
079-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3,500	120
079-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**3,810 J**	**204 J**
136-A	1,1-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.48 J
136-A	1,2,4-TRIMETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.95 J
136-A	BENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.8
136-A	CHLORODIFLUOROMETHANE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.0
136-A	CHLOROFORM	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	330	50
136-A	CIS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	4.5
136-A	DICHLORODIFLUOROMETHAN	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	2.5
136-A	ETHYLBENZENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	1.6 J
136-A	METHYLENE CHLORIDE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	5.9
136-A	TOLUENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	13
136-A	TOTAL XYLENES	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	7.9
136-A	TRANS-1,2-DICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-	0.56 J
136-A	TRICHLOROETHENE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	35,000	850 DL
136-A	**TOTAL VOCs**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**35,330**	**941 J**

Notes:

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

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
001-C	1,1,1-TRICHLOROETHANE	-	-	-	-	-	-	-	-	-	2.1	-	2.8	-	-	-	-	NS	NS	NS	2	-	1.5 J	0.43 J	2.2 J
001-C	1,1-DICHLOROETHANE	-	-	-	-	-	-	0.33	-	0.28	-	-	6.7	-	-	-	1.4	NS	NS	NS	5.8	-	-	-	-
001-C	1,1-DICHLOROETHENE	5410	-	-	-	24	39	0.9	1	2.7	-	-	2.3	0.59	-	23	-	NS	NS	NS	-	-	-	0.45 J	-
001-C	1,2,4-TRIMETHYLBENZENE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NS	NS	NS	1.4	-	-	-	-
001-C	BENZENE	33.4	62.1	-	-	-	-	-	-	0.26	-	-	0.39	-	-	-	-	NS	NS	NS	-	0.81	-	0.41 J	-
001-C	CARBON TETRACHLORIDE	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-	-	-	NS	NS	NS	-	-	-	-	-
001-C	CHLORODIFLUOROMETHANE	-	-	-	-	-	-	-	-	-	7.5	-	-	-	NA	NA	-	NS	NS	NS	6.3	1.8	7.9	2.1	2.8 J
001-C	CHLOROFORM	86.8	-	-	-	-	-	8.5	7.4	6.1	18	5	13	5.2	-	-	8.9	NS	NS	NS	16.3	3.4	14	13	24
001-C	CIS-1,2-DICHLOROETHENE	840000	481000	1550000	257714	1100	3300	270	230	300	360	120	250	100	110	1900	170	NS	NS	NS	251	64	130	110	230
001-C	DICHLORODIFLUOROMETHANE	-	-	-	-	-	-	2.4	2.2	0.87	-	2	2.6	3	-	-	-	NS	NS	NS	2.6	2.1	2.7 J	2.4	2.9 J
001-C	ETHYLBENZENE	-	-	-	-	-	-	0.67	-	0.45	-	-	6.6	-	-	-	-	NS	NS	NS	4.3	0.89 J	-	0.79 J	2.4 J
001-C	M+P-XYLENES	-	-	-	-	-	-	1.3	-	1	13	-	14	-	NA	NA	-	NS	NS	NS	4.8	0.98 J	-	-	-
001-C	METHYL TERT-BUTYL ETHER	332	-	-	-	NA	NA	-	-	-	-	1	-	-	-	-	-	NS	NS	NS	-	-	-	-	-
001-C	METHYLENE CHLORIDE	-	-	-	-	-	-	-	4.5	-	7.4	33	1.1	-	-	32	-	NS	NS	NS	-	-	-	2.9 J	-
001-C	NAPHTHALENE	-	-	-	-	-	-	1.6	-	2.9	-	-	3.1	-	-	-	-	NS	NS	NS	18.3	2.2 J	-	1.1	-
001-C	O-XYLENE	-	-	-	-	-	-	-	-	0.41	5.6	-	4	-	NA	NA	-	NS	NS	NS	2.5	-	-	-	-
001-C	TETRACHLOROETHENE	107	158	136	-	-	-	3.3	3	3.6	6.2	2	4.8	1.8	-	-	8.7	NS	NS	NS	7	-	4.2 J	2.6 J	8.8 J
001-C	TOLUENE	86.8	-	-	-	-	-	1.8	-	0.49	-	0.6	3.6	1.2	-	-	13	NS	NS	NS	3.2	1.2 J	-	-	-
001-C	TOTAL XYLENES	81.5	-	-	-	-	-	-	-		-	-		3.5	-	-	5.1	NS	NS	NS	-	-	-	-	-
001-C	TRANS-1,2-DICHLOROETHENE	5180	5200	5930	3529	-	-	65	49	67	88	30	44	19	-	-	33	NS	NS	NS	45.7	13.5	32	24	60
001-C	TRICHLOROETHENE	19200	19600	21100	8599	450	850	270	330	230	620	190	550	200	150	700	300	NS	NS	NS	591	158	410	350	900
001-C	VINYL CHLORIDE	1320	761	578	-	58	40	-	-	1.4	-	-	-	-	-	14	-	NS	NS	NS	-	-	-	-	-
001-C	**TOTAL VOCs**	**871,838**	**506,781**	**1,577,744**	**269,842**	**1,632**	**4,229**	**626**	**627**	**618**	**1,128**	**384**	**909**	**334**	**260**	**2,669**	**540**	**NS**	**NS**	**NS**	**962**	**249 J**	**602**	**510 J**	**1,233**
SSD-2-C	BENZENE	18.3 J	NS	NS	NS	-	8.4	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	CHLOROFORM	552 J	NS	NS	NS	-	18	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	CIS-1,2-DICHLOROETHENE	320 J	NS	NS	NS	22	350	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	DICHLORODIFLUOROMETHANE	4.5 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	ETHYLBENZENE	38.2 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	METHYL TERT-BUTYL ETHER	1000	NS	NS	NS	NA	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TETRACHLOROETHENE	174 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TOLUENE	65.9 J	NS	NS	NS	14	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TOTAL XYLENES	95.5 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TRANS-1,2-DICHLOROETHENE	20.9 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	TRICHLOROETHENE	408 J	NS	NS	NS	55	770	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	VINYL CHLORIDE	15.9 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-2-C	**TOTAL VOCs**	**2,713 J**	**NS**	**NS**	**NS**	**91**	**1,146**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-2-C has been referenced as 002-C and SV-002-C																									
SSD-3-C	BENZENE	6.7 J	NS	NS	NS	64	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CARBON TETRACHLORIDE	1.8 J	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CHLOROFORM	66	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	CIS-1,2-DICHLOROETHENE	93.6	NS	NS	NS	-	8.5	NS	NS	NS	NS	NS	NS	NS	-	11	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	ETHYLBENZENE	19	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	METHYL TERT-BUTYL ETHER	469	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TETRACHLOROETHENE	388	NS	NS	NS	-	14	NS	NS	NS	NS	NS	NS	NS	-	58	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TOLUENE	18.8	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TOTAL XYLENES	70.9	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	8.7	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TRANS-1,2-DICHLOROETHENE	24.4	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	TRICHLOROETHENE	2130	NS	NS	NS	49	60	NS	NS	NS	NS	NS	NS	NS	49	310	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-3-C	**TOTAL VOCs**	**3,288 J**	**NS**	**NS**	**NS**	**273**	**1,999**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**58**	**379**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**
Note: SSD-3-C has been referenced as 003-C and SV-003-C																									

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
SSD-4-C	1,1,1-TRICHLOROETHANE	NA	NA	NA	NA	NA	NA	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	NA	NA	NS	NA	NA	NA	NA	NA
SSD-4-C	1,1-DICHLOROETHENE	1010	-	-	-	9.7	9.9	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.2	1.7	NS	-	1.1 J	0.8 J	-	0.69 J
SSD-4-C	1,2,3-TRIMETHYLBENZENE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.6 J	2	NS	-	-	-	-	-
SSD-4-C	1,2,4-TRICHLOROBENZENE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-
SSD-4-C	1,2,4-TRIMETHYLBENZENE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1	4.8	NS	-	-	-	-	-
SSD-4-C	1,3,5-TRIMETHYLBENZENE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	1.5	NS	-	-	-	-	-
SSD-4-C	BENZENE	51.2	50	71.2		-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.62	-	NS	-	-	-	-	0.37 J
SSD-4-C	CARBON TETRACHLORIDE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.83 J	0.83 J	NS	-	-	-	-	3.4
SSD-4-C	CHLORODIFLUOROMETHANE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	-	2.9	NS	26	1.6	2.1	0.99 J	1.7
SSD-4-C	CHLOROFORM	131	7 J	-	-	270	240	NS	NS	NS	NS	NS	NS	NS	33	46	NS	37	88	NS	34.3	15	4.7	5.9	20
SSD-4-C	CIS-1,2-DICHLOROETHENE	65800	79300	58100	10705	650	520	NS	NS	NS	NS	NS	NS	NS	200	2500	NS	82	71	NS	80.4	57.2	47	39	79
SSD-4-C	DICHLORODIFLUOROMETHANE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	3.4	2.3	NS	-	2.1	2.3	2.3	2.6
SSD-4-C	ETHYLBENZENE	58.9	4.3 J	4 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	1.5 J	NS	-	-	-	-	-
SSD-4-C	M+P-XYLENES	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	1.3 K	3.6	NS	-	-	-	-	-
SSD-4-C	METHYL TERT-BUTYL ETHER	420	-	-	-	-	NA	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-
SSD-4-C	METHYLENE CHLORIDE	-	-	-	-	-	36	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.5	1.2	NS	145	3.5 J	-	-	5.7
SSD-4-C	NAPHTHALENE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	12	4.4	NS	-	1.2 J	-	-	1.1
SSD-4-C	O-XYLENE	-	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NA	NA	NS	0.93	1.1	NS	-	-	-	-	-
SSD-4-C	TETRACHLOROETHENE	72.1	33.9	33.8 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.1	2.2 J	NS	-	-	0.79 J	1.3 J	2.4 J
SSD-4-C	TOLUENE	211	51.2	72.1	215	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	1.3	14	NS	9.6 J	1.1 J	-	-	-
SSD-4-C	TOTAL XYLENES	264	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	-	-	NS	-	-	-	-	-
SSD-4-C	TRANS-1,2-DICHLOROETHENE	1020	661	759	139	-	-	NS	NS	NS	NS	NS	NS	NS	-	-	NS	8.5	20	NS	12.4 J	6.2	7.4	2.2	5.1
SSD-4-C	TRICHLOROETHENE	14400	28300	16500	2741	430	300	NS	NS	NS	NS	NS	NS	NS	240	2500	NS	180	140	NS	210	121	120	99	250
SSD-4-C	VINYL CHLORIDE	663	381	609	-	16	13	NS	NS	NS	NS	NS	NS	NS	-	-	NS	0.47	0.65	NS	-	-	-	-	-
004-C	**TOTAL VOCs**	**84,101**	**108,788 J**	**76,149 J**	**13,800**	**1,376**	**1,119**	NS	NS	NS	NS	NS	NS	NS	**473**	**5,046**	NS	**334 J**	**364 J**	NS	**518 J**	**210 J**	**185**	**151 J**	**372 J**
Note: SSD-4-C has been referenced as 004-C and SV-004-C																									
SSD-5-C	1,1,1-TRICHLOROETHANE	-	NS	NS	NS	NS	-	-	-	-	4.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,1-DICHLOROETHANE	-	NS	NS	NS	NS	-	-	-	-	0.12 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,2,4-TRICHLOROBENZENE	-	NS	NS	NS	NS	-	0.39 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	1,2-DICHLOROETHANE	-	NS	NS	NS	NS	-	0.27 J	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	BENZENE	9 J	NS	NS	NS	NS	-	0.86	0.36	0.22 J	0.39	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CARBON TETRACHLORIDE	0.9 J	NS	NS	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CARBON TETRACHLORIDE	-	NS	NS	NS	NS	-	0.4 J	0.44 J	0.29 J	0.61	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CHLORODIFLUOROMETHANE	-	NS	NS	NS	NS	-	-	-	-	6.1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	CHLOROFORM	286	NS	NS	NS	NS	15	15	8.5	5.9	13	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	DICHLORODIFLUOROMETHANE	3.1 J	NS	NS	NS	NS	-	0.25 J	3.7	0.32 J	0.73	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	ETHYLBENZENE	93.6 J	NS	NS	NS	NS	-	1	0.24 J	-	0.41	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	M+P-XYLENES	-	NS	NS	NS	NS	-	3.3	0.65	0.24 J	1	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	METHYL TERT-BUTYL ETHER	572	NS	NS	NS	NS	NA	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	METHYLENE CHLORIDE	-	NS	NS	NS	NS	-	0.59 J	-	-	0.58 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	NAPHTHALENE	-	NS	NS	NS	NS	-	1.4	0.47 J	0.33 J	0.29 J	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	O-XYLENE	-	NS	NS	NS	NS	-	1.8	0.43	0.16 J	0.64	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TETRACHLOROETHENE	82.9 J	NS	NS	NS	NS	64	94	66	48	110	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TOLUENE	157 J	NS	NS	NS	NS	-	4.1	0.53	0.36	0.56	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TOTAL XYLENES	407 J	NS	NS	NS	NS	-	-	-	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	TRICHLOROETHENE	-	NS	NS	NS	NS	-	1.5	0.94	0.81	2.6	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-5-C	**TOTAL VOCs**	**1,612 J**	NS	NS	NS	NS	79	**125 J**	**82 J**	**57**	**142 J**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-5-C has been referenced as 005-C and SV-005-C																									

TABLE 4-2

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

Location	VOC (µg/m³)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
SSD-6-C	BENZENE	23.5 J	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	CARBON TETRACHLORIDE	1.4 J	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	CHLOROFORM	390	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	DICHLORODIFLUOROMETHANE	2.6 J	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	ETHYLBENZENE	164 J	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	METHYL TERT-BUTYL ETHER	416	NS	NS	NS	NS	NA	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TETRACHLOROETHENE	76.3 J	NS	NS	NS	NS	42	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TOLUENE	249	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	TOTAL XYLENES	935	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
SSD-6-C	**TOTAL VOCs**	**2,258** J	NS	NS	NS	NS	**42**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Note: SSD-6-C has been referenced as 006-C and SV-006-C																									
060-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	-	-	-	14 J	4	33	17 J	NS	NS	9.5 J	19	19	-	0.95 J	7.9	0.76 J	51	3.9
060-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	8.5	0.29 J	-	87	21	250	120 J	NS	NS	74	43	6.9	2.3	1.8	3.1 J	0.69 J	6.8	3.2
060-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	-	-	-	3 J	2	17	12 J	NS	NS	4.6 J	22	7.4	0.86 J	-	-	-	0.86 J	-
060-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	6.8	1.5 J	0.91	1 J	-	-	-	1.2 J
060-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	64	NS	NS	-	9.5	5.4 J	3.2	4.3	3.8 J	1.5 J	4	5.2
060-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	0.53 J	-	-	-	-	-	-
060-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	19 J	NS	NS	-	14 J	5.8 J	2.2	1.7	2.7 J	0.94 J	3.1	4.2
060-C	BENZENE	NS	NS	NS	NS	NS	NS	2.2 J	0.53	0.64	-	1	6.5	-	NS	NS	-	5.9	0.62	0.85	-	-	-	0.48 J	-
060-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	-	0.5 J	0.38 J	-	-	-	-	NS	NS	-	-	-	-	-	-	-	-	-
060-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	-	-	-	190	-	-	-	NS	NS	6 J	-	260	5.8 J	9.4	6.4	62	6.8	17
060-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	9.1	0.44	0.13 J	67	16	200	94 J	NS	NS	69	57	5	3.1	-	4.5	1.3 J	9.9	3.1
060-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	45	0.19 J	-	140	31	540	340 J	NS	NS	230	460 J	23	16.5	1.4	-	-	2.1	1.5 J
060-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	2.7 J	2.3	1.9	-	3	7.5	-	NS	NS	-	4	3.8	2.8	3	-	3	2.4	2.9
060-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	490	2.8	22	53	31	270	460 J	NS	NS	160	390 J	150 J	96.5	65	234	66	190	190
060-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	2200	11	95	110	-	580	-	NS	NS	-	2800	650	561	250	1240	-	-	-
060-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	-	-	-	12 J	-	10	-	NS	NS	-	5.8	3.4	10.7	70.9	6.7 J	4.4	2.5 J	11
060-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	5.8 J	0.44 J	3.2	-	-	3	770 J	NS	NS	360 J	67	4.3 J	4.4	28.6 J	7.5 J	5	10	13
060-C	O-XYLENE	NS	NS	NS	NS	NS	NS	670	5.8	40	130	-	720	-	NS	NS	-	1300	130	230	171	455	-	-	-
060-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	3.4 J	0.26 J	21	25 J	6	88	40 J	NS	NS	26 J	23	1.2 J	2.2	2.9	-	-	1 J	1.2 J
060-C	TOLUENE	NS	NS	NS	NS	NS	NS	50	2.4	7	7.6 J	4	14	29 J	NS	NS	10 J	8	20	13.1	8.2	18.8	14	3.4	4.8
060-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	-	-	-	-	130	-	3100 J	NS	NS	2600	-	-	-	-	-	550	1000	1200 DL
060-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	2.1 J	-	-	17	5	61	38	NS	NS	24	18	3.5	1.1 J	-	-	-	1.1 J	0.96 J
060-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	180	2.6	0.46	2200	440	12000	4900	NS	NS	3700	10000	370	291	58.6	78.5	8.2	220	70
060-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	1.9	-	NS	NS	-	-	-	-	-	-	-	-	-
060-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	**3,669 J**	**30 J**	**192 J**	**3,056 J**	**694**	**14,802**	**10,003 J**	NS	NS	**7,273 J**	**15,253 J**	**1,671 J**	**1,249 J**	**679 J**	**2,069 J**	**718**	**1,515 J**	**1,533**

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
088-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	-	-	-	0.54 J	0.6 J	0.89	-	NS	NS	-	-	0.67 J	-	-	-	0.93 J	-	1.3 J
088-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	0.2 J	0.32 J	-	-	0.14 J	0.74	-	NS	NS	-	-	-	0.66	1.6 J	-	0.22 J	-	0.23 J
088-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	0.2 J	0.43 J	0.13 J	-	-	1	3.3 J	NS	NS	-	1	0.52 J	-	-	-	-	-	-
088-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	30	NS	NS	-	2.9	3	1.1	1.5 J	-	1.6 J	-	1.5 J
088-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	39	NS	NS	-	5.4	5.4	1.8	2	-	1 J	-	1.8 J
088-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	0.62	-	-	-	-	-	-
088-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	11 J	NS	NS	-	1.1	1.7	-	-	-	-	-	0.69 J
088-C	BENZENE	NS	NS	NS	NS	NS	NS	2.8	2	0.93	1.3	6	2.6	-	NS	NS	-	1.1	0.97	1.2	-	1.7	0.39 J	0.59 J	0.4 J
088-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	0.53 J	0.64 J	0.33 J	0.66 J	-	-	-	NS	NS	-	0.77 J	-	-	-	-	-	-	0.59 J
088-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	-	-	-	49	-	-	-	NS	NS	-	-	210	3.2	6.5	3.9	35	1.8	7.1
088-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	4.4	1.8 J	1.4	2.8	3	11	9.7 J	NS	NS	5.1 J	6.6	2.4	-	-	-	0.96 J	0.44 J	1.4 J
088-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	95	140	73	73	100	620	670	NS	NS	350	470	33	17.6	17.7	8.4	7.7	12	17
088-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	2.5	2.2	1.6	2.7	2	3.1	-	NS	NS	-	3.2	6.8	2.6	2.8	1.9 J	2.5	2.5	2.4
088-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	30	6.7	2.2	2.9	11	7.2	15 J	NS	NS	-	1.1	2.6 J	2.2	1.8	-	0.78 J	-	1.4 J
088-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	110	30	11	14	-	23	-	NS	NS	-	5.5	11	10	8.7	1.9 J	-	-	-
088-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	2.8	-	-	3.3 J	-	1.8	-	NS	NS	-	0.92	1.3	82.5	-	1.3 J	3.2 J	-	3.7
088-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	17	3.5 J	1.7	3.2 J	0.9 J	3.7	540	NS	NS	290	61	15	22.3	61.7 J	4.4 J	5.4	1.8	4
088-C	O-XYLENE	NS	NS	NS	NS	NS	NS	100	25	8.1	10	-	18	-	NS	NS	-	4.4	7.1	4.7	5.5	-	-	-	-
088-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	0.95 J	0.65 J	0.43 J	-	-	1.1	-	NS	NS	-	2.3	0.83 J	-	-	-	-	2.9	-
088-C	TOLUENE	NS	NS	NS	NS	NS	NS	32	8	5.7	9.2	10	18	12 J	NS	NS	-	1.4	8.4	-	10.3	114	-	-	3.2
088-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	-	-	-	-	31	-	150	NS	NS	5 J	-	-	-	-	-	7.3	3.9	16
088-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	1.7	3	1.2	1.4 J	2	7.5	14 J	NS	NS	6.1 J	5.4	1.9	-	0.87 J	-	-	-	1 J
088-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	260	560	240	270	270	1800	3800	NS	NS	2000	2800	270	70.6	79.8	40	31	46	76
088-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	-	-	-	-	-	-	-	NS	NS	-	-	-	0.49	-	-	-	-	-
088-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**660 J**	**784 J**	**348 J**	**444 J**	**437 J**	**2,520**	**5,294 J**	**NS**	**NS**	**2,656 J**	**3,374 J**	**583 J**	**221**	**201 J**	**178 J**	**98**	**72 J**	**140 J**
111-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.98 J	-	NS	NS
111-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	0.76 J	NS	NS
111-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.6	30	NS	NS
111-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	1.5 J	NS	NS
111-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.2 J	-	NS	NS
111-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	2.4	NS	NS
111-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7	2.3	NS	NS
111-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3		NS	NS
111-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	37.4	5.3	NS	NS
111-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.9 J	1.1	NS	NS
111-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7		NS	NS
111-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.9	4.9	NS	NS
111-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	18.4	9.4	NS	NS
111-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**84 J**	**58**	**NS**	**NS**

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
113-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	2.6	-	NS	NS	-	1.1 J	1.3 J	-	-	-	0.56 J	1.4 J	1 J
113-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	4.1	-	NS	NS	-	2.2 J	2.2 J	-	1.4 J	-	-	1.6	-
113-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	3.1	-	NS	NS	-	1.7	0.69 J	-	-	-	-	0.66 J	-
113-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	2.8 J	3 J	-	12.5	27.3	-	-	0.89 J
113-C	1,2,4-TRICHLOROBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	-	-	-	-	-	-	-	-
113-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	8.5 J	-	-	-	121	-	-	1.1 J
113-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	-	2.2 J	1.9 J	-	5.2	38.9	-	-	-
113-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	4.6	-	NS	NS	-	2 J	0.49 J	2.4	-	12.1	-	-	-
113-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.7	-	NS	NS	-	-	-	1.1	-	-	-	-	0.51 J
113-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	NS	NS	12 J	3.2	27	10.7 J	6.7	4.4	18	2.9	5.9
113-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	25	67	38	NS	NS	59	50 J	3 J	1.8	-	2.5	1.6 J	1.4 J	2.5
113-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	330	490	500	NS	NS	700	850 J	40	31.7 J	17.5	28.6	14	19	36
113-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	3.6	-	NS	NS	-	3.2	2.4 J	3.8 J	3.3	2.2	2.4	2.3	3
113-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11	4.6	-	NS	NS	-	1.6 J	2.6 J	-	2.3	27.5	0.98 J	-	0.65 J
113-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	15	-	NS	NS	-	6.4 J	14 J	2.4 J	7.6	207	-	-	-
113-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	1.7	-	NS	NS	-	0.56	0.53 J	557 J	9.4	2.4 J	-	4.8	19
113-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	17 L	1600 J	64 J	NS	NS	30 J	51 J	47	3.7 J	233 J	27	1.4	-	3.1
113-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	7.8	-	NS	NS	-	2.5 J	4.5 J	0.83 J	4.7	80.2	-	-	-
113-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9 J	20	14 J	NS	NS	21 J	15 J	0.69 J	-	1.8	1.4	-	-	-
113-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	16	8.4	15 J	NS	NS	16 J	3 J	7 J	6.1 J	7.3	51.1	-	-	2.3
113-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	79	-	-	NS	NS	-	-	-	-	-	-	5.3	2 J	4
113-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	8.3	-	NS	NS	-	5.2 J	0.6 J	-	-	-	-	-	-
113-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5000	7300	5700	NS	NS	8900	16000 J	290	243 J	222	424	140	150	320
113-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.65	-	NS	NS	-	0.86	-	-	-	-	-	-	-
113-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**5,487**	**9,542**	**6,331**	**NS**	**NS**	**9,738 J**	**17,013 J**	**449 J**	**865 J**	**535 J**	**1,058 J**	**184**	**186 J**	**400 J**
126-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	360	NS	NS	1300	680	720	199	80.4	104	330	500	1100
126-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	5.5 J	5.8 J	-	1.4	-	-	-	-
126-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	29 J	NS	NS	-	-	6.2 J	4.3	1.7	2.1	-	-	-
126-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	1.1 J	-	-	-	-	-
126-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	86	NS	NS	270	250 J	300	88.4	29.3	40.6	120	150	290
126-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	22 J	1.2 J	-	-	-	-	-	-	-
126-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	20 J	NS	NS	-	-	-	-	5.3	-	6.5 J	-	-
126-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	2.3 J	0.84 J	-	-	-	-	-
126-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	350	NS	NS	900	560	740	205	74.2	83.1	250	290	530
126-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.96 J	0.55 J	1.5 J	3.1	1.3 J	-	-	-
126-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	72	NS	NS	220	8.7 J	13 J	3	1.1 J	0.81 J	6.4 J	-	-
126-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	18 J	15 J	13.4	3.9	3.6	-	-	-
126-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	4.2 J	3.1 J	9.2	-	1.4 J	-	-	-
126-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	NS	NS	380	200 J	100 J	70.6	152 J	25.7	11	-	28
126-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	11 J	14 J	5.7	1.8	1.5 J	-	-	-
126-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	-	1.2	-	-	-	-
126-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	54	NS	NS	110	19 J	45 J	14.7	20	19.6	23	-	-
126-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	350	NS	NS	1200	-	-	-	-	-	11 J	-	-
126-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	41 J	NS	NS	95	32 J	92	-	8.5	-	31	20 J	43
126-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	280	NS	NS	5800 J	920 J	2400	177	26.4	71.3	170	340	890
126-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	82000	NS	NS	110000	37000	28000	11900	4030	1310 J	16000	3100	5000 DL
126-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**83,892 J**	**NS**	**NS**	**120,297 J**	**39,711 J**	**32,457 J**	**12,694 J**	**4,440 J**	**1,665 J**	**16,959**	**4,400 J**	**7,881 J**

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
127-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	268	NS	NS	NS	NS
127-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	25.1	NS	NS	NS	NS
127-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS
127-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4000	NS	NS	NS	NS	NS	NS	0.91 J	NS	NS	NS	NS
127-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1000 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS
127-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	27.8	NS	NS	NS	NS
127-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	4.1	NS	NS	NS	NS
127-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.4 J	NS	NS	NS	NS
127-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.2	NS	NS	NS	NS
127-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.1 J	NS	NS	NS	NS
127-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4300 J	NS	NS	NS	NS	NS	NS	5.9 J	NS	NS	NS	NS
127-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS
127-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	2.6	NS	NS	NS	NS
127-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	5.9	NS	NS	NS	NS
127-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2900 J	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS
127-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	240000	NS	NS	NS	NS	NS	NS	410	NS	NS	NS	NS
127-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	NS	NS	NS	NS	1.1	NS	NS	NS	NS
127-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**254,400 J**	NS	NS	NS	NS	NS	NS	**763 J**	NS	NS	NS	NS
133-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	5.2	-	-	NS	NS	NS	NS
133-C	1,1-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	4.6 J	-	-	NS	NS	NS	NS
133-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	1.5 J	-	-	NS	NS	NS	NS
133-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.95	4.1 J	-	-	NS	NS	NS	NS
133-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.1	28 J	-	-	NS	NS	NS	NS
133-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.7	0.66	0.92	-	NS	NS	NS	NS
133-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.6 J	3.6	-	-	NS	NS	NS	NS
133-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.3	0.71	0.87	-	NS	NS	NS	NS
133-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.5	0.9 J	-	-	NS	NS	NS	NS
133-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1500	NS	NS	290 J	-	440 J	4.4	12.7	NS	NS	NS	NS
133-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	83 J	NS	NS	-	43	8.3	6.7	-	NS	NS	NS	NS
133-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	33	2.5	8.7	-	NS	NS	NS	NS
133-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	130 J	NS	NS	-	-	2.8 J	3.2	4.3	NS	NS	NS	NS
133-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93	2.5	-	1.2 J	NS	NS	NS	NS
133-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.93 J	9.6	2 J	4	NS	NS	NS	NS
133-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2700 J	NS	NS	13000 J	-	0.74	20.2 J	-	NS	NS	NS	NS
133-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	-	110	42 J	4.7	3.3 J	NS	NS	NS	NS
133-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.57 J	2.3	0.95 J	1.5	NS	NS	NS	NS
133-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2200	NS	NS	740	1500	77	169	3.3 J	NS	NS	NS	NS
133-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	180 J	NS	NS	2400 J	1.3	9.2	5.5 J	5.1	NS	NS	NS	NS
133-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	170 J	NS	NS	-	-	-	-	-	NS	NS	NS	NS
133-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	25 L	3.1	3.6 J+	-	NS	NS	NS	NS
133-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	50000	NS	NS	20000	60000	5600	10700	199 J	NS	NS	NS	NS
133-C	VINYL CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.57	-	-	NS	NS	NS	NS
133-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**59,163 J**	NS	NS	**36,430 J**	**61,723 J**	**6,250 J**	**10,931 J**	**234 J**	NS	NS	NS	NS

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
135-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.78 J	-	NS	NS	NS	NS	NS
135-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	-	3.2	NS	NS	NS	NS	NS
135-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	81	NS	NS	-	4.1	2.1	-	NS	NS	NS	NS	NS
135-C	1,2-DICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	-	0.49 J	-	NS	NS	NS	NS	NS
135-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	27 J	NS	NS	-	1.2 J	1	-	NS	NS	NS	NS	NS
135-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.75	1.1	0.33 J	NS	NS	NS	NS	NS
135-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	52	1.7	-	NS	NS	NS	NS	NS
135-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-		89	2.1	NS	NS	NS	NS	NS
135-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	14 J	NS	NS	-	21	0.84	-	NS	NS	NS	NS	NS
135-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	220	NS	NS	260	130	-	-	NS	NS	NS	NS	NS
135-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	2.7	3.4	2.1	NS	NS	NS	NS	NS
135-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	40 J	NS	NS	-	-	3	4.2	NS	NS	NS	NS	NS
135-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	1.9	9.2	18.1	NS	NS	NS	NS	NS
135-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.49 J	-	2.1 J	NS	NS	NS	NS	NS
135-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	510	NS	NS	580	280	6.7	3.8 J	NS	NS	NS	NS	NS
135-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	NS	-	0.66	4.8	4.3	NS	NS	NS	NS	NS
135-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22 J	NS	NS	-	11	-	-	NS	NS	NS	NS	NS
135-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	49	NS	NS	-	0.61	7.7	-	NS	NS	NS	NS	NS
135-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	210	NS	NS	-	-	-	-	NS	NS	NS	NS	NS
135-C	TRANS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15 J	NS	NS	-	3.9	-	-	NS	NS	NS	NS	NS
135-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11000	NS	NS	16000	4500	29	5.6	NS	NS	NS	NS	NS
135-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**12,188 J**	NS	NS	**16,840**	**5,010 J**	**161 J**	**46 J**	NS	NS	NS	NS	NS
141-C	1,1-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.44 J	1.7	-	-	0.69 J	NS	NS
141-C	1,2,3-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	-	-	-	-	-	NS	NS
141-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.5 J	1.9	-	1.5 J	-	-	NS	NS
141-C	1,3,5-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.9 J	-	-	-	-	-	NS	NS
141-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.58 J	-	0.88	-	0.96	-	NS	NS
141-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.64 J	-	-	-	-	NS	NS
141-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.7 J	3.4	2.6	19.9	2.7	90	NS	NS
141-C	CIS-1,2-DICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS		0.73	2.2		-	0.72 J	NS	NS
141-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.7 J	2.3	2.3	2.7	2	2.3	NS	NS
141-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	48	1.9	2.2	2.6	-	1.2 J	NS	NS
141-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	250	10	11.6	10.3	1 J	-	NS	NS
141-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	1	39.1	1.4 J	1.8 J	7.5	NS	NS
141-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	170	1.7	4.1 J	1.5 J	-	-	NS	NS
141-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	62	2.4 J	3.7	4.6	-	-	NS	NS
141-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	1.5	-	-	NS	NS
141-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7 J	15	3.7	5.2	2.4	33	NS	NS
141-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.4 J	5.7	25.2	3.2	2	3.9	NS	NS
141-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**560 J**	**47 J**	**99 J**	**54 J**	**13 J**	**139**	NS	NS
149-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.86 J
149-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	1.2 J	-	4	
149-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.95 J	1.9	0.45 J	1.1 J	0.6 J
149-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.54 J
149-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8	11.7	11	3.5	3.7
149-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.84 J
149-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	4.6	2.3	2.4	2.7
149-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2	-	0.7 J	1.5 J	1.8
149-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	7.2	2.9 J	-	-	-
149-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1 J	105	6.1	7.2	12
149-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2 J	-	-	-	-
149-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.6	1.1 J	-	-	-
149-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6	-	-	-	0.57 J
149-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	21.1	23.5	5.9	13	7.4
149-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	12
149-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	1.4	3.5	-	5.3
149-C	**TOTAL VOCs**	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	**59 J**	**153 J**	**30**	**33 J**	**48 J**

TABLE 4-2

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

Location	VOC (µg/m^3)	Mar-06	Dec-06	Apr-07	Oct-07	Jul-08	Nov-08	Jul-09	Oct-09	Feb-10	Aug-10	Feb-11	Aug-11	Feb-12	Jun-12	Jul-12	Aug-12	Feb-13	Aug-13	Feb-14	Sep-14	Feb-15	Aug-15	Feb-16	Aug-16
152-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.7	13 J	1.1 J	0.84 J
152-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.98 J	-	0.97 J	0.79 J
152-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	-	1.5	1.3
152-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.6	72	18	38
152-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	0.40 J
152-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	-	2.5	2.8
152-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.89 J	-	0.75 J	1.8
152-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.1	-	-	-
152-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.89 J	-	4.1	12
152-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	-	-	5
152-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.1 J	-	-	-
152-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.2	-	-	-
152-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	15.1	-	4.3	5.5
152-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	7.9
152-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.8	2100	-	0.48 J
152-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**46 J**	**2,185**	**33 J**	**77 J**
153-C	1,1,1-TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	0.57 J	
153-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	0.98 J	0.81 J	1 J	0.83 J
153-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	2.3	1.4	0.86 J	0.38 J
153-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.49 J
153-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	10.7	7.6	21	3	6.7
153-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	0.57 J
153-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3	2.3	2.5	2.7	2.6
153-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.8	-	1 J	1 J	1.6 J
153-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	6.9	2.3 J	-	-	
153-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.97 J	1.7 J	4.1	-	15
153-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.5 J	1.1 J	-	-	
153-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.6	0.92 J	-	-	
153-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5	-	0.62 J	-	2.9
153-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	8.6	56.9 J	3.5	-	4.9
153-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	-	-	-	11
153-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	18.8 J	13	10	12
153-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**42 J**	**95 J**	**48**	**19 J**	**60 J**
155-C	1,1,1-TRICHLOROETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	0.96 J
155-C	1,2,4-TRIMETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	0.91 J	NS	-	-	-
155-C	CARBON TETRACHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	1.4 J
155-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.4	NS	22	4.4	5.7
155-C	CHLOROFORM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	1.7 J
155-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.9	NS	2.3	2.2	2.5
155-C	ETHYLBENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.4 J	NS	0.65 J	1.3 J	1.2 J
155-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	4.5	NS	-	-	-
155-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4 J	NS	-	-	3.3 J
155-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	-	-	2
155-C	O-XYLENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	-	-	-
155-C	TETRACHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	5.7
155-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	11.2	NS	-	-	2.4
155-C	TOTAL XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	-	NS	-	-	8.6
155-C	TRICHLOROETHENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.5 J	NS	0.66 J	0.96 J	1.4
155-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**39 J**	**NS**	**26**	**9 J**	**37 J**
156-C	BENZENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	3.4	NS	NS	NS
156-C	CHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	5.3	NS	NS	NS
156-C	DICHLORODIFLUOROMETHANE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	2.1	NS	NS	NS
156-C	M+P-XYLENES	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.6 J	NS	NS	NS
156-C	METHYLENE CHLORIDE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	22.5	NS	NS	NS
156-C	NAPHTHALENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	1.3 J	NS	NS	NS
156-C	TOLUENE	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	9.9	NS	NS	NS
156-C	**TOTAL VOCs**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**NS**	**46 J**	**NS**	**NS**	**NS**

Notes:

Data presented in this table is from sub-slab vapor samples.

VOC = volatile organic compound
SSDS = sub-slab depressurization system
µg/m^3 = micrograms per cubic meter
- = not detected (below detection limit)
DL = diluted analysis
NS = not sampled

J = estimated value
J+ = estimated value, may be biased high
K = value is biased high
L = value is biased low
NA = compound not reported
NA = compound not reported

TABLE 4-3

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

Date	*Sub-Slab Vapor Monitoring Point*								
	SSD-11-A	*SSD-12-A*	*SSD-13-A*	*015-A*	*SSD-16-A*	*017-A*	*018-A*	*079-A*	*136-A*
6-Mar	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
6-Dec	-	-	✓	✓	-	-	✓	N/A	N/A
7-Apr	-	-	✓	✓	-	-	✓	N/A	N/A
7-Oct	-	-	✓	✓	-	-	✓	N/A	N/A
7-Nov	-	-	✓	✓	-	-	✓	N/A	N/A
8-Jul	✓	✓	✓	✓	✓	-	-	N/A	N/A
8-Nov	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
9-Jul	-	-	-	✓	-	✓	✓	N/A	N/A
9-Oct	-	-	-	✓	-	✓	✓	N/A	N/A
10-Aug	-	-	-	✓	✓	-	✓	N/A	N/A
10-Feb	-	-	-	✓	-	✓	✓	N/A	N/A
11-Feb	-	-	-	✓	-	-	✓	N/A	N/A
11-Aug	-	-	-	✓	-	-	✓	N/A	N/A
11-Oct	-	-	-	✓	-	-	✓	N/A	N/A
12-Feb	-	-	-	✓	-	-	✓	N/A	N/A
12-Aug	-	-	-	✓	-	-	✓	N/A	N/A
13-Feb	-	-	-	✓	-	-	✓	N/A	N/A
13-Mar	-	-	-	✓	-	-	✓	N/A	N/A
13-Aug	-	-	-	✓	-	-	✓	N/A	N/A
14-Feb	-	-	-	✓	-	-	✓	N/A	N/A
14-Sep	-	-	-	-	-	-	-	N/A	N/A
15-Feb	-	-	-	✓	-	-	-	N/A	N/A
15-Aug	-	-	-	✓	-	-	-	N/A	N/A
16-Feb	-	-	-	✓	-	-	-	✓	✓
16-Aug	-	-	-	✓	-	-	-	✓	✓

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

TABLE 4-4

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

Vapor Monitoring Point	*Before SSD-system operation**		*During SSD-system operation (most recent concentration)*	
	Date	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*	*Date*	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*
015-A	April 2007	326,000	August 2016	35 *J*
018-A	August 2010	64,000	February 2014	174
079-A	February 2016	3,500	August 2016	120
136-A	February 2016	35,300	August 2016	850

Notes:

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

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

J—estimated value

SSD—sub-slab depressurization

TABLE 4-5

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

Date	Sub-Slab Vapor Monitoring Point																			
	001-C	SSD-2-C	SSD-3-C	SSD-4-C	SSD-5-C	SSD-6-C	060-C	088-C	111-C	113-C	126-C	127-C	133-C	135-C	141-C	149-C	152-C	153-C	155-C	156-C
6-Mar	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
6-Dec	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7-Apr	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7-Oct	✓	-	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8-Jul	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8-Nov	✓	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9-Jul	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
9-Oct	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
10-Feb	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	
10-Aug	✓	-	-	-	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
11-Feb	✓	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-
11-Aug	✓	-	-	-	-	-	✓	✓	-	✓	-	-	-	-	-	-	-	-	-	-
12-Feb	✓	-	-	-	-	-	✓	✓	-	✓	✓	✓	✓	✓	-	-	-	-	-	-
12-Jun	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Jul	✓	-	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
12-Aug	✓	-	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	-	-	-	-	-	-
13-Feb	-	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
13-Aug	-	-	-	✓	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
14-Feb	-	-	-	-	-	-	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	-
14-Sep	✓	-	-	✓	-	-	✓	✓	-	✓	✓	✓	✓	-	✓	✓	-	✓	✓	-
15-Feb	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	-	✓
15-Aug	✓	-	-	✓	-	-	✓	✓	✓	✓	✓	-	-	-	✓	✓	✓	✓	✓	-
16-Feb	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-
16-Aug	✓	-	-	✓	-	-	✓	✓	-	✓	✓	-	-	-	-	✓	✓	✓	✓	-

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

TABLE 4-6

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

Vapor Monitoring Point	*Before SSD-system operation**		*During SSD-system operation (most recent concentration)*	
	Date	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*	*Date*	*Sub-Slab Vapor Concentration ($\mu g/m^3$)*
SOUTHERN BASEMENT AREA+A3:E24*				
001-C	March 2006	19,200	August 2016	900
SSD-4-C	December 2006	28,300	August 2016	250
MID-BASEMENT AREA **				
060-C	August 2011	12,000	August 2016	70
088-C	February 2012	3,800	August 2016	76
113-C	February 2013	16,000 J	August 2016	320
126-C	August 2012	5,800 J	August 2016	890
127-C	Not Sampled		September 2014	410
133-C	February 2013	60,000	September 2014	199 J
141-C	Not Sampled		August 2015	3.9
149-C	Not Sampled		August 2016	5.3
152-C	Not Sampled		August 2016	0.48 J
153-C	Not Sampled		August 2016	12
155-C	Not Sampled		August 2016	1.4

Notes:

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

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

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

J—estimated value

SSD—sub-slab depressurization

Table 4-7A
Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Mar-08	--	--	N/A	--	--	**2,100**	--	**7,900**	**8,300**	--	**300**	--	--	--	**330**	**30,000**	**44,000**	--	--	--	--	--	**1,100**	**280**	94,310
Apr-08	--	--	N/A	--	--	**660**	--	**4,500**	**3,800**	--	--	--	--	--	--	**16,000**	**34,000**	--	--	--	--	--	--	--	58,960
Apr-08	--	--	N/A	--	--	**460**	--	**3,300**	**2,300**	--	--	--	--	--	--	**13,000**	**30,000**	--	--	--	--	--	--	--	49,060
Apr-08	--	--	N/A	--	--	**280**	--	**1,500**	**1,100**	--	--	--	--	--	**120**	**9,100**	**14,000**	--	--	--	--	--	--	--	26,100
Apr-08	--	--	N/A	--	--	**480**	--	**2,200**	**2,000**	--	--	--	--	--	**120**	**11,000**	**18,000**	--	--	--	--	--	**110**	--	33,910
Apr-08	--	--	N/A	--	--	**260**	--	**1,200**	**930**	--	--	--	--	--	**86**	**6,500**	**8,600**	--	--	--	--	--	--	--	17,576
May-08	--	--	N/A	--	--	**320**	--	**950**	**1,000**	--	--	--	--	--	--	**6,000**	**5,500**	--	--	--	--	--	--	--	13,770
Jun-08	**180**	--	N/A	--	--	**180**	--	**760**	**720**	--	--	--	--	--	--	**4,800**	**7,100**	--	--	--	--	--	--	--	13,740
Jul-08	--	--	N/A	--	--	**110**	--	**430**	**350**	--	--	--	--	--	--	**3,200**	**3,700**	--	--	--	--	--	--	--	7,790
Aug-08	--	--	N/A	--	--	**150**	--	**400**	**470**	--	--	--	--	--	**28**	**2,900**	**3,400**	--	--	--	--	--	--	--	7,348
Sep-08	--	--	N/A	--	--	**130**	--	**430**	**380**	--	--	**17**	--	**70**	**52**	**1,900**	**2,700**	**32**	--	--	--	--	--	--	5,711
Nov-08	--	--	N/A	--	--	**300**	--	**1,100**	**1,300**	--	--	--	--	--	**72**	**6,500**	**7,200**	--	--	--	--	--	--	--	16,472
Dec-08	--	--	N/A	--	--	**120**	--	**380**	**420**	--	--	--	--	--	--	**2,300**	**4,100**	--	--	--	--	--	**53**	--	7,373
Jan-09	--	--	N/A	--	--	**110**	--	**380**	**380**	--	--	--	--	--	--	**2,100**	**2,100**	--	--	--	--	--	--	--	5,070
Feb-09	--	--	N/A	--	--	**78**	--	**260**	**270**	--	--	--	--	--	**24**	**1,600**	**1,600**	--	--	--	--	--	--	--	3,832
Mar-09	--	--	N/A	--	--	**470**	--	**150**	**620**	--	--	--	--	--	--	**3,800**	**3,700**	--	--	--	--	--	--	--	8,740
Apr-09	--	--	N/A	--	--	**100**	--	**220**	**360**	--	--	--	--	--	--	**1,900**	**2,400**	--	--	--	--	--	--	--	4,980
May-09	--	--	N/A	--	--	**62**	--	**140**	**200**	--	--	--	--	--	**32**	**1,700**	**1,500**	--	--	--	--	--	--	--	3,634
Jun-09	--	--	N/A	--	--	**77**	--	**200**	**280**	--	--	--	--	--	**19**	**1,700**	**1,800**	--	--	--	--	--	--	--	4,076
Jul-09	--	--	N/A	--	--	**68**	--	**180**	**250**	--	--	**27**	--	--	**13**	**1,400**	**1,700**	**14**	--	--	--	--	--	--	3,652
Aug-09	--	--	N/A	--	--	**79**	--	**200**	**280**	--	--	--	--	--	**42**	**1,900**	**1,900**	--	--	--	--	--	--	--	4,401
Sep-09	--	--	N/A	--	--	**40**	--	**110**	**150**	--	--	--	--	--	**13**	**870**	**1,000**	--	--	--	--	--	--	--	2,183
Oct-09	--	--	N/A	--	--	**64**	--	**210**	**230**	--	--	--	--	--	**20**	**1,500**	**1,400**	--	--	--	--	--	**9.7**	--	3,434
Nov-09	--	--	N/A	--	--	**43**	--	**180**	**180**	--	--	--	--	--	**14**	**1,200**	**1,100**	--	--	--	--	--	--	--	2,717
Dec-09	--	--	N/A	--	--	**48**	--	**180**	**190**	--	--	--	--	--	**39**	**1,100**	**1,300**	--	--	--	--	--	--	--	2,857
Jan-10	--	--	N/A	--	--	**67**	--	**180**	**240**	--	--	--	--	--	**16**	**1,500**	**1,600**	--	--	--	--	--	--	--	3,603
Feb-10	--	--	N/A	--	--	**35**	--	**120**	**140**	--	--	--	--	--	**24**	**760**	**930**	--	--	--	--	--	--	--	2,009
Mar-10	--	--	N/A	--	--	**62**	--	**190**	**250**	--	--	--	--	--	**21**	**1,500**	**1,900**	--	--	--	--	--	--	--	3,923
Apr-10	--	--	N/A	--	--	**41**	--	**160**	**160**	--	--	--	--	--	--	**1,100**	**1,000**	--	--	--	--	--	--	--	2,461
May-10	--	--	N/A	--	--	**42**	--	**170**	**170**	--	**19**	--	--	--	**95**	**960**	**1,100**	--	--	**18**	--	--	**75**	**23**	2,672
Jun-10	--	--	N/A	--	--	**24**	--	**110**	**96**	--	**12**	--	--	--	**15**	**630**	**600**	**12**	--	**130**	**28**	--	**50**	**26**	1,733
Jul-10	--	--	N/A	--	--	**52**	--	**180**	**220**	--	--	--	--	--	--	**1,500**	**1,500**	--	--	**24**	--	--	--	--	3,476
Aug-10	--	--	N/A	--	--	**45**	--	**170**	**200**	--	--	--	--	--	**12**	**1,200**	**1,100**	**16**	--	--	--	--	--	--	2,743
Sep-10	--	--	N/A	--	--	**35**	--	**150**	**140**	--	--	--	--	--	**29**	**860**	**1,100**	**20**	--	--	--	--	--	--	2,334
10/12/2010[a]	--	--	N/A	--	--	**40**	--	**140**	**170**	--	--	--	--	--	**940**	**1,100**	**1,400**	**20**	--	--	--	--	**89**	**33**	3,932
Nov-10	--	--	N/A	--	--	**34**	--	**100**	**150**	--	--	--	--	--	**71**	**920**	**1,200**	**53**	--	--	--	--	**14**	--	2,542
Dec-10	--	--	N/A	--	--	**28**	--	**110**	**120**	--	**42**	--	--	--	**54**	**790**	**970**	**13**	--	--	--	--	**170**	**31**	2,328
Jan-11	--	--	N/A	--	--	**34**	--	**130**	**150**	--	**14**	--	--	--	**13**	**860**	**1,200**	--	--	--	--	--	**47**	**10**	2,458
Feb-11	--	--	N/A	--	--	**32**	--	**160**	**130**	--	--	--	--	--	**23**	**910**	**900**	--	--	--	--	--	**29**	--	2,184
Mar-11	--	--	N/A	--	--	**98**	--	**350**	**390**	--	**19**	--	--	--	**23**	**2,800**	**2,500**	--	--	--	--	--	**61**	--	6,241
Apr-11	--	--	N/A	--	--	**36**	--	**160**	**150**	--	--	**30**	--	--	**10**	**900**	**1,100**	--	--	--	--	--	--	--	2,386
May-11	--	--	N/A	--	--	**39**	--	**150**	**150**	--	--	--	--	--	--	**880**	**890**	--	--	--	--	--	--	--	2,109
Jun-11	--	--	N/A	--	--	**59**	--	**190**	**240**	--	--	--	--	--	**35**	**1,600**	**1,600**	**20**	--	--	--	--	--	--	3,744
Jul-11	--	--	N/A	--	--	**51**	--	**170**	**200**	--	--	**40**	--	--	**81**	**1,300**	**1,300**	--	--	--	--	--	**26**	--	3,168
Aug-11	--	--	N/A	--	--	**44**	--	**160**	**200**	--	--	--	--	--	**29**	**1,200**	**1,400**	--	--	--	--	--	--	--	3,033
Sep-11	**12**	--	N/A	--	--	**29**	--	**130**	**130**	--	--	--	--	--	**11**	**750**	**990**	**12**	--	--	--	--	--	--	2,064
Oct-11	**8.3**	--	N/A	--	--	**28**	--	**93**	**120**	--	--	--	--	--	**51**	**640**	**780**	--	--	--	--	--	--	--	1,720
Nov-11	**10**	--	N/A	--	--	**34**	--	**110**	**140**	--	--	--	--	--	**9.2**	**730**	**930**	--	--	--	--	--	--	--	1,963
Dec-11	**7.3**	--	N/A	--	--	**29**	--	**110**	**130**	--	--	--	--	--	**46**	**600**	**800**	--	--	--	--	--	--	--	1,722

Table 4-7A
Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Jan-12	--	--	N/A	--	--	30	--	140	130	--	--	--	--	--	16	590	840	--	--	--	--	--	--	--	1,746
Feb-12	--	--	N/A	--	--	31	--	110	140	--	--	--	--	--	--	760	980	--	--	--	--	--	--	--	2,021
Mar-12	--	--	N/A	--	--	36	--	130	160	--	--	--	--	--	14	880	1,100	--	--	--	--	--	--	--	2,320
Apr-12	--	--	N/A	--	--	34	--	140	170	--	--	--	--	--	--	880	1,300	--	--	--	--	--	20	--	2,544
May-12	--	--	N/A	--	--	56	--	200	290	--	--	--	--	--	32	1,700	2,300	--	--	--	--	--	--	--	4,578
Jun-12	--	--	N/A	--	--	66	--	200	320	--	--	--	--	--	--	1,700	2,100	--	--	--	--	--	--	--	4,386
Jul-12	--	--	N/A	--	--	50	--	180	250	--	--	--	--	--	16	1,300	1,300	--	--	--	--	--	--	--	3,096
Aug-12	--	--	N/A	--	--	30	--	130	150	--	--	--	--	--	22	730	1,000	17	--	--	--	--	--	--	2,079
Sep-12	--	--	N/A	--	--	23	--	120	110	--	--	--	--	--	170	560	720	--	--	--	--	--	11	--	1,714
Oct-12	--	--	N/A	--	--	36	--	180	190	--	--	--	--	--	--	1,000	1,400	--	--	--	--	--	--	--	2,806
Nov-12	--	--	N/A	--	--	23	--	140	120	--	--	--	--	--	--	600	910	--	--	--	--	--	--	--	1,793
Dec-12	--	--	N/A	--	--	21	--	120	130	--	--	--	--	--	8	590	1,000	--	--	--	--	--	--	--	1,869
Jan-13	--	--	N/A	--	--	24	--	190	130	--	--	--	--	--	--	630	950	--	--	--	--	--	--	--	1,924
Feb-13	--	--	N/A	--	--	26	--	130	130	--	--	--	--	--	--	560	860	--	--	--	--	--	--	--	1,706
Mar-13	--	--	N/A	--	--	30	--	94	140	--	--	--	--	--	10	670	1,100	--	--	--	--	--	--	--	2,044
Apr-13	--	--	N/A	--	--	290	--	1,500	2,200	--	--	--	--	--	--	2,900	5,900	--	--	--	--	--	--	--	12,790
May-13	--	--	N/A	--	11	29	--	130	140	--	--	--	--	--	14	730	1,200	17	--	--	--	--	--	--	2,271
Jun-13	--	--	N/A	--	--	22	--	110	100	--	--	--	--	--	--	530	790	--	--	--	--	--	--	--	1,552
Jul-13	--	--	N/A	--	--	33	--	100	160	--	--	--	--	--	--	820	1,100	--	--	--	--	--	--	--	2,213
Aug-13	--	--	N/A	--	--	34	--	120	180	--	--	--	--	--	15	780	1,300	--	--	--	--	--	--	--	2,429
Sep-13	--	--	N/A	--	--	16	--	90	100	--	--	--	--	--	--	410	630	--	--	--	--	--	--	--	1,246
Oct-13	--	--	N/A	--	--	39	--	190	220	--	--	--	--	--	15	810	1,400	16	--	--	--	--	--	--	2,690
Nov-13	--	--	N/A	--	--	39	--	170	200	--	--	--	--	--	11	930	1,500	41	--	--	--	--	--	--	2,891
Dec-13	0.94	--	--	21.2	--	30.7	--	132	165	2.5	--	4.4	--	--	12.2	883	1,530	--	--	--	--	--	--	--	2,782
Jan-14	--	--	6.5	11.6	2.2	29.3	--	141	173	--	1.8	3.3	4.9	--	9,820	570	795	--	--	1.9	--	--	4.3	1.7	11,567
Feb-14	--	--	2.4	7.4	--	21.2	--	92.7	126	--	--	2.1	--	--	15.3	429	843	--	--	--	--	--	--	--	1,539
Mar-14	--	--	2.4	--	2.0	29.3	36.4	130	176	--	--	--	--	3.6	9.1	1,310	2,100	--	--	--	--	--	3.0	--	3,802
Apr-14	81.7	--	--	--	--	31.8	--	131	194	--	120	--	--	--	75.7	646	1,490	--	--	--	--	--	387	109	3,266
May-14	4.8	--	8.8	3.9	4.1	6.7	--	32.6	44.7	--	6.5	202	2.3 J	1.2	29.5	142	292	--	2.8	11.5	3.0	--	24.3	9.3	832
Jun-14	1,040	--	30.3	136	--	565	--	2,840	3,710	51.7	--	138	34.9 J	--	199	1,000 J	1,490	--	--	17.6 J	--	--	25.6 J	--	11,278
Jul-14	45.1	--	--	8.4 J	--	36.5	81.2	145	189	--	--	--	--	--	20.8 J	871	1,250	--	--	--	--	--	--	--	2,647
Aug-14	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
Sep-14	51.1	1.1	1.0 J	54	4.7	104	--	323	416	8.1	--	0.67 J	--	2.3	8.8	1,290	3,250	--	--	2.3	0.83 J	1.5	1.5 J	1.1 J	5,522
Oct-14	46.6	--	--	--	--	16.1	--	69.8	89.0	--	--	17.3 J	--	--	--	480	819	NS	--	--	--	--	--	--	1,538
Nov-14	38.2	--	--	--	--	16.8	--	71	92.4	--	--	23.9 J	--	59.4	14.3 J	459	803	NS	--	--	--	--	--	--	1,578
Dec-14	34.3	--	--	11.8	--	18.8	--	68.6	77.6	--	--	19.4 J	--	--	41.5 J	428	741	NS	--	--	--	--	--	--	1,441
Jan-15	64.8	--	--	6.8	4.4	15.7	--	81	85.6	1.3	--	2.0 J	--	2.0	1.7	404	695	NS	--	--	--	--	0.90 J	--	1,365
Feb-15	1.5	--	3.7	--	--	--	--	6.5	8.5	--	1.9 J	46.9	4.1 J	--	13.5	17.0	22.4	NS	--	--	--	--	6.5	2.7	135
Mar-15	0.54	2.9	1.4	2.4	1.6	28.3	--	141	183	--	1.1 J	1.4 J	1.2 J	--	1.7	1,370	2,300	NS	--	--	--	--	4.1	1.3	4,042
Apr-15	0.73	0.78 J	2.1	7.1	2.2	22.7	--	112	147	--	--	3.5 J	2.7 J	0.87 J	2.7	617	1,090	NS	--	1.3 J	--	--	2.7 J	0.99 J	2,016
May-15	--	--	--	--	--	23 J	--	121	161	--	--	--	--	--	--	573	1,170	NS	--	--	--	--	--	--	2,048
Jun-15	--	--	--	--	--	19.4 J	33.4	105	143	--	133	--	--	--	--	536	1,110	NS	--	--	--	--	582	142	2,804
Jul-15	--	--	--	--	--	14	--	78	91	--	--	--	--	--	--	390	470	NS	--	--	--	--	N/A	N/A	1,043
Aug-15	12.0	--	1.3 J	2.4 J	2.8 J	16	--	63	82	1.4	--	--	--	--	12	400	590	NS	--	--	--	--	N/A	N/A	1,183
Sep-15	72.0	--	2.7 J	1.8 J	--	24	--	86	130	1.9 J	--	--	--	--	--	510	1,000	NS	--	--	--	--	N/A	N/A	1,828
Oct-15	78.0	--	1.5 J	--	--	24	--	91	130	2.0 J	--	--	--	--	--	560	900	NS	--	--	--	--	N/A	N/A	1,787
Nov-15	43.0	--	3.2 J	1.9 J	3.6	25	--	110	140	2.5 J	--	--	--	--	--	570	900	NS	--	--	--	--	N/A	N/A	1,799
Dec-15	34.0	--	3.2 J	1.4 J	3.2	23	--	83	120	1.8 J	--	--	--	--	--	490	830	NS	--	--	--	--	N/A	N/A	1,590
Jan-16	9.2	--	1.1 J	2.0	2.1	16	--	80	84	1.5 J	--	3.0 J	--	--	2.7	320	480	NS	--	--	--	--	N/A	N/A	1,002

Table 4-7A
Summary of VOC Detections in SSDS Influent, Building A
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building A - Influent Volatiles (µg/m^3)																								
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Feb-16	**2.6**	--	**1.0 J**	**1.0 J**	**2.4**	**20**	**0.60**	**82**	**100**	**1.6**	--	--	--	--	--	**550 EE**	**840**	NS	--	--	--	--	N/A	N/A	1,601
Mar-16	**36.0**	**0.49 J**	**7.9**	**1.5 J**	**2.4**	**25**	**0.70**	**98**	**130**	**2.0**	--	**2.8 J**	--	**0.64 J**	**5.3**	**680 E**	**1,300**	NS	--	--	--	**0.42**	N/A	N/A	2,293
4/7/16	**28.0**	--	--	--	--	**42**	--	**180**	**230**	--	--	--	--	--	--	**940**	**1,700**	NS	--	--	--	--	N/A	N/A	3,120
4/27/16	--	--	--	--	--	**18**	--	**68**	**90**	--	--	--	--	--	--	**490**	**950**	NS	--	--	--	--	N/A	N/A	1,616
May-16	--	--	**19.0**	**2.0 J**	**3.5 J**	**18**	--	**120**	**110**	--	--	**9.0**	--	--	**6.5**	**600 B**	**910**	NS	--	--	--	--	N/A	N/A	1,798
Jun-16	**31.0**	--	**63.0**	--	--	**26**	--	**140**	**150**	**3.6 J**	--	--	--	--	--	**670**	**1,100**	NS	--	--	--	--	N/A	N/A	2,184
Jul-16	**65.0**	--	--	--	--	**17**	--	**75**	**100**	--	--	**36.0**	--	--	**15.0**	**510**	**940**	NS	--	--	--	--	N/A	N/A	1,758
Aug-16	**20.0**	--	--	--	--	**17**	--	**68**	**92**	--	--	--	--	--	--	**460**	**860**	NS	--	**8.20 J**	--	--	N/A	N/A	1,525
Sep-16	**38.0**	--	**1.5 J**	**1.2 J**	**2.3 J**	**14**	--	**66**	**88**	**1.8 J**	--	**15.0**	--	--	--	**400**	**760**	NS	--	--	--	--	N/A	N/A	1,388
6-Month Average Apr-Sep 2016	**36.4**	**--**	**27.8 J**	**1.6 J**	**2.9 J**	**21.7**	**--**	**102.4**	**122.9**	**2.7 J**	**--**	**20.0**	**--**	**--**	**10.8**	**581.4 B**	**1,031.4**	**--**	**--**	**8.2 J**	**--**	**--**	**--**	**--**	**1,913**
Previous 6-Month Average Oct 2015-Mar 2016	**33.8**	**0.5 J**	**3.0 J**	**1.6 J**	**2.7**	**22.2**	**0.7**	**90.7**	**117.3**	**1.9 J**	**--**	**2.9 J**	**-- J**	**0.64 J**	**4.0**	**528.3 EI**	**875.0**	**--**	**--**	**-- J**	**--**	**0.4**	**--**	**--**	**1,679**

SSD - sub-slab depressurization SV - soil vapor D - duplicate J - estimated value NA - not applicable (compound not analyzed/reported) NS - not sampled -- - non-detect (below detection limit); not included in total VOC calculation

Table 4-7B
Summary of VOC Detections in SSDS Influent, Building C
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

Building C - Influent Volatiles (µg/m^3)																									
Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Mar-08	--	--	N/A	--	--	--	--	--	--	**25,000**	--	**320**	--	--	--	--	--	**550**	--	N/A	**990**	**740**	**2,100**	**1,100**	**370**	**31,170**
Apr-08	--	--	N/A	--	--	--	--	--	--	**2,700**	--	--	--	--	--	--	--	**84**	--	N/A	**63**	**56**	**320**	**65**	--	**3,288**
Apr-08	--	--	N/A	--	--	--	--	--	**32**	**6,600**	--	**44**	--	--	--	--	--	**440**	--	N/A	**180**	**170**	**690**	**180**	**68**	**8,404**
Apr-08	--	--	N/A	--	--	--	--	--	--	**4,100**	--	--	--	--	--	--	--	**600**	--	N/A	**73**	**61**	**370**	**48**	--	**5,252**
Apr-08	--	--	N/A	--	--	--	--	--	--	**2,900**	--	--	--	--	--	--	--	**670**	--	N/A	**69**	**55**	**190**	**34**	--	**3,918**
Apr-08	--	--	N/A	--	--	--	--	--	--	**2,600**	--	--	--	--	**28**	--	--	**750**	--	N/A	**85**	**70**	**130**	**32**	**17**	**3,712**
May-08	--	--	N/A	--	--	--	--	--	--	**1,600**	--	--	--	--	**17**	--	--	**650**	--	N/A	**65**	**51**	**41**	**15**	--	**2,439**
Jun-08	**7.4**	--	N/A	--	--	--	--	--	--	**300**	--	--	--	--	--	**110**	--	--	--	N/A	**23**	**19**	**8**	**9**	--	**476**
Jul-08	--	--	N/A	--	--	--	--	--	--	**1,300**	--	--	--	--	**14**	--	--	**440**	--	N/A	**45**	**36**	**35**	--	--	**1,870**
Aug-08	--	--	N/A	**16**	--	--	--	--	--	**410**	--	--	--	--	--	--	--	**58**	--	N/A	--	--	**13**	--	--	**497**
Sep-08	--	--	N/A	--	--	--	--	--	--	**730**	--	--	**18**	--	--	--	**13**	**130**	--	N/A	--	--	**20**	--	--	**911**
Nov-08	--	--	N/A	--	--	--	--	--	--	**390**	--	--	--	--	--	--	--	**110**	--	N/A	--	--	**17**	--	--	**517**
Dec-08	--	--	N/A	--	--	--	--	--	--	**420**	--	--	--	--	--	--	--	**150**	--	N/A	--	--	**22**	--	--	**592**
Jan-09	--	--	N/A	--	--	--	--	--	--	**810**	--	--	--	--	**170**	--	--	**580**	--	N/A	**37**	**29**	**38**	**17**	**14**	**1,695**
Feb-09	--	--	N/A	--	--	--	--	--	--	**630**	--	--	--	--	**140**	--	--	**270**	--	N/A	**39**	**34**	**25**	**16**	**12**	**1,166**
Mar-09	--	--	N/A	--	--	--	--	--	--	**460**	--	--	--	--	**160**	--	--	**350**	--	N/A	**62**	**51**	**16**	**14**	**13**	**1,126**
Apr-09	--	--	N/A	--	--	--	--	--	--	**200**	--	--	--	--	**46**	--	--	**86**	--	N/A	**19**	**16**	**6.1**	--	--	**373.1**
May-09	--	--	N/A	--	--	--	--	--	--	**210**	--	--	--	--	**24**	--	--	**79**	--	N/A	**14**	**14**	**5.7**	--	--	**346.7**
Jun-09	--	--	N/A	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--	**58**	--	N/A	--	--	--	--	--	**248**
Jul-09	--	--	N/A	--	--	--	--	--	--	**150**	--	--	--	--	--	--	--	**55**	--	N/A	--	--	--	--	--	**205**
Aug-09	--	--	N/A	--	--	--	--	--	--	**720**	--	--	**17**	--	--	--	--	**160**	--	N/A	--	--	**13**	--	--	**910**
Sep-09	--	--	N/A	--	--	--	--	--	--	**39**	--	--	**110**	--	--	--	--	**16**	--	N/A	--	--	--	--	--	**165**
Oct-09	--	--	N/A	--	--	--	--	--	--	**200**	--	--	--	--	--	--	--	**64**	--	N/A	--	--	--	--	--	**264**
Nov-09	--	--	N/A	--	--	--	--	--	--	**190**	--	--	--	--	--	--	--	**75**	--	N/A	--	--	--	--	--	**265**
Dec-09	--	--	N/A	--	--	--	--	--	--	**96**	--	--	--	--	--	**26**	--	**45**	--	N/A	--	--	--	**8.7**	--	**176**
Jan-10	--	--	N/A	--	--	--	--	--	--	**140**	--	--	--	--	--	--	--	**57**	--	N/A	--	--	--	--	--	**197**
Feb-10	--	--	N/A	--	--	--	--	--	--	**100**	--	--	--	--	--	--	--	**37**	--	N/A	--	--	--	--	--	**137**
Mar-10	--	--	N/A	--	--	--	--	--	--	**87**	--	--	--	--	--	--	--	**33**	--	N/A	--	--	--	--	--	**120**
Apr-10	--	--	N/A	--	--	--	--	--	--	**110**	--	--	--	--	--	--	--	**39**	--	N/A	--	--	--	--	--	**149**
May-10	**58**	--	N/A	--	--	--	--	--	--	**65**	--	**38**	**--**	--	--	**220**	--	**22**	--	N/A	**25**	--	--	**140**	**39**	**607**
Jun-10	--	--	N/A	--	--	--	--	--	--	**72**	--	--	--	--	--	--	--	**25**	--	N/A	**83**	**17**	--	**30**	**17**	**244**
Jul-10	--	--	N/A	--	--	--	--	--	--	**68**	--	--	--	--	--	--	--	**34**	--	N/A	--	--	--	--	--	**102**
Aug-10	--	--	N/A	--	--	--	--	--	--	**100**	--	--	--	--	--	--	--	**31**	--	N/A	--	--	--	--	--	**131**
Sep-10	--	--	N/A	--	--	--	--	--	--	**70**	--	--	--	--	--	--	--	**33**	--	N/A	--	--	--	--	--	**103**
Oct-10	**10**	--	N/A	--	--	--	--	--	--	**160**	--	**11**	--	--	--	**130**	**110.0**	**70**	--	N/A	--	--	--	**23**	--	**513.5**
Nov-10	--	--	N/A	--	--	--	--	--	--	**65**	--	--	--	--	--	--	--	**35**	--	N/A	--	--	--	--	--	**100**
Dec-10	--	--	N/A	--	--	--	--	--	--	**120**	--	--	--	--	**19**	--	--	**89**	--	N/A	--	--	--	--	--	**228**
Jan-11	--	--	N/A	--	--	--	--	--	--	**160**	--	--	--	--	**94**	**7.7**	--	**250**	--	N/A	--	--	**9**	--	--	**520**
Feb-11	--	--	N/A	--	--	--	--	--	--	**180**	--	--	--	--	**120**	--	--	**270**	--	N/A	--	--	--	--	--	**570**
Mar-11	--	--	N/A	--	--	--	--	--	--	**170**	--	--	--	--	**110**	**34**	--	**180**	--	N/A	--	--	--	--	--	**494**
Apr-11	--	--	N/A	--	--	--	--	--	--	**130**	--	--	--	--	**37**	**10**	--	**90**	--	N/A	--	--	--	--	--	**267**
May-11	**8**	--	N/A	--	--	--	--	--	--	**100**	--	**16**	--	--	**19**	--	--	**82**	--	N/A	--	--	--	**9**	--	**234**
Jun-11	**26**	--	N/A	--	--	--	--	--	--	**97**	--	--	--	--	--	**14**	--	**63**	--	N/A	--	--	--	--	--	**200**
Jul-11	**20**	--	N/A	--	--	--	--	--	--	**74**	--	--	**37**	--	--	**62**	--	**26**	--	N/A	--	--	--	**21**	--	**240**
Aug-11	**14**	--	N/A	--	--	--	--	--	--	**76**	--	--	--	--	--	--	--	**34**	--	N/A	--	--	--	--	--	**124**
Sep-11	**10**	--	N/A	--	--	--	--	--	--	**22**	--	--	--	--	--	--	--	--	--	N/A	--	--	--	--	--	**32**
Oct-11	--	--	N/A	--	--	--	--	--	--	**38**	--	--	**27**	--	--	**20**	--	--	--	N/A	--	--	--	**11**	--	**96**
Nov-11	**12**	--	N/A	--	--	--	--	--	--	**45**	--	--	--	--	--	--	--	**16**	--	N/A	--	--	--	--	--	**73**
Dec-11	--	--	N/A	--	--	--	--	--	--	**62**	--	--	--	--	--	--	--	**21**	--	N/A	--	--	--	--	--	**83**
Jan-12	--	--	N/A	--	--	--	--	--	--	**55**	--	--	--	--	--	--	--	**21**	--	N/A	--	--	--	--	--	**76**
Feb-12	--	--	N/A	--	--	--	--	--	--	**76**	--	--	--	--	--	--	--	**43**	--	N/A	--	--	--	--	--	**119**
Mar-12	--	--	N/A	--	--	--	--	--	--	**93**	--	--	--	--	**16**	--	--	**58**	--	N/A	--	--	--	--	--	**167**
Apr-12	--	--	N/A	--	--	--	--	--	--	**64**	--	--	--	--	**16**	--	--	**56**	--	N/A	--	--	--	--	--	**136**
May-12	--	--	N/A	--	--	--	--	--	--	**72**	--	--	--	--	**20**	**9.8**	--	**65**	--	N/A	--	--	--	--	--	**167**
Jun-12	--	--	N/A	--	--	--	--	--	--	**71**	--	--	--	--	**17**	--	--	**50**	--	N/A	--	--	--	--	--	**138**
Aug-12	--	--	N/A	--	--	--	--	--	--	**39**	--	--	--	--	--	--	--	**19**	--	N/A	--	--	--	--	--	**58**
Sep-12	--	--	N/A	--	--	--	--	--	--	**41**	--	--	--	--	--	**23**	--	**22**	--	N/A	--	--	--	--	--	**86**

Table 4-7B
Summary of VOC Detections in SSDS Influent, Building C
Lockheed Martin Corporation, Middle River Complex, Middle River, Maryland

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

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	cis-1,2-dichloroethene	trans-1,2-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	m-xylene & p-xylene	o-xylene	Total VOCs
Oct-12	--	--	N/A	--	--	--	--	--	--	**95**	--	--	--	--	--	--	--	**45**	--	N/A	--	--	--	--	--	**140**
Nov-12	--	--	N/A	--	--	--	--	--	--	**18**	--	--	--	--	--	--	--	**270**	--	N/A	--	--	--	**31**	**16**	**335**
Dec-12	--	--	N/A	--	--	--	--	--	--	**70**	--	--	--	--	**22**	--	--	**91**	--	N/A	--	--	**5.3**	--	--	**188**
Jan-13	--	--	N/A	--	--	--	--	--	--	**66**	--	--	--	--	**42**	--	--	**110**	--	N/A	--	--	--	--	--	**218**
Feb-13	--	--	N/A	--	--	--	--	--	--	**49**	--	--	--	--	**29**	--	--	**91**	--	N/A	--	--	--	--	--	**169**
Mar-13	--	--	N/A	--	--	--	--	--	--	**60**	--	--	--	--	**45**	--	--	**100**	--	N/A	--	--	--	--	--	**205**
Apr-13	--	--	N/A	--	--	--	--	--	--	**44**	--	--	--	--	**21**	--	--	**52**	--	N/A	--	--	--	--	--	**117**
May-13	--	--	N/A	--	--	--	--	--	--	**120**	--	--	--	--	--	--	--	**2,900**	--	N/A	--	--	--	**80**	--	**3,100**
Jun-13	--	--	N/A	--	--	--	--	--	--	**10**	--	--	--	--	--	--	--	**460**	**50**	N/A	--	--	--	**31**	**15**	**566**
Jul-13	**12**	--	N/A	--	**12**	--	--	--	--	--	--	**9.4**	--	--	--	--	--	**290**	**16**	N/A	**11**	--	--	**43**	**23**	**416**
Aug-13	--	--	N/A	--	--	--	--	--	--	--	--	--	**20**	--	--	--	--	**210**	**18**	N/A	--	--	--	**20**	**11**	**279**
Sep-13	--	--	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**150**	--	N/A	--	--	--	--	--	**150**
Oct-13	**14**	--	N/A	--	--	--	--	--	--	--	--	--	--	--	--	--	--	**200**	**16**	N/A	--	--	--	**20**	**10**	**260**
Nov-13	**13**	--	N/A	--	--	--	--	--	--	**18**	--	**9.8**	--	--	--	--	--	**280**	--	N/A	--	--	--	**45**	**24**	**390**
Dec-13	**6.3**	--	--	--	N/A	**6.6**	--	--	--	**13**	--	**7.3**	**4.1**	**33.9**	**5.4**	**4.0**	--	**228**	N/A	--	**4.8**	**2.4**	--	**30.4**	**16.1**	**362**
Jan-14	**13.7**	--	**4.7**	--	N/A	--	--	--	--	**5.7**	--	**10.3**	**3.4**	**22.6**	**5.6**	**49.6**	--	**298**	N/A	**5.5**	**17.8**	--	--	**49.1**	**19.3**	**505**
Feb-14	**1.8**	--	**4.5**	--	N/A	**2.2**	--	--	--	**2.3**	--	**2.1**	--	**5.3**	**2.2**	**2.7**	--	**157**	N/A	--	**2.8**	--	--	**8.9**	**4.7**	**197**
Mar-14	**9.1**	--	**3.0**	**3.2**	N/A	**2.2**	--	--	--	**4.9**	--	**5.9**	--	**11.5**	**3.3**	**6.0**	--	**261**	N/A	**1.6**	**6.0**	**3.0**	--	**25.3**	**12.3**	**358**
Apr-14	**10.0**	--	**7.1**	--	N/A	--	--	--	--	**7.0**	--	**67**	--	**12.1**	**5.1**	**50.7**	**6.6**	**266**	N/A	--	**6.9**	--	--	**218**	**67.4**	**724**
May-14	**11.8**	**1.2**	**5.8**	**1.5 J**	N/A	**2.9**	--	--	--	**7.6**	--	**4.7**	**1.2 J**	**12.7**	**3.6**	**30.6**	--	**236**	N/A	**2.1**	**6.8**	**3.5**	--	**20.9**	**11.3**	**364**
Jun-14	**12.8**	--	--	**2.7**	N/A	**2.1**	--	--	--	**2.7**	--	**4.1**	**24.5**	**13.1**	**23.1**	**11.6**	--	**154**	N/A	**6.1**	**18**	**6.1**	--	**27.0**	**12.1**	**320**
Jul-14	**14.4**	**0.77 J**	**11.2**	**5.6**	N/A	**1.4 J**	--	--	**0.88 J**	**4.1**	**0.81 J**	**6.3**	**147**	**16.9**	**7.1**	**5.7**	--	**183**	N/A	**2.8**	**7.3**	**4.7**	--	**19.4**	**9.8**	**449**
Aug-14	**10.8**	**1.7**	N/A	**66.2**	**1.5**	--	**7.6**	--	**4.8**	**4.7**	--	**7.5**	--	**20.6**	**7.0**	**5.0**	**33.6**	**289**	N/A	N/A	**7.8**	**3.9**	--	**30.2**	**16.0**	**518**
Sep-14	**8.0**	**1.1**	**5.6**	--	N/A	**2.9**	**7.0**	--	--	**5.3**	--	**2.9**	**0.76 J**	**31.2**	**2.1**	**3.4**	**37.9**	**124**	N/A	**2.1**	**5.4**	**2.1**	--	**17.2**	**10.8**	**270**
Oct-14	**6.6**	**1.2**	**10.1**	**0.98**	N/A	**2.0**	**6.1**	**2.7**	**3.0**	**6.6**	**0.71 J**	**3.2**	**2.1 J**	**13.3**	**2.7**	**5.1**	**38.6**	**137**	N/A	**2.6**	**4.7**	**2.0**	--	**15.8**	**9.5**	**277**
Nov-14	**5.2**	--	**7.5**	--	N/A	**2.3**	**3.5**	--	--	**5.7**	--	**3.2 J**	**6.0**	**10.5**	**5.4**	**4.3**	**22.6**	**111**	N/A	**3.5 J**	**5.4**	**3.2 J**	--	**11.0 J**	**6.4**	**217**
Dec-14	**5.3**	--	**8.1**	**1.3**	N/A	**2.8**	**1.9**	--	--	**7.0**	**1.6 J**	**3.2 J**	**3.3 J**	**8.7**	**7.8**	**5.0**	**9.1**	**106**	N/A	**3.6 J**	**4.7**	**3.7 J**	--	**8.6**	**5.8**	**198**
Jan-15	**6.2**	--	**8.3**	**1.7**	N/A	**3.1**	--	--	--	**5.9**	--	**1.2 J**	**2.5 J**	**3.1 J**	**2.8**	**3.1**	**3.0**	**87.5**	N/A	**1.2**	**5.5**	**2.0**	--	**4.8**	**2.9**	**145**
Feb-15	**5.6**	--	**3.8**	**0.94**	N/A	--	--	--	--	**4.6**	--	**1.3 J**	**0.61 J**	**2.3 J**	**1.7**	**3.7**		**75.3**	N/A	--	**3.8**	**1.7**	--	**5.3**	**3.2**	**114**
Mar-15	**5.3**	**2.8**	**4.0**	**0.82**	N/A	**1.5 J**	--	--	--	**3.7**	--	**1.3 J**	**0.62 J**	**3.0 J**	**2.1**	**2.5**	**0.94 J**	**80.5**	N/A	**0.97 J**	**4.0**	**1.7**	--	**4.4**	**2.9**	**123**
Apr-15	**6.5**	**1.1**	**4.6**	**1.20**	N/A	**1.8**	**2.0**	--	**1.1 J**	**3.6**	--	**2.0**	--	**6.1**	**2.3**	**2.3**	**14.6**	**107**	N/A	**1.5 J**	**5.8**	**2.4**	--	**8.0**	**4.3**	**178**
May-15	**6.1**	--	**10.4**	--	N/A	**2.3 J**	**1.7 J**	--	--	**2.6**	--	**5.3 J**	**4.0 J**	**7.8 J**	**2.1 J**	**5.2**	**14**	**128**	N/A	**5.1 J**	**10**	**5.3 J**	--	**13.3 J**	**6.5 J**	**230**
Jun-15	**7.4**	**1.2**	**8.3**	**1.00**	N/A	--	**4.9**	--	--	**4.0**	--	**2.5**	**6.3**	**14.4**	**3.2**	**4.3**	**32.1**	**132**	N/A	**3.7**	**11.1**	**4.9**	--	**11.4**	**7.1**	**260**
Jul-15	**3.2**	--	**6.6**	**4.90**	N/A	--	**3.2**	--	--	--	--	--	--	--	--	**2.5**	**22**	**20**	N/A	--	--	--	--	N/A	N/A	**62**
Aug-15	**5.1**	**2.1 J**	**15**	**0.74 J**	N/A	**2.4**	**5.9**	--	**2.0**	**2.7**	--	**1.3 J**	--	--	**1.1 J**	**15**	**45**	**41**	N/A	--	**2.0**	**0.8 J**	--	N/A	N/A	**142**
Sep-15	**8.0**	**1.3 J**	**12**	**1.10 J**	N/A	**2.3**	**7.7**	--	**2.8**	**2.4**	--	**2.0**	**8.7**	--	**1.2 J**	**6.2**	**58**	**73**	N/A	**1.1 J**	**3.5**	**1.3 J**	--	N/A	N/A	**193**
Oct-15	**5.5**	--	**3.3**	--	N/A	**2.1**	**2.0**	--	**1.0**	**0.7**	--	**0.6 J**	**3.4 J**	--	--	**8.7**	**18**	**14**	N/A	--	**1.2**	--	--	N/A	N/A	**60**
Nov-15	**5.1**	**0.7 J**	**8.6**	**0.93 J**	N/A	**3.2**	**3.7**	--	**1.4 J**	**2.3**	--	**1.2 J**	**3.4 J**	--	**3.5**	**3.0**	**32**	**50**	N/A	--	**2.1**	**0.9 J**	--	N/A	N/A	**122**
Dec-15	**4.5**	**0.6 J**	**14**	**0.51 J**	N/A	**2.4**	**1.5 J**	--	**0.5 J**	**2.1**	--	**0.6 J**	**2.4 J**	--	**0.9 J**	**3.9**	**14**	**43**	N/A	--	**1.9**	--	--	N/A	N/A	**93**
Jan-16	**4.4**	--	**4.8**	**0.43 J**	N/A	**2.0**	**0.3 J**	--	--	**0.8**	--	--	**2.4 J**	--	**1.0 J**	**5.0**	**2**	**30**	N/A	--	**1.3**	--	--	N/A	N/A	**55**
Mar-16	**6.4**	**0.6 J**	**12**	**0.88 J**	N/A	**2.3**	**0.7 J**	--	**0.3 J**	**1.9**	--	**0.8 J**	**3.3 J**	--	**0.9 J**	**10**	**11**	**41**	N/A	--	**2.6**	**0.9 J**	--	N/A	N/A	**96**
May-16	**2.9**	**0.5 J**	**6.6**	**1.00 J**	N/A	**2.9**	**0.4 J**	--	**0.5 J**	**1.6**	--	**1.1 J**	**2.8 J**	--	**0.7 J**	**73**	**5.4 B**	**31**	N/A	--	**1.6 J**	--	--	N/A	N/A	**132**
Jul-16	**8.0**	**1.2 J**	**13**	**2.40**	N/A	**2.7**	**11.0**	--	**5.5**	**2.5**	--	**1.3 J**	**4.2**	--	**1.1 J**	**6.2**	**76 B**	**46**	N/A	**1.20 J**	**4.4**	**1.5 J**	--	N/A	N/A	**188**
Sep-16	**8.6**	**0.5 J**	**4.0**	**2.50**	N/A	**2.4**	**4.2**	--	**1.9**	**2.5**	--	**1.4 J**	**5.3**	--	**1.0 J**	**3.2**	**29**	**45**	N/A	**0.93 J**	**3.5**	**1.5 J**	--	N/A	N/A	**117**
6-Month Average Apr-Sep 2016	**6.5**	**2.2 J**	**7.9**	**2.0 J**	**NA**	**2.7**	**5.2 J**	**--**	**2.6 J**	**2.2**	**--**	**1.3 J**	**4.1 J**	**--**	**0.9 J**	**27.5**	**36.8 B**	**40.7**	**NA**	**1.1 J**	**3.2 J**	**1.5 J**	**--**	**NA**	**NA**	**146**
Previous 6-Month Average Oct 2015-Mar 2016	**5.2**	**0.7 J**	**8.5**	**0.7 J**	**NA**	**2.4**	**1.6 J**	**--**	**0.8 J**	**1.6**	**--**	**0.8 J**	**3.0 J**	**--**	**1.6 J**	**6.1**	**15.5**	**35.6**	**NA**	**--**	**1.8**	**0.9 J**	**--**	**NA**	**NA**	**85**

SSD - sub-slab depressurization SV - soil vapor D - duplicate J - estimated value NA - not applicable (compound not analyzed/reported) -- - non-detect (below detection limit); not included in total VOC calculation

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



Figure 4-2
Sub-Slab Vapor VOC Concentrations at 018-A, Building A
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland

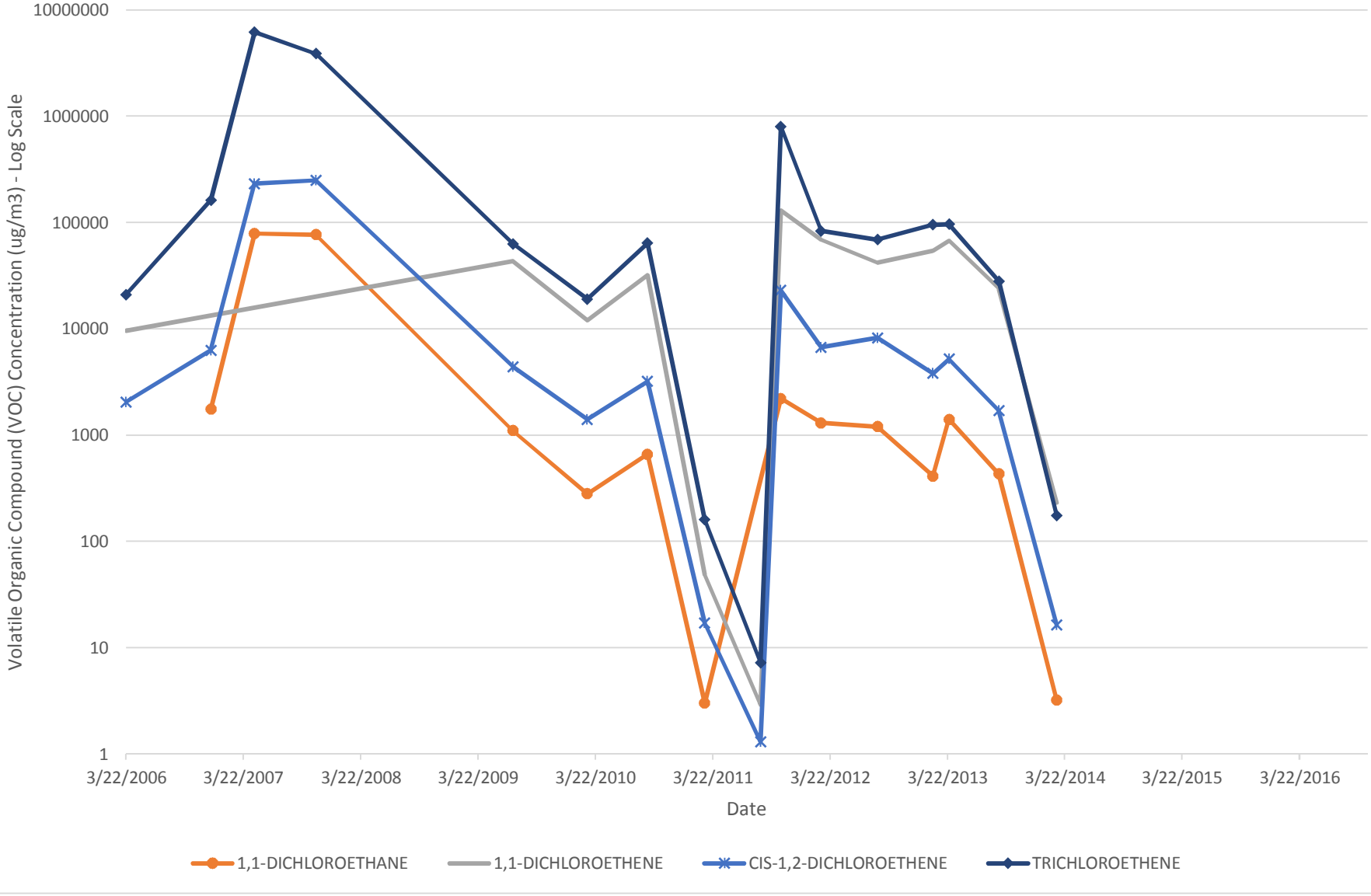
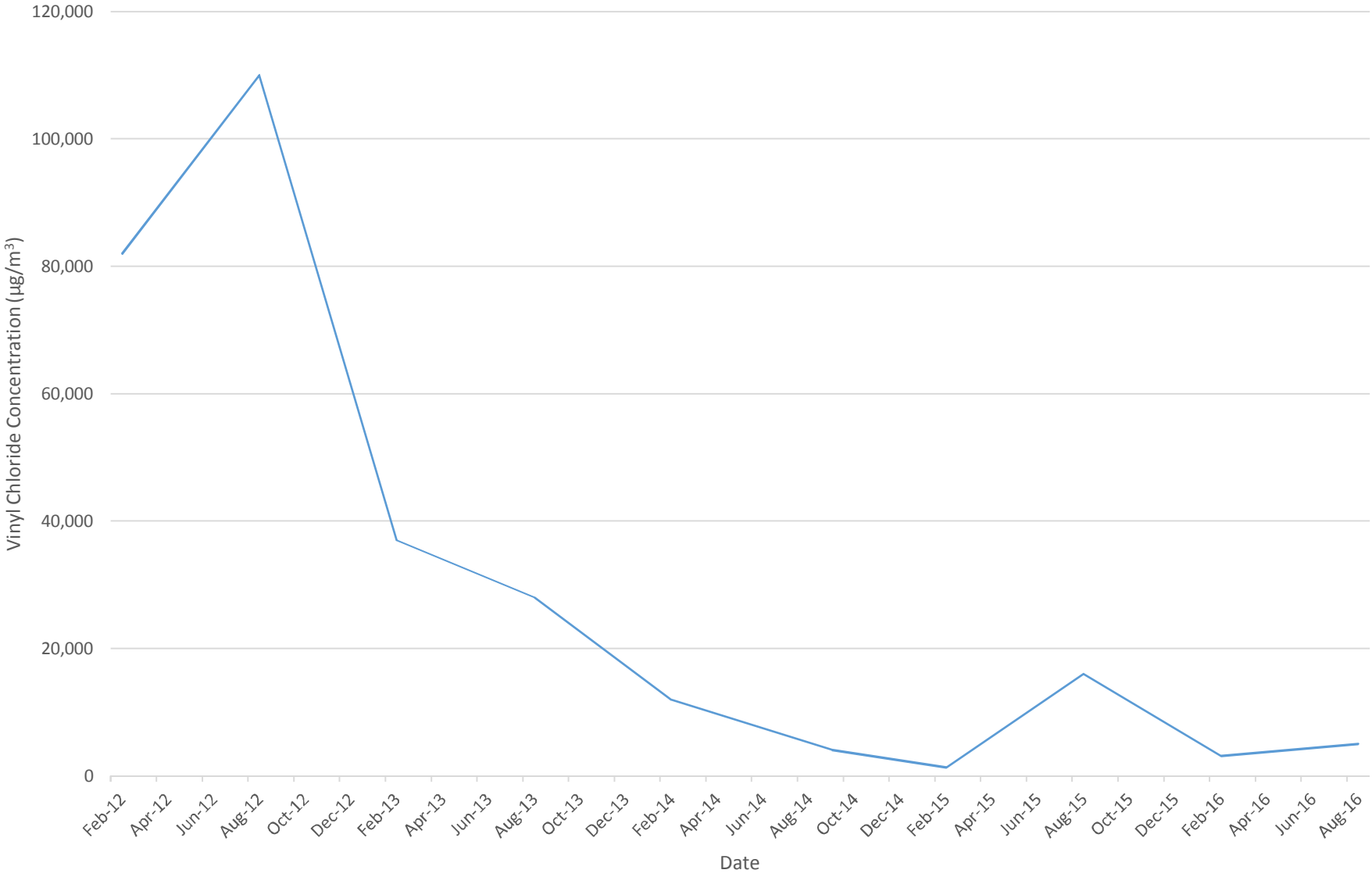


Figure 4-3
Sub-Slab Vapor Vinyl Chloride Concentrations at 126-C, Building C
Lockheed Martin Corporation, Middle River Complex
Middle River, Maryland



Section 5
Conclusions and Recommendations

5.1 CONCLUSIONS

Tetra Tech, Inc. (Tetra Tech) has completed Round 21 of vapor intrusion monitoring (the second of two scheduled for 2016) in Buildings A, B, and C at the Middle River Complex (MRC) (owned by LMC Properties, Inc.) in Middle River, Maryland. This ongoing investigation seeks to evaluate whether volatile organic compounds (VOCs) in sub-slab-vapor (associated with soil and groundwater chemicals of concern [COC] at the site) might be moving into indoor air (IA) at the Middle River Complex facilities. The data set is comprised of indoor air and sub-slab-vapor (SV) samples collected in August 2016. Ambient air samples were also collected at four outdoor background locations around the perimeter of the Middle River Complex. All data were validated to ensure compliance with analytical method requirements.

Indoor air quality (IAQ) data were compared to risk-based screening levels for industrial air set at the 1×10^{-5} (i.e., one-in-100,000 probability) risk level for carcinogens, at a hazard quotient of 1 for noncarcinogens (as published in the United States Environmental Protection Agency [USEPA] *Regional Screening Levels for Chemical Contaminants at Superfund Sites* [USEPA, 2016]), and at (federal) Occupational Safety and Health Administration (OSHA) permissible exposure limits (PELs). Alternate values, such as the "Threshold Limit Values" published by the American Council of Governmental Industrial Hygienists, were used for chemicals without published permissible exposure limits. SV data were compared to screening values derived using methods described in *Draft Guidance for Evaluating the Vapor Intrusion to Indoor-Air Pathway from Groundwater and Soils* (USEPA, 2002) by applying an attenuation factor of 0.03 to the indoor-air screening-values.

Historically, trichloroethene (TCE) and naphthalene have been the prevalent contaminants of concern in indoor air at this site; however, only two naphthalene exceedances (in an original and

its duplicate sample) at one location (Building A) were detected in indoor air samples during Round 21. Trichloroethene was detected below its screening level in indoor air in Buildings A and C, and was not detected in Building B (see plan view in Figure 5-1). Trichloroethene was detected in seven of 40 indoor air samples in Round 21; detections were observed in Buildings A and C. Naphthalene was detected in IA above its screening level in Building A, but at levels less than its screening level in Building C. Naphthalene was not detected in indoor air in Building B. Naphthalene was detected in six of 40 indoor air samples in Round 21; these detections were observed in Buildings A and C.

5.1.1 BUILDING A

Historically, trichloroethene in indoor air has exceeded its screening level at location 093-A in the Building A basement. The maximum detected TCE concentration (six micrograms per cubic meter [$\mu g/m^3$]) during Round 21 was at this location. Indoor air exceedances of trichloroethene at location 093-A occurred between August 2013 and September 2014. During Round 16 (February 2014), a trichloroethene concentration of 87 $\mu g/m^3$ was measured above a nearby floor grate using the hand-held hazardous air *p*ollutants on-*site* (HAPSITE) field instrument. (For comparison, trichloroethene laboratory-analyzed concentrations of 5.9 $\mu g/m^3$ and 8.4 $\mu g/m^3$ were observed at locations 093-A and 093X-A, respectively, during conventional sampling in Round 16). Trichloroethene exceedances were observed in all samples collected from location 093-A during Round 17 (in August supplemental sampling, September sampling, and October 2014 resampling), with little variability. These results indicate that the floor grate might serve as a preferential vapor-intrusion pathway to this part of Building A.

Additional information about the underground network in the Building A basement was obtained during a recent interview with EMCOR, the on-site maintenance contractor. Many of the floor sumps and drains were historically used to manage groundwater infiltration. Sumps collected infiltrated groundwater and pumped it out of the basement. Several large sumps were used to prevent water intrusion into large air handlers that once sat directly on top of the sumps. These air handlers pumped air through large diameter heat tunnels and corridors in the Building A basement's eastern wall; these tunnels extend back under the main floor of Building A. These sumps may also connect to pipes that carry the air to other parts of the building. This network provides a preferential pathway to transfer contaminants in indoor air. Groundwater in the basement sumps is pumped back to Lift Station #5 (located farther north in the Building A

basement) and is then discharged to the sanitary system. Several floor drains in this area also drain groundwater from the basement floor; they are connected to the storm-drain system that provides a direct pathway to Cow Pen Creek.

The consistent presence of trichloroethene at concentrations that fluctuate above and below its indoor-air screening level in the Building A basement led to the installation of three indoor-air filter-units in January 2015. Each unit filters 300 cubic feet of indoor air per minute. Trichloroethene concentrations in this area during the last four sampling rounds have been less than the indoor air screening level, but have generally been increasing. Indoor air concentrations of trichloroethene detected at 093-A during additional sampling in January 2015 (before the filters were installed) were 3.6–8.3 $\mu g/m^3$; the highest concentration in that range is just below the screening level (8.8 $\mu g/m^3$). After filter installation, the trichloroethene concentrations at 093-A during Round 18 in February 2015 (1.5 $\mu g/m^3$), during Round 19 in August 2015 (3.3 $\mu g/m^3$), during Round 20 in February 2016 (6.4 $\mu g/m^3$), and during Round 21 in August 2016 (6 $\mu g/m^3$), did not exceed the screening level.

A trichloroethene exceedance at nearby basement location 138-A was noted in Building A indoor air samples during Round 20. However, when the same location was resampled one month later, the trichloroethene concentration was less than its screening level. Note that, historically, trichloroethene has not exceeded its screening level in indoor air at location 138-A (Figure 5-3). However, the initial exceedance at this location during Round 20 indicates that a source continues to contribute trichloroethene to indoor air, despite the air filtration units in the basement. During Round 21, trichloroethene was detected (2.7 $\mu g/m^3$) at location 138-A, but its concentration did not exceed its screening level.

Figure 5-2 shows trichloroethene concentrations at location 093-A for regular sampling rounds (i.e., excluding additional January 2015 samples) over time, beginning when it was first sampled in August 2010. This graph suggests that trichloroethene concentrations in this area were increasing over time. However, the reduction in trichloroethene concentrations to below their indoor-air screening level during Rounds 18 through 21 might be due to the use of indoor-air filtration units that were in operation during sampling. The ongoing study of groundwater, sub-slab vapor, indoor air, and the network of sumps and pipes may improve our understanding of how trichloroethene migrates into the building.

The sub-slab-depressurization system in Building A appears to be operating as designed, and appears to be effectively mitigating sub-slab-vapor intrusion from known source areas of sub-slab-vapor contamination, in concert with the indoor-air filtration units. Contaminants are constantly removed from soil vapor during system operation, and indoor air concentrations in the main part of Building A excluding the basement rarely exceed screening values. The operation and maintenance manual for the Building A SSDS has been updated to include biweekly inspections of the air-filter units. Filter cartridges are changed out quarterly; no other maintenance is required. Although basement occupancy is intermittent, this area will continue to be monitored as the sub-slab-depressurization system continues to operate.

Although below the screening level in indoor air, trichloroethene was detected in Building A sub-slab vapor at concentrations exceeding the sub-slab-vapor screening level during Round 21. Trichloroethene exceeded its screening level at locations 118-A and 136-A. Sub-slab-vapor concentrations of trichloroethene in samples collected from location 136-A have been consistently greater than its screening level.

The Round 21 trichloroethene sub-slab-vapor concentration detected at 136-A (850 $\mu g/m^3$) is almost three times greater than the screening level (293 $\mu g/m^3$), but is two orders of magnitude less than the concentrations detected at that location during the previous round (37,000 $\mu g/m^3$ in the original sample, and 33,000 $\mu g/m^3$ in the duplicate sample). Historical sub-slab-vapor exceedances of trichloroethene have been consistently detected at location 079-A, but the concentration at 079-A during Round 21 (120 $\mu g/m^3$) did not exceed the screening level. Locations 079-A and 136-A are in the eastern portion of Building A in the central and southern areas of the building, respectively. These locations have been within the zone of influence from the new second-phase expansion of the Building A SSDS since installation in February 2016. Historical trichloroethene concentrations in sub-slab vapor have also exceeded screening levels at location 118-A, which is in the southwestern portion of Building A, and some historical exceedances have also been detected at nearby location 015-A. These two locations are within the zone of influence from the original SSDS that was installed in 2008.

During Round 21, a trichloroethene sub-slab-vapor exceedance was detected at location 118-A (890 $\mu g/m^3$), but the concentration detected at location 015-A (35 $\mu g/m^3$) did not exceed the screening level (293 $\mu g/m^3$). Elevated trichloroethene concentrations in sub-slab vapor suggest

that vapor intrusion into indoor air is possible; however, indoor air concentrations of trichloroethene did not exceed the screening level during Round 21. These results indicate that the sub-slab-depressurization system is effective in preventing vapor intrusion in Building A. Figures 5-4A, 5-4B and 5-4C display the Round 21 sub-slab-vapor and indoor-air concentrations from the basement and first floor in Building A for chemicals that exceed their screening levels.

Chloroform (at location 136-A) was detected in sub-slab vapor at concentrations greater than its screening level during Round 20, but concentrations of chloroform detected in indoor air and sub-slab vapor during Round 21 did not exceed screening levels. Naphthalene (at location 075-A) exceeded its sub-slab-vapor screening level during Round 19, but the concentration at the same location during Rounds 20 (100 µg/m^3) and 21 (110*J* µg/m^3) did not exceed the screening level. However, indoor air naphthalene concentrations (12 µg/m^3 for the original sample, and 15 µg/m^3 for the duplicate) at location 018-A did exceed the screening level (3.6 µg/m^3) during Round 21.

In summary, trichloroethene in indoor air has historically exceeded its screening level at location 093-A in the Building A basement, and previous investigation results indicate that the nearby floor grate might serve as a preferential vapor intrusion pathway. The consistent presence of trichloroethene at concentrations that fluctuate above and below its indoor-air screening level in the Building A basement led to the installation of three indoor-air filter units in January 2015. After filter installation, indoor air trichloroethene concentrations at 093-A during the following four sampling rounds did not exceed the screening level, possibly due to the use of indoor-air filtration units that were in operation during sampling. However, an exceedance of the trichloroethene indoor air screening level at a nearby location during Round 20 indicates that a source continues to contribute trichloroethene to indoor air, despite the operation of the air filtration units in the basement.

Trichloroethene was detected in Building A sub-slab vapor at concentrations exceeding the screening level during Round 21 at two locations. The sub-slab-depressurization system in Building A appears to be operating as designed, and appears to be effectively mitigating sub-slab-vapor intrusion from known source areas of sub-slab-vapor contamination, in concert with the indoor-air filtration units. Indoor-air naphthalene concentrations at one location exceeded the screening level during Round 21; however, sub-slab-vapor naphthalene concentrations did not exceed the screening level.

5.1.2 BUILDING B

No exceedances were noted in Building B indoor air or sub-slab-vapor samples during Round 21, Round 20, or Round 19. Historically, during Round 18, only one slight exceedance of naphthalene was noted in Building B indoor air; this concentration only marginally exceeded its screening level. No exceedances were noted in Building B indoor air or sub-slab-vapor samples during Round 17.

5.1.3 BUILDING C

Trichloroethene, and vinyl chloride (VC) were detected in Building C sub-slab vapor at concentrations greater than screening levels during Round 21, but no chemicals exceeded their screening levels in Building C indoor air. Comparison of the two graphs in Figures 5-5A and 5-5B shows sub-slab vapor and indoor air concentrations of trichloroethene and vinyl chloride in Building C. Trichloroethene was infrequently detected in indoor air samples collected from Building C during Round 21 (Figure 5-5B).

Trichloroethene was detected in only three of 21 indoor air samples, at a maximum concentration of 1.3 µg/m^3 (at location 145-C). During Round 20, the only detection of trichloroethene (1.3 µg/m^3) was also at this location. Trichloroethene was not detected at 149-C, where the highest concentrations were detected in Round 19 (1.1 µg/m^3), Round 18 (8.6 µg/m^3), and Round 17 (1.8 µg/m^3). However, all of these concentrations were less than its screening level (8.8 µg/m^3).

Although trichloroethene has been routinely detected in indoor air in Building C, its concentrations have not typically exceeded its screening level. The only exception (a concentration of 20 µg/m^3) occurred during Round 15 at sampling location 144-C, which is in the machine shop of the Rotary and Mission Systems (RMS) mechanical prototype lab (MPL). A trace concentration (0.43 µg/m^3) of trichloroethene was detected nearby at location 128-C during Round 18. The Round 15 exceedance possibly resulted from an indoor source, because the room was air-conditioned and under positive pressure, making it extremely unlikely that sub-slab vapor had migrated into the room. No indoor air exceedances of trichloroethene were detected in the machine shop or elsewhere in Building C during Rounds 19, 20, or 21.

During Round 18, tetrachloroethene (PCE) was detected at a concentration (870 µg/m^3) greater than its indoor-air screening level (180 µg/m^3) in a resample (but not in the original sample)

collected from indoor air at location 149-C. Before Round 18, tetrachloroethene had never been detected in Building C indoor air or sub-slab vapor at concentrations greater than its screening levels. Additionally, concentrations of tetrachloroethene detected in Rounds 19, 20, and 21 indoor air and sub-slab-vapor samples did not exceed screening levels. In most sub-slab-vapor samples collected over the course of the investigation, from locations at and near location 149-C, concentrations of tetrachloroethene are typically below detection limits. The preponderance of evidence suggests that the elevated tetrachloroethene concentration at location 149-C during Round 18 is anomalous and possibly attributable to some indoor air source rather than vapor intrusion.

Concentrations of vinyl chloride detected in sub-slab vapor at 126-C have decreased since the SSD-system expansion, but have varied over time. The vinyl chloride concentration detected at location 126-C during Round 21 (5,000 µg/m^3) is greater than those detected during Rounds 16 through 18, and 20, but is less than the concentration detected during Round 15 (28,000 µg/m3) and Round 19 (16,000 µg/m^3). Vinyl chloride's sub-slab screening level is 933 µg/m^3. Trichloroethene concentrations up to 1,500 micrograms per liter have been detected in groundwater near 126-C, but vinyl chloride has not been detected in groundwater. The 126-C area might be affected by groundwater fluctuation (depth to groundwater is between four and five feet), but its correlation to vinyl chloride concentrations is difficult to determine. In general, sub-slab-vapor concentrations of volatile organic compounds have decreased in the southern basement area (SSD-4-C) of Building C since system startup in March 2008. Vapor monitoring points (060-C, 088-C, 113-C, 126-C, 133-C, and 135-C) in the mid-basement area also show lower concentrations, as compared to results before system expansion in May 2013.

5.2 RECOMMENDATIONS

Results of the August 2016 Round 21 vapor intrusion investigation at Buildings A, B, and C lead us to the following recommendations:

- Operation of the sub-slab-depressurization systems in Buildings A and C should continue.
- Continue semiannual indoor-air-quality/sub-slab-vapor monitoring to evaluate possible vapor intrusion and assess the performance/effectiveness of the existing mitigation systems. Monitoring results will be used to evaluate the control and reduction (if occurring) of known sources, to identify new sources (if present), and help determine if additional mitigation or sub-slab-depressurization-system modifications are needed. Locations within

the Building C sub-slab-depressurization-system areas of influence should continue to be monitored to evaluate whether the recent system expansion affects contaminant concentrations.

- Continue routine semiannual monitoring of indoor air and sub-slab soil-vapor to evaluate concentrations of tetrachloroethene in the Building C museum area near location 149-C. The absence of tetrachloroethene concentrations greater than screening levels in indoor air and sub-slab vapor near this location suggests that the Round 18 exceedance is most likely an anomaly.

- Evaluate ways to reduce trichloroethene concentrations in the Building A basement. Trichloroethene may result from venting through storm drains, tunnels, or walls, rather than or in addition to beneath the floor slab. Therefore, sealing the floor drain (if sealing does not cause other problems) might further reduce indoor air concentrations of trichloroethene. Expanding the influence of the existing sub-slab-depressurization system in this area may be ineffective, because the water table there is high. Despite continuous operation of the air-filtration units in this area, trichloroethene is still being detected near or above its IA screening concentration. Increased air exchange and ventilation should be considered in this area to further reduce indoor air concentrations of trichloroethene.

- Continue to investigate conditions in the Building A basement. An expanded investigation program is currently in preparation. The investigation objective is to define the vapor-intrusion conceptual site-model through incorporation of groundwater contamination, soil vapor, indoor air and the open drains, and other preferential pathways in the basement as possible.

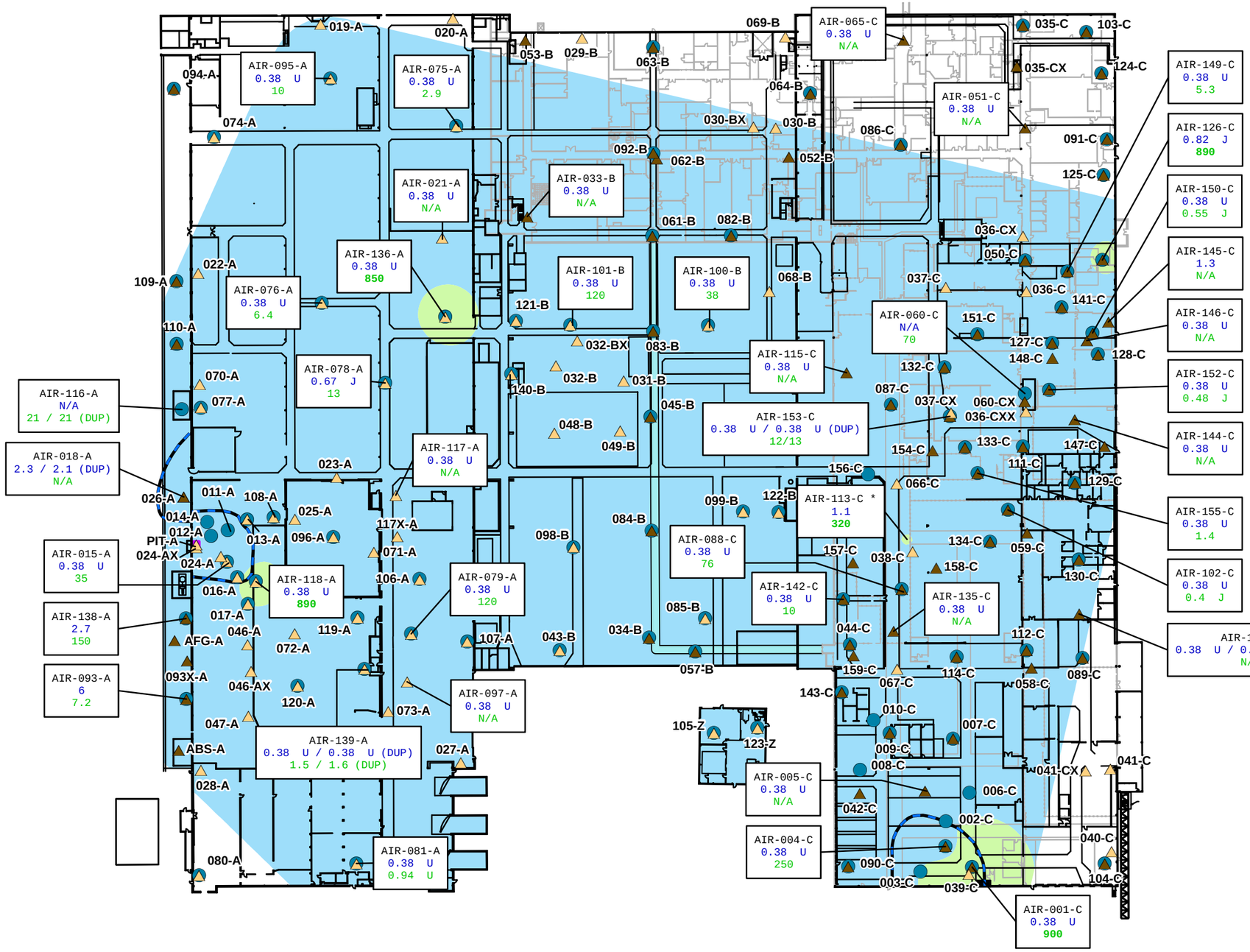


FIGURE 5-1

TRICHLOROETHENE SAMPLE RESULTS
ROUND 21
BUILDINGS A, B AND C

Legend

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

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

*** IAQ and SV symbols for location AIR-113-C are hidden on this map for illustrative purposes.**

All units in µg/m^3.

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

Screening Levels

Indoor Air	Soil Vapor
8.8	293

August 2016 Sub-Slab Vapor TCE Concentration

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

Lockheed Martin Middle River Complex
Middle River, Maryland

0 62.5 125 Feet

N

DATE MODIFIED: 10/26/16

CREATED BY: JEE

TETRA TECH

Map Document: (P:\GIS\Middle_River\MapDocs\MXD\bldg_abc_tce_tags_rnd21_1117.mxd)
10/26/16 -- JEE

Figure 5-2
Concentrations of Trichloroethene Detected at Location 093-A
Indoor Air - Basement

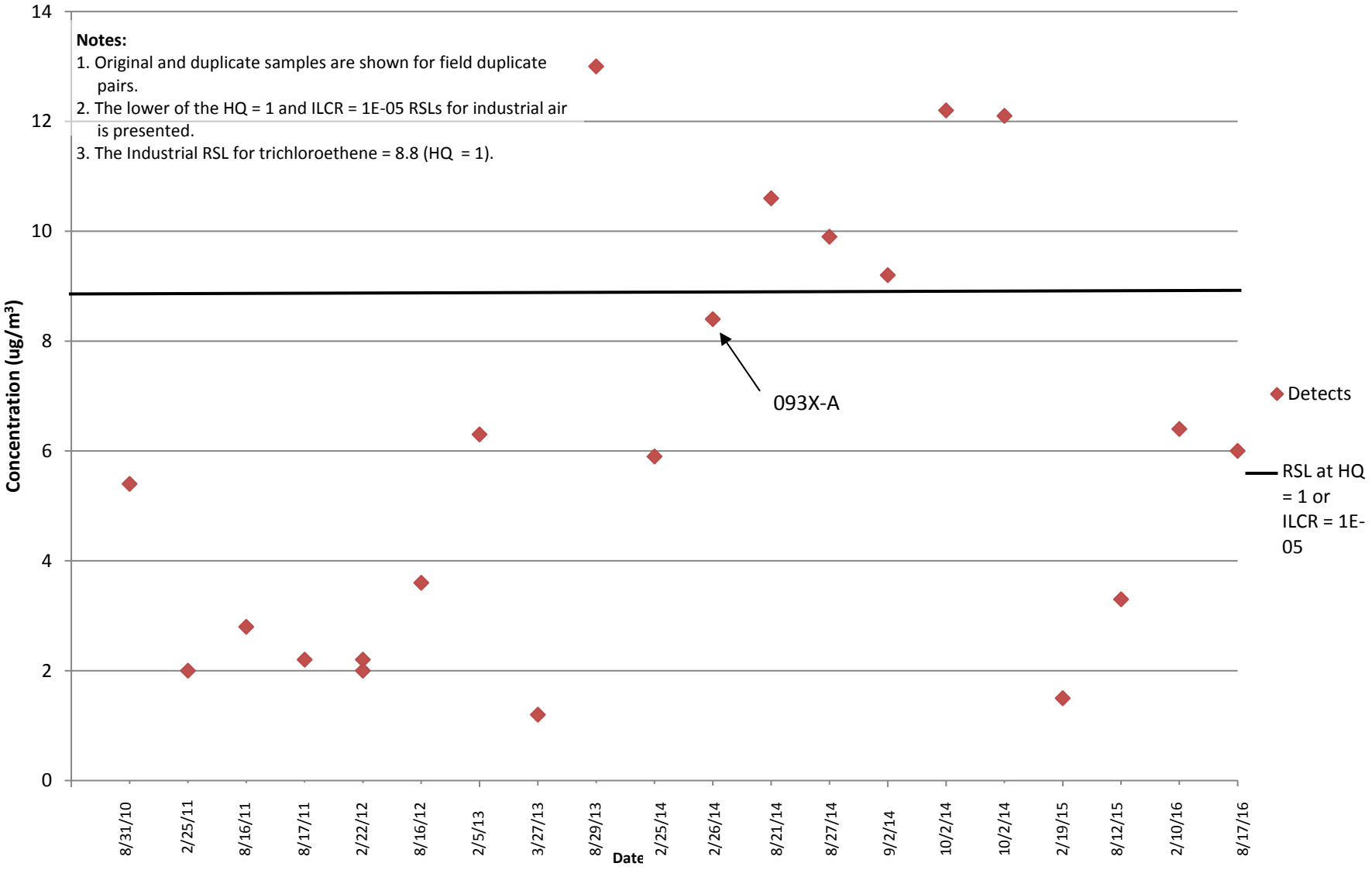


Figure 5-3
Concentrations of Trichloroethene Detected at Location 138-A
Indoor Air - Basement

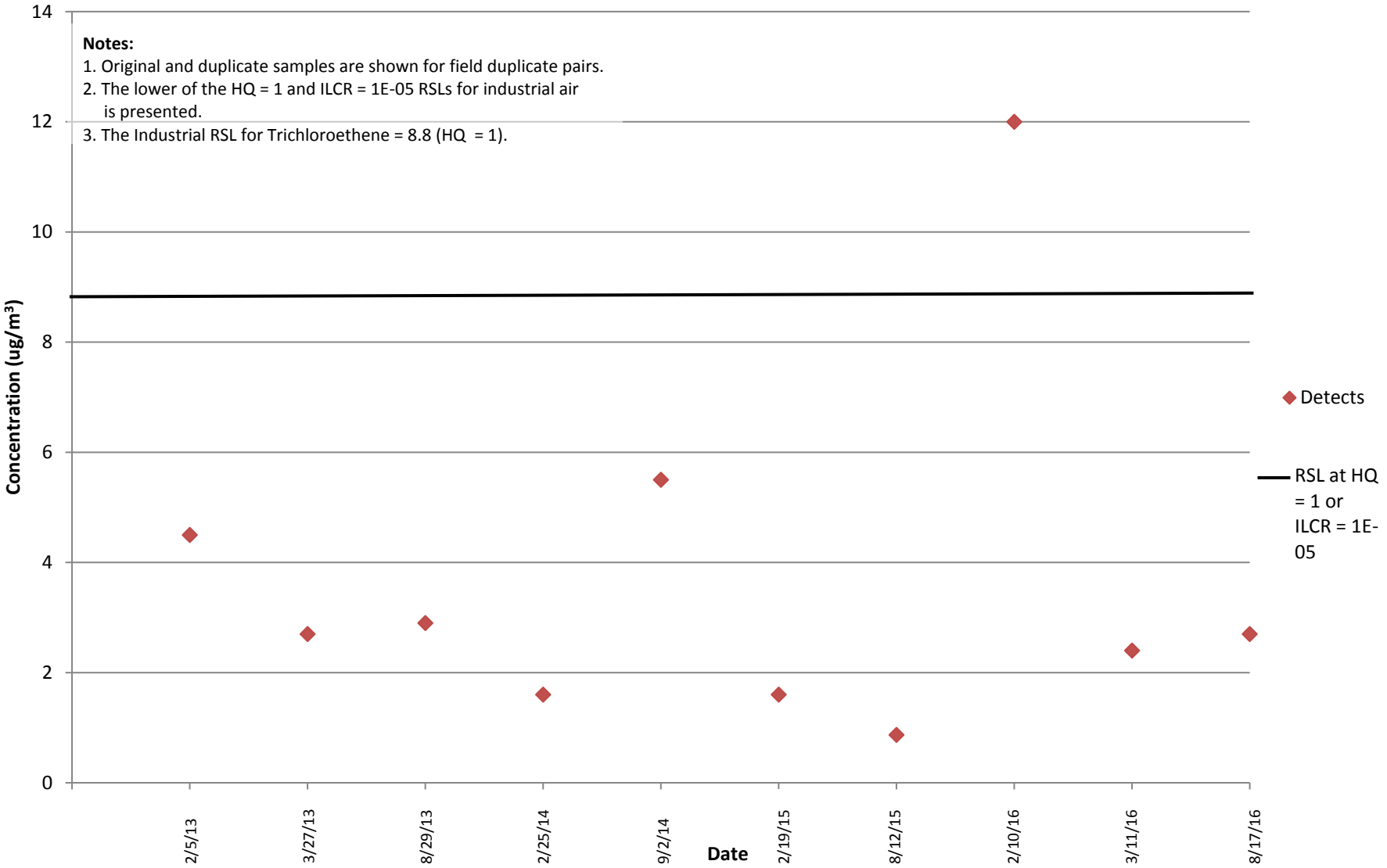


Figure 5-4A
Concentrations of Select Chemicals from Round 21 - Building A - Soil Vapor

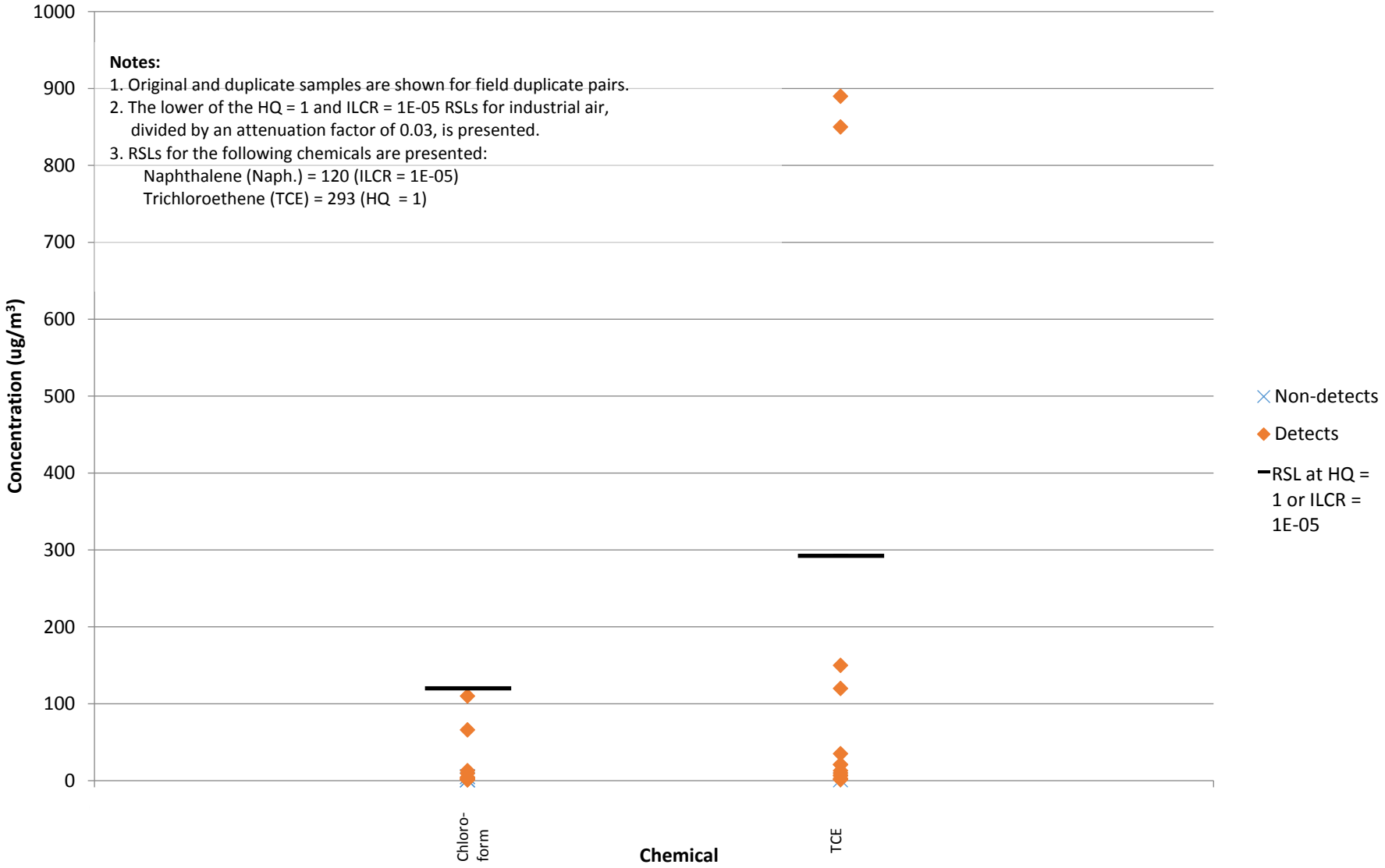


Figure 5-4B
Concentrations of Select Chemicals from Round 21 - Building A - Indoor Air - Basement

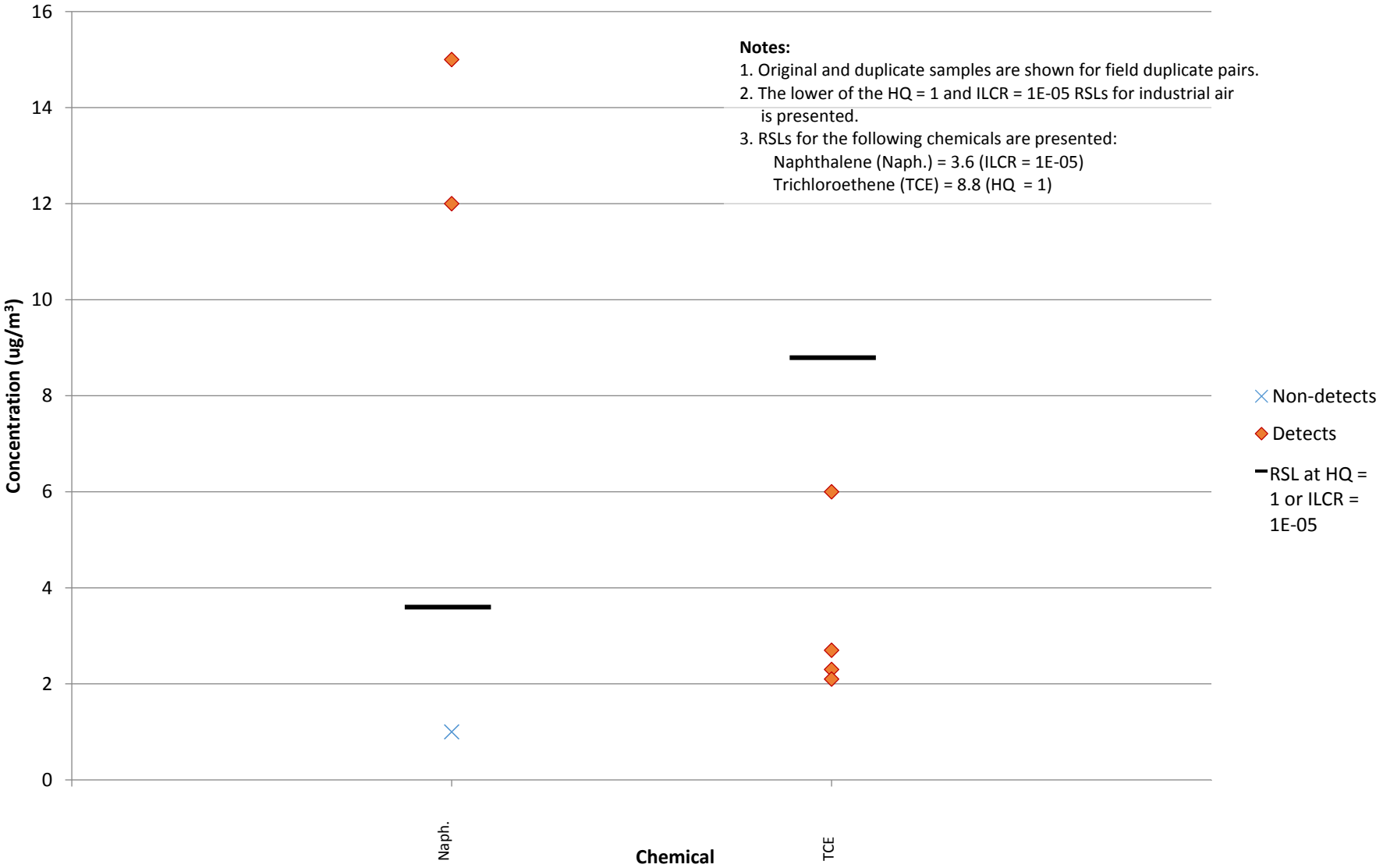


Figure 5-4C
Concentrations of Select Chemicals from Round 21 - Building A - Indoor Air - First Floor

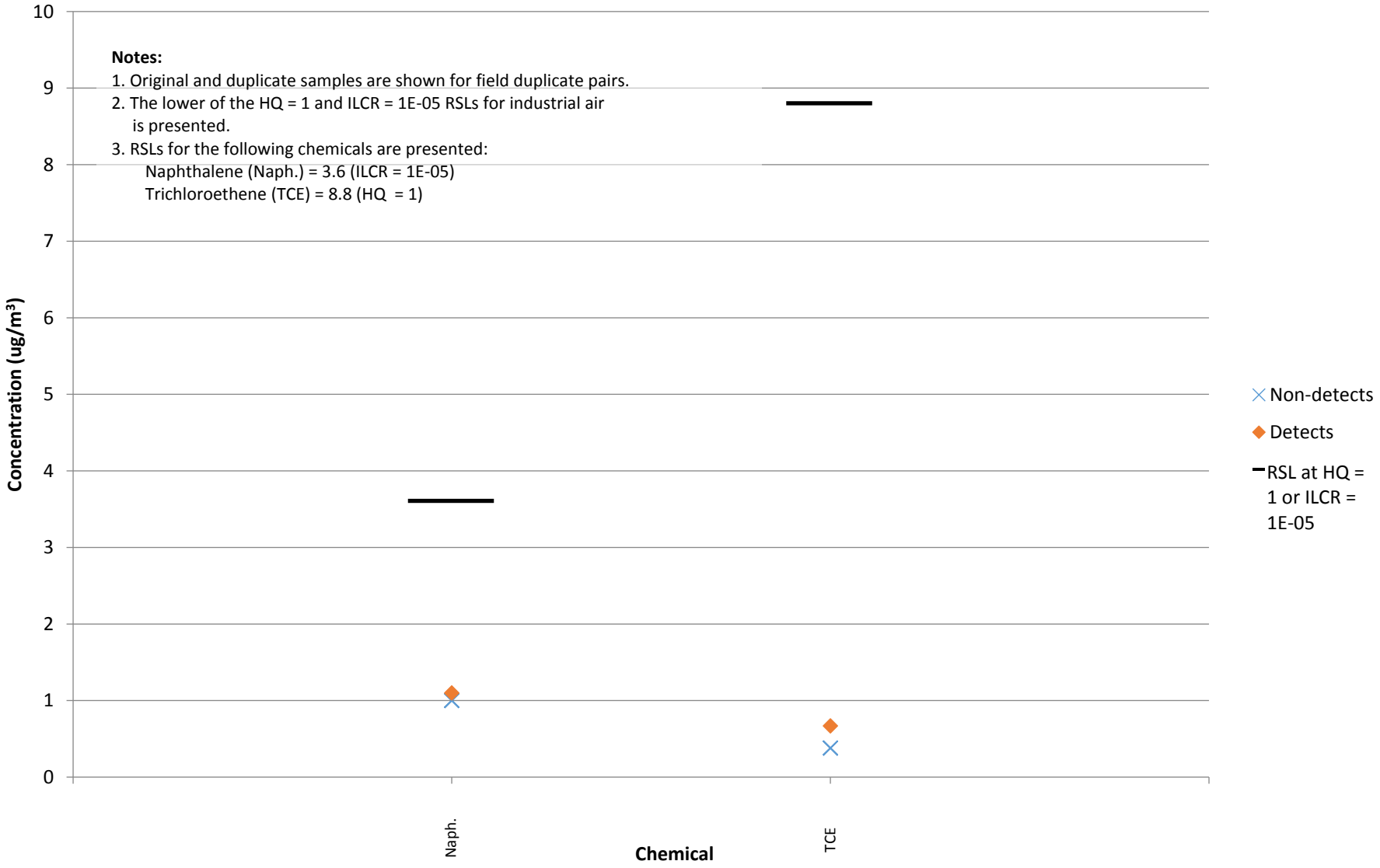


Figure 5-5A
Concentrations of Select Chemicals from Round 21 - Building C - Soil Vapor

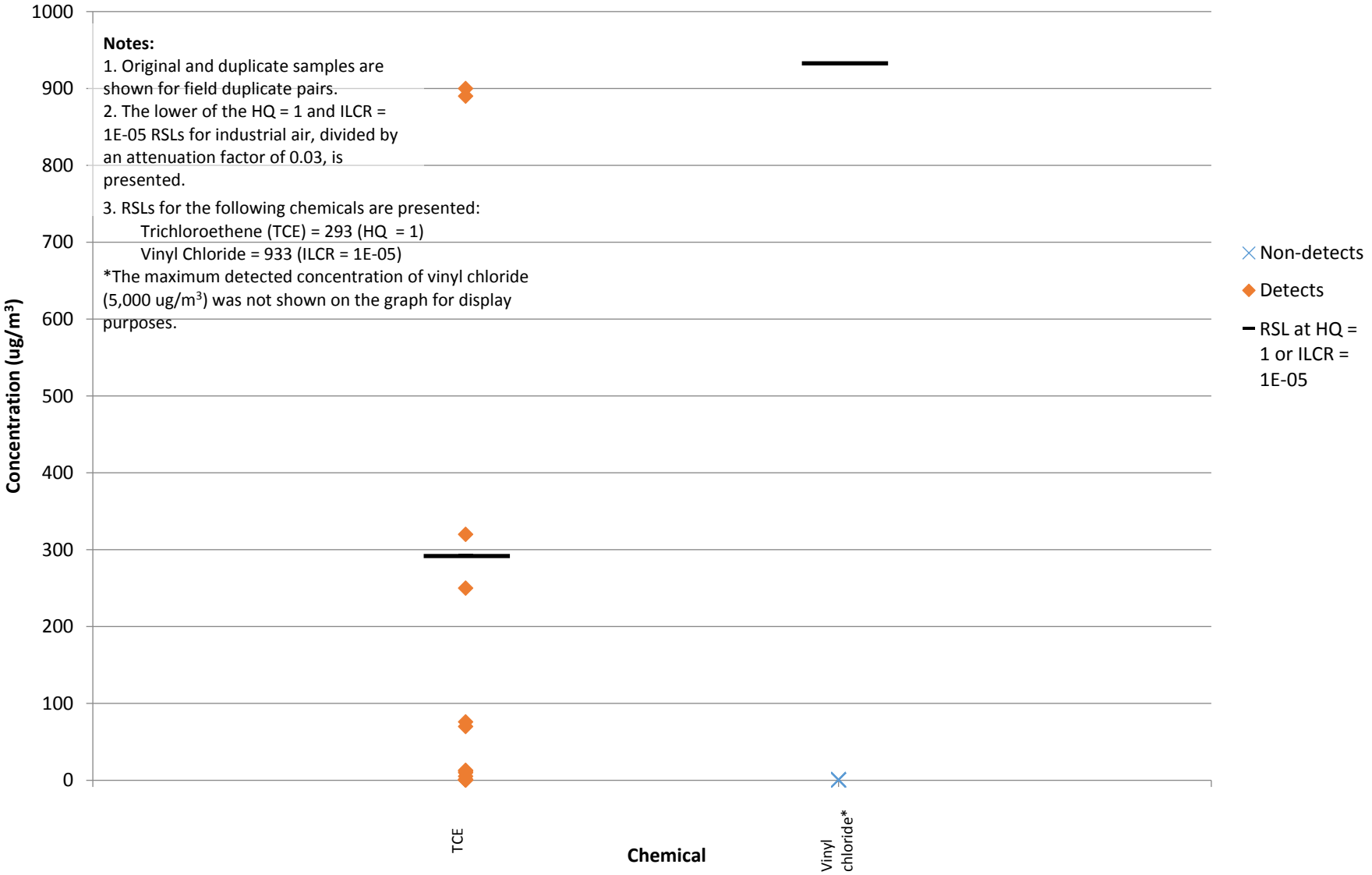
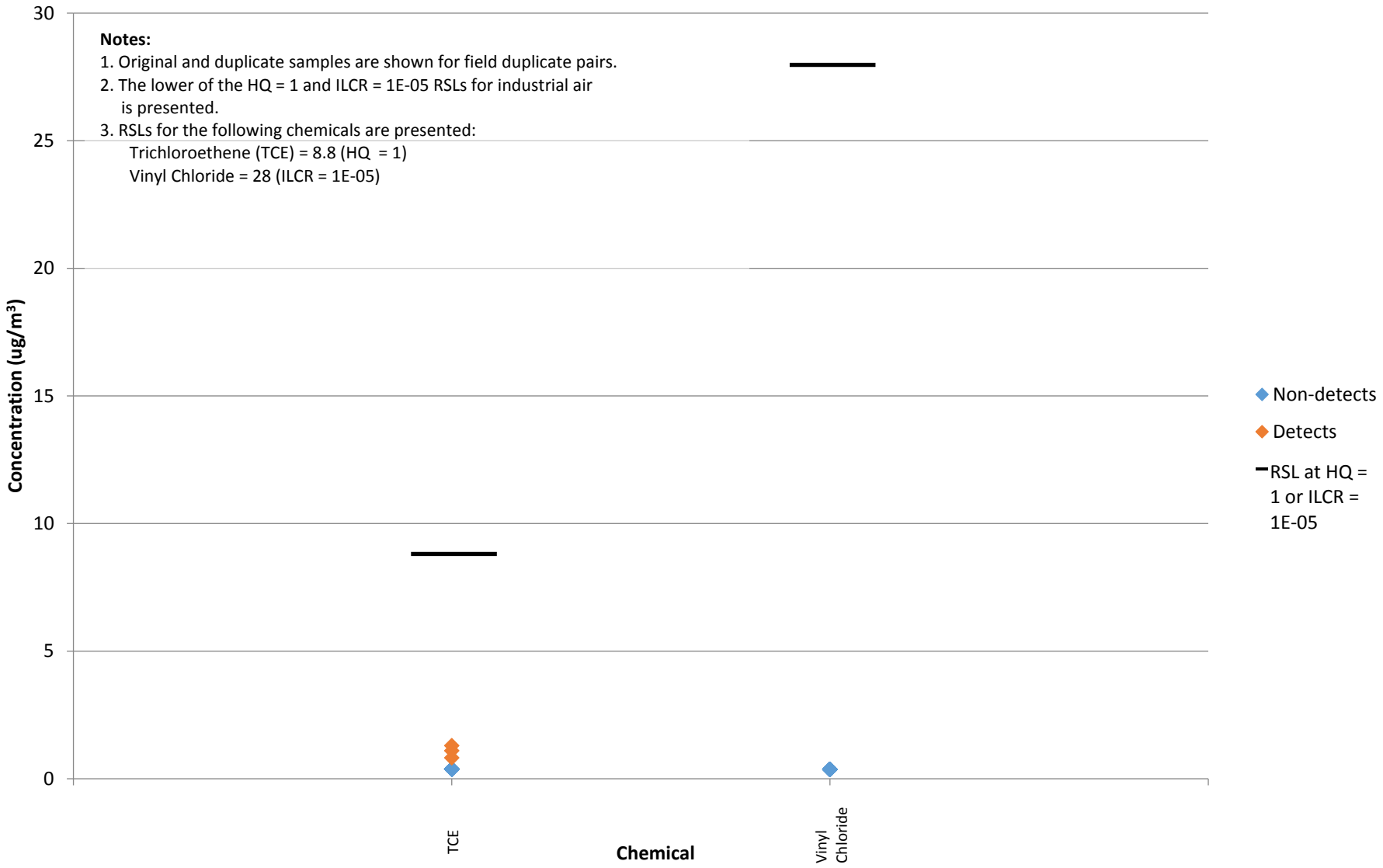


Figure 5-5B
Concentrations of Select Chemicals from Round 21 - Building C - Indoor Air - Basement



Section 6
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APPENDIX A—AUGUST 2016
SAMPLE LOG SHEETS/CHAIN OF CUSTODY

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-001-C-21
SV Canister #:	09662
SV Regulator #:	09915
SV Start Time:	8:47 AM
SV Start Pressure:	-30
SV Stop Time:	9:48 AM
SV Stop Pressure:	-4

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-001-C-21
IAQ Canister #:	11161
IAQ Regulator #:	10299
IAQ Start Time:	7:30 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:30 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-004-C-21
SV Canister #:	11123
SV Regulator #:	09844
SV Start Time:	8:50 AM
SV Start Pressure:	-28
SV Stop Time:	9:50 AM
SV Stop Pressure:	-2.5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-004-C-21
IAQ Canister #:	10334
IAQ Regulator #:	11266
IAQ Start Time:	7:32 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	3:32 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-005-C-21
IAQ Canister #:	09790
IAQ Regulator #:	11238
IAQ Start Time:	7:34 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:34 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-051-C-21
IAQ Canister #:	10341
IAQ Regulator #:	09855
IAQ Start Time:	8:00 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:00 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-060-C-21
SV Canister #:	09665
SV Regulator #:	10050
SV Start Time:	9:02 AM
SV Start Pressure:	-30
SV Stop Time:	10:02 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-060-C-21
IAQ Canister #:	09822
IAQ Regulator #:	10874
IAQ Start Time:	7:46 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	3:46 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-065-C-21
IAQ Canister #:	09645
IAQ Regulator #:	09842
IAQ Start Time:	8:03 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:03 PM
IAQ Stop Pressure:	-6

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-088-C-21
SV Canister #:	10833
SV Regulator #:	11053
SV Start Time:	9:21 AM
SV Start Pressure:	-30
SV Stop Time:	10:21 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-088-C-21
IAQ Canister #:	09588
IAQ Regulator #:	10661
IAQ Start Time:	8:17 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:17 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-102-C-21
SV Canister #:	10502
SV Regulator #:	11250
SV Start Time:	8:52 AM
SV Start Pressure:	-30
SV Stop Time:	9:52 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-102-C-21
IAQ Canister #:	09885
IAQ Regulator #:	10360
IAQ Start Time:	7:38 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:38 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-113-C-21
SV Canister #:	09803
SV Regulator #:	09754
SV Start Time:	9:16 AM
SV Start Pressure:	-30
SV Stop Time:	10:16 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-113-C-21
IAQ Canister #:	09835
IAQ Regulator #:	10854
IAQ Start Time:	8:13 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:13 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-115-C-21
IAQ Canister #:	10340
IAQ Regulator #:	10878
IAQ Start Time:	8:10 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:10 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-126-C-21
SV Canister #:	11285
SV Regulator #:	09946
SV Start Time:	9:12 AM
SV Start Pressure:	-30
SV Stop Time:	10:12 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-126-C-21
IAQ Canister #:	09806
IAQ Regulator #:	10620
IAQ Start Time:	8:34 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:34 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-131-C-21
SV Canister #:	10523
SV Regulator #:	10289
SV Start Time:	8:45 AM
SV Start Pressure:	-30
SV Stop Time:	9:45 AM
SV Stop Pressure:	-30

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-131-C-21
IAQ Canister #:	09660
IAQ Regulator #:	10175
IAQ Start Time:	7:24 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:24 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: SV/IAQ-DUP01-C-21

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-135-C-21
IAQ Canister #:	09741
IAQ Regulator #:	10292
IAQ Start Time:	8:19 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:19 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-142-C-21
SV Canister #:	09744
SV Regulator #:	10139
SV Start Time:	9:20 AM
SV Start Pressure:	-30
SV Stop Time:	10:20 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-142-C-21
IAQ Canister #:	10496
IAQ Regulator #:	09702
IAQ Start Time:	8:15 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:15 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-144-C-21
IAQ Canister #:	11256
IAQ Regulator #:	10173
IAQ Start Time:	7:50 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:50 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-145-C-23
IAQ Canister #:	10923
IAQ Regulator #:	11263
IAQ Start Time:	7:53 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:53 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-146-C-21
IAQ Canister #:	10495
IAQ Regulator #:	11239
IAQ Start Time:	7:52 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:52 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-149-C-21
SV Canister #:	10336
SV Regulator #:	09715
SV Start Time:	9:11 AM
SV Start Pressure:	-30
SV Stop Time:	10:11 AM
SV Stop Pressure:	-1

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-149-C-21
IAQ Canister #:	11164
IAQ Regulator #:	11283
IAQ Start Time:	8:33 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:33 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-150-C-21
SV Canister #:	11135
SV Regulator #:	10302
SV Start Time:	9:06 AM
SV Start Pressure:	-30
SV Stop Time:	10:06 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-150-C-21
IAQ Canister #:	11133
IAQ Regulator #:	10587
IAQ Start Time:	7:55 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	3:55 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-152-C-21
SV Canister #:	10972
SV Regulator #:	10466
SV Start Time:	9:04 AM
SV Start Pressure:	-30
SV Stop Time:	10:04 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-152-C-21
IAQ Canister #:	10494
IAQ Regulator #:	10158
IAQ Start Time:	7:48 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:48 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-153-C-21
SV Canister #:	11136
SV Regulator #:	10625
SV Start Time:	8:57 AM
SV Start Pressure:	-30
SV Stop Time:	9:54 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-153-C-21
IAQ Canister #:	10924
IAQ Regulator #:	10347
IAQ Start Time:	7:45 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:45 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: SV/IAQ-DUP02-C-21

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-155-C-21
SV Canister #:	10748
SV Regulator #:	11310
SV Start Time:	8:54 AM
SV Start Pressure:	-30
SV Stop Time:	9:54 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-155-C-21
IAQ Canister #:	10973
IAQ Regulator #:	11498
IAQ Start Time:	7:40 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:40 PM
IAQ Stop Pressure:	-3.5

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-DUP01-C-21
SV Canister #:	11287
SV Regulator #:	11272
SV Start Time:	8:45 AM
SV Start Pressure:	-30
SV Stop Time:	9:45 AM
SV Stop Pressure:	-30

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-DUP01-C-21
IAQ Canister #:	10309
IAQ Regulator #:	09854
IAQ Start Time:	7:24 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:24 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

IA-131-C-21

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 16, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-DUP02-C-21
SV Canister #:	09788
SV Regulator #:	09910
SV Start Time:	8:57 AM
SV Start Pressure:	-30
SV Stop Time:	9:47 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-DUP02-C-21
IAQ Canister #:	09747
IAQ Regulator #:	11307
IAQ Start Time:	8:49 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:45 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

IA-153-C-21

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-116-A-21
SV Canister #:	09743
SV Regulator #:	09714
SV Start Time:	8:48 AM
SV Start Pressure:	-30
SV Stop Time:	9:48 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

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

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: SV-DUP3-A-21

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-DUP03-A-21
SV Canister #:	10740
SV Regulator #:	10304
SV Start Time:	8:48 AM
SV Start Pressure:	-28
SV Stop Time:	9:59 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

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

SAMPLE COLLECTION INFORMATION:

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

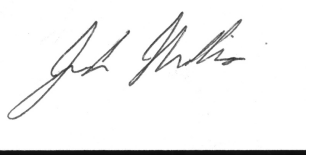
LOCATION:

SV-116-A-21

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-015-A-21
SV Canister #:	09667
SV Regulator #:	10870
SV Start Time:	8:57 AM
SV Start Pressure:	-28
SV Stop Time:	9:57 AM
SV Stop Pressure:	-4

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-015-A-21
IAQ Canister #:	09829
IAQ Regulator #:	10645
IAQ Start Time:	7:27 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	3:27 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-018-A-21
IAQ Canister #:	11109
IAQ Regulator #:	10056
IAQ Start Time:	7:23 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:23 PM
IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-021-A-21
IAQ Canister #:	11138
IAQ Regulator #:	11314
IAQ Start Time:	7:57 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:57 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-033-B-21
IAQ Canister #:	09800
IAQ Regulator #:	10240
IAQ Start Time:	8:06 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:06 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-075-A-21
SV Canister #:	10735
SV Regulator #:	10355
SV Start Time:	9:27 AM
SV Start Pressure:	-30
SV Stop Time:	10:27 AM
SV Stop Pressure:	-4

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-075-A-21
IAQ Canister #:	10753
IAQ Regulator #:	10163
IAQ Start Time:	8:00 AM
IAQ Start Pressure:	-27
IAQ Stop Time:	4:00 PM
IAQ Stop Pressure:	-2

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-076-A-21
SV Canister #:	11126
SV Regulator #:	09659
SV Start Time:	9:24 AM
SV Start Pressure:	-30
SV Stop Time:	10:24 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-076-A-21
IAQ Canister #:	10493
IAQ Regulator #:	10646
IAQ Start Time:	7:54 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:54 PM
IAQ Stop Pressure:	-15

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-078-A-21
SV Canister #:	10518
SV Regulator #:	10464
SV Start Time:	9:15 AM
SV Start Pressure:	-30
SV Stop Time:	10:15 AM
SV Stop Pressure:	-4

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-078-A-21
IAQ Canister #:	09583
IAQ Regulator #:	10154
IAQ Start Time:	7:50 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:50 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-79-A-21
SV Canister #:	11257
SV Regulator #:	10057
SV Start Time:	9:11 AM
SV Start Pressure:	-30
SV Stop Time:	10:11 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-079-A-21
IAQ Canister #:	10963
IAQ Regulator #:	11240
IAQ Start Time:	7:38 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:38 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-081-A-21
SV Canister #:	10980
SV Regulator #:	09654
SV Start Time:	9:03 AM
SV Start Pressure:	-30
SV Stop Time:	10:03 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-081-A-21
IAQ Canister #:	10974
IAQ Regulator #:	10079
IAQ Start Time:	7:45 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:45 PM
IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-093-A-21
SV Canister #:	10782
SV Regulator #:	10454
SV Start Time:	8:44 AM
SV Start Pressure:	-30
SV Stop Time:	9:44 AM
SV Stop Pressure:	0

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-093-A-21
IAQ Canister #:	09834
IAQ Regulator #:	10592
IAQ Start Time:	7:20 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:20 PM
IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-095-A-21
SV Canister #:	09632
SV Regulator #:	09703
SV Start Time:	9:29 AM
SV Start Pressure:	-29
SV Stop Time:	10:29 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-095-A-21
IAQ Canister #:	09636
IAQ Regulator #:	09848
IAQ Start Time:	8:02 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	4:02 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-097-A-21
IAQ Canister #:	09810
IAQ Regulator #:	10840
IAQ Start Time:	7:40 AM
IAQ Start Pressure:	-27
IAQ Stop Time:	3:40 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-100-B-21
SV Canister #:	10739
SV Regulator #:	11051
SV Start Time:	9:35 AM
SV Start Pressure:	-30
SV Stop Time:	10:35 AM
SV Stop Pressure:	-6

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-100-B-21
IAQ Canister #:	09888
IAQ Regulator #:	10429
IAQ Start Time:	8:12 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:12 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-101-B-21
SV Canister #:	10780
SV Regulator #:	09912
SV Start Time:	9:33 AM
SV Start Pressure:	-30
SV Stop Time:	10:33 AM
SV Stop Pressure:	-5

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-101-B-21
IAQ Canister #:	09808
IAQ Regulator #:	09861
IAQ Start Time:	8:09 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	4:09 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-117-A-21
IAQ Canister #:	11119
IAQ Regulator #:	10469
IAQ Start Time:	7:34 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:34 PM
IAQ Stop Pressure:	-4

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-118-A-21
SV Canister #:	09743
SV Regulator #:	09714
SV Start Time:	8:59 AM
SV Start Pressure:	-30
SV Stop Time:	9:59 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-118-A-21
IAQ Canister #:	09799
IAQ Regulator #:	10791
IAQ Start Time:	7:30 AM
IAQ Start Pressure:	-29
IAQ Stop Time:	3:30 PM
IAQ Stop Pressure:	0

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-136-A-21
SV Canister #:	11110
SV Regulator #:	10856
SV Start Time:	9:21 AM
SV Start Pressure:	-29
SV Stop Time:	10:21 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-136-A-21
IAQ Canister #:	10841
IAQ Regulator #:	09648
IAQ Start Time:	7:52 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:52 PM
IAQ Stop Pressure:	-1

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-138-A-21
SV Canister #:	09591
SV Regulator #:	09561
SV Start Time:	8:46 AM
SV Start Pressure:	-30
SV Stop Time:	9:46 AM
SV Stop Pressure:	-2

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-138-A-21
IAQ Canister #:	10919
IAQ Regulator #:	10146
IAQ Start Time:	7:22 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:22 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-139-A-21
SV Canister #:	09738
SV Regulator #:	10437
SV Start Time:	9:07 AM
SV Start Pressure:	-30
SV Stop Time:	10:07 AM
SV Stop Pressure:	-3

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-139-A-21
IAQ Canister #:	10602
IAQ Regulator #:	10162
IAQ Start Time:	7:43 AM
IAQ Start Pressure:	-30
IAQ Stop Time:	3:43 PM
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: IA/SV-DUP04-A-21

TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-DUP3-A-21
IAQ Canister #:	10741
IAQ Regulator #:	10764
IAQ Start Time:	
IAQ Start Pressure:	-30
IAQ Stop Time:	
IAQ Stop Pressure:	-5

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

IA-018-A-21

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

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

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	IA-DUP4-A-21
IAQ Canister #:	09792
IAQ Regulator #:	09713
IAQ Start Time:	
IAQ Start Pressure:	-30
IAQ Stop Time:	
IAQ Stop Pressure:	-3

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

IA-139-A-21

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID:



TETRA TECH

SOIL VAPOR AND INDOOR AIR QUALITY SAMPLE LOG SHEET

Date: August 17, 2016

SAMPLING DATA:

SOIL VAPOR SAMPLE

SV Sample ID:	SV-DUP4-A-21
SV Canister #:	11111
SV Regulator #:	09913
SV Start Time:	9:07 AM
SV Start Pressure:	-30
SV Stop Time:	
SV Stop Pressure:	

INDOOR AIR QUALITY SAMPLE

IAQ Sample ID:	SV-DUP4-A-21
IAQ Canister #:	
IAQ Regulator #:	
IAQ Start Time:	
IAQ Start Pressure:	
IAQ Stop Time:	
IAQ Stop Pressure:	

SAMPLE COLLECTION INFORMATION:

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

LOCATION:

OBSERVATIONS / NOTES:

MS/MSD:

Duplicate ID: SV-139-A-21



TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** Tony Aprahamian	**Sampled By:** JM/WP	1 of 15 COCs
Company: TETRA TECH INC	Phone: 301-528-3021		
Address: 20251 Century Blvd. Ste. 200	Site Contact: Joe Mullis		
City/State/Zip Germantown, MD 20874	TAL Contact: Terry Walker		
Phone: 301-528-3021			
FAX: —			
Project Name: MRC SUSTA Rnd. 21	**Analysis Turnaround Time**	140-5667 Chain of Custody	
Site/location: Block E	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-131-C-21	8/16/16	0724	1524	-30	-4	10175	09660	X							X				
IA-DUP01-C-21		0000	0000	-30	-4	09854	10309	X							X				
IA-001-C-21		0730	1530	-30	-3	10299	11161	X							X				
IA-004-C-21		0732	1532	-29	-3	11266	10334	X							X				
IA-005-C-21		0734	1534	-30	-3	11238	09790	X							X				
IA-102-C-21		0738	1538	-30	-3	10360	09885	X							X				

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Received @ ambient (20°C)
J. Boxer, No custody seal
Fedex Sc. tr# 777o 3842 8063
" " 7961
" " 7446

KW 8/22/16

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:	
Relinquished by:	Date/Time: 8-19-2016/1540	Received by:	8/22/16 000

24 cans
23 flows
2 Ts

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** AMANAVAGE	**Sampled By:** JM/WP	2 of 15 COCs
Company: TETRA TECH INC	Phone: 301-528-3021		
Address: 20251 Century Blvd Ste. 200	Site Contact: MILLS		
City/State/Zip Germantown, MD, 20874	TAL Contact: WALKER		
Phone: 301-528-3021			
FAX:			
Project Name: MRL SW/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block I	Standard (Specify)		
PO # 112IC07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type: Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-155-C-21	8/16/16	0740	1540	-30	-3.5	11498	10973	X						X				
IA-153-C-21	"	0745	1545	-30	-4	10347	10924	X						X				
IA-DUP02-C-21	"	0000	0000	-30	-4	11307	09747	X						X				
IA-060-C-21	"	0746	1546	-29	-1	10879	09822	X						X				
IA-152-C-21	"	0748	1548	-30	-4	10158	10494	X						X				
IA-144-C-21	"	0750	1550	-30	-3	10173	11256	X						X				

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: SEE PAGE 1
Address:
City/State/Zip
Phone:
FAX:
Project Name: MRC SU/IA Rnd. 21
Site/location: Block I
PO # 112IC07671

Project Manager: APANAVAGE
Phone: 301-528-3021
Site Contact: MULLIS
TAL Contact: WALKER

Sampled By: JM/WP

3 of 15 COCs

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-146-C-21	8/16/16	0752	1552	-30	-3	11239	10495	X							X				
IA-145-C-21		0753	1553	-30	-2	11263	10923	X							X				
IA-150-C-21		0755	1555	-29	-2	10587	11133	X							X				
IA-051-C-21		0800	1600	-30	-2	09855	10341	X							X				
IA-065-C-21		0803	1603	-30	-6	09842	09645	X							X				
IA-115-C-21		0810	1610	-30	-1	10878	10340	X							X				

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 /1540	Received by: [signature] 8/22/16 0600

08/31/2016

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: AMANUAGE	Sampled By: TM/WP	4 of 15 COCs
Company: TETRA TECH	Phone: 301-528-3021		
Address:	Site Contact: MULLIS		
City/State/Zip SEE PAGE 1	TAL Contact: WALKER		
Phone:			
FAX:			
Project Name: MRL SI/IA Ind. 21	Analysis Turnaround Time		
Site/location: Block I	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-113-C-21	8/16/16	0813	1613	-29	-1	10854	09835	X							X				
IA-142-C-21	"	0815	1615	-30	-4	09702	10496	X							X				
IA-088-C-21	"	0817	1617	-29	0	10661	09588	X							X				
IA-135-C-21	"	0819	1619	-29	-2	10292	09741	X							X				
IA-149-C-21	"	0833	1633	-29	-1	11283	11164	X							X				
IA-126-C-21	"	0834	1634	-30	0	10620	09806	X							X				

Sampled by : TM/WP

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

08/31/2016

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: TETRA TECH
Address:
City/State/Zip: SEE PAGE 1
Phone:
FAX:
Project Name: MRC SU/IA Rnd. 21
Site/location: Block I
PO #: 112IC07677

Project Manager: APANAVAGE
Phone: 301-838-3021
Site Contact: MULLIS
TAL Contact: WALKER

Sampled By: JM/WP

5 of 15 COCs

140-5668 Chain of Custody

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-131-C-21	8/16/16	0845	0945	-30	-30	10289	10523	X									X		
SU-DUP01-C-21		0000	0000	-30	-30	11272	11287	X									X		
SU-001-C-21		0847	0947	-30	-4	09915	09662	X									X		
SU-004-C-21		0850	0950	-28	-2.5	09844	11123	X									X		
SU-102-C-21		0852	0952	-30	-5	11250	10502	X									X		
SU-155-C-21		0854	0954	-30	-5	11310	10748	X									X		

Sampled by: JM/WP [signature]

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

SU-131-C and SU-DUP01-C did not drop in pressure over time on regulator faceplate

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Received @ ambient (20°C)
2 boxes, Fedex so
trk# 7770 3821 3889
" " 3834

Special Instructions/QC Requirements & Comments:

No custody seal, KW 8/23/16

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016/1540	Received by: [signature] 8/22/16 0900

28 Cams
4 Tv
28 Flows

08/31/2016

TAL Knoxville
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Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

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BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** APANAVAGE	**Sampled By:** JM/WP
Company: TETRA TECH	**Phone:** 302-528-3021	6 of 15 COCs
Address:	**Site Contact:** MULLIS	
City/State/Zip SEE PAGE 1	**TAL Contact:** WALKER	
Phone:		
FAX:		
Project Name: MRC SU/EA Rnd-21	**Analysis Turnaround Time**	
Site/location: MRC Block I	(Standard) (Specify)	
PO # 112IC07671	Rush (Specify)	

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-153-C-21	8/16/16	0857	0957	-30	-5	10625	11136	X									X		
SU-AP02-C-21	"	0000	0000	-30	-5	09910	09788	X									X		
SU-060-C-21	"	0902	1002	-30	-5	10050	09665	X									X		
SU-152-C-21	"	0904	1004	-30	0	10466	10972	X									X		
SU-150-C-21	"	0906	1006	-30	0	10302	11135	X									X		
SU-149-C-21	"	0911	1011	-30	-1	09715	10336	X									X		

Sampled by :

JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016/1540	Received by: 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
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Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: ARANAUAGE	Sampled By: JM/WP	7 of 15 COCs
Company:	TETRA TECH	Phone: 301-528-3021		
Address:	20251 Century Blvd.	Site Contact: MULLIS		
City/State/Zip	GBG 20866	TAL Contact: WALKER		
Phone:				
FAX:				
Project Name:	MRL SI/IA and 21	Analysis Turnaround Time		
Site/location:	Block I	Standard (Specify)		
PO #	112ILC0767)	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type: Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-126-C-21	8/16/16	0912	1012	-30	-5	09946	11285	X								X		
SV-113-C-21		0916	1016	-30	-3	09754	09803	X								X		
SV-142-C-21		0920	1020	-30	-3	10139	09744	X								X		
SV-088-C-21		0921	1021	-30	0	11053	10833	X								X		
	JM																	

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:	
Relinquished by:	Date/Time: 9-19-2016/1540	Received by:	8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
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BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** AMANUAGE	**Sampled By:** JM/WP	8 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-528-3021		
Address:	**Site Contact:** MULLIS		
City/State/Zip SPARKS	**TAL Contact:** WALKER		
Phone:			
FAX:			
Project Name: MRL SUPERFUND-21	**Analysis Turnaround Time**		
Site/location: ROCK I	Standard (Specify)		
PO # 112I07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type: Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-093-A-21	8/17/16	0720	1520	-30	-5	10592	09834	X						X				
IA-138-A-21		0722	1522	-30	-3	10146	10919	X						X				
IA-018-A-21		0723	1523	-30	-5	10056	11109	X						X				
IA-DUP03-A-21		0000	0000	-30	-5	10164	10741	X						X				
IA-015-A-21		0727	1527	-29	-3	10645	09829	X						X				
IA-118-A-21		0730	1530	-29	0	70791	09799	X						X				

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

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BALTIMORE

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: ABANAVALE	Sampled By: JM/MP	9 of 15 COCs
Company: TETRA TECH INC	Phone: 301-528-3021		
Address:	Site Contact: MORRIS		
City/State/Zip SEE PAGE 1	TAL Contact: WALKER		
Phone:			
FAX:			
Project Name: MRC SV/EA mod. 21	Analysis Turnaround Time		
Site/location: Block I	Standard (Specify)		
PO # 117IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-117-A-21	8/17/16	0739	1534	-30	-4	10469	11119	X							X				
IA-078-A-21		0738	1538	-30	-3	11240	10963	X							X				
IA-097-A-21		0740	1540	-27	-4	10440	09810	X							X				
IA-139-A-21		0743	1543	-30	-3	10162	10602	X							X				
IA-DUP04-A-21		0000	0000	-30	-3	09713	09792	X							X				
IA-081-A-21		0745	1545	-30	-5	10079	10974	X							X				

Sampled by : JM/MP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

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Knoxville, TN 37921
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BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** APANAUAGE	**Sampled By:** TM/WP	10 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-328-3021		
Address:	**Site Contact:** MULLIS		
City/State/Zip: SEE PAGE 1	**TAL Contact:** WALKER		
Phone:			
FAX:			
Project Name: MRC SU/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block I	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

140-5670 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-078-A-21	8/17/16	0750	1550	-30	-1	10154	09583	X							X	X			
IA-036-A-21		0752	1552	-30	-1	09648	10841	X							X	X			
IA-076-A-21		0754	1554	-30	-15	10646	10493	X							X				
IA-021-A-21		0757	1557	-30	-4	11314	11138	X							X				
IA-075-A-21		0800	1600	-27	-2	10163	10753	X							X				
IA-095-A-21		0802	1602	-30	-4	09848	09636	X							X				

Sampled by : TM/WP [signature]

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient (20°C), 3 boxes
Fedex Sa, tr K# 7770 3842 8177
" " 8475
" " 8328
No custody seal, KW 8/23/16

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 / 1540	Received by: [signature] 8/22/16 0900

33 canv
3 Ts
40 flow

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
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180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: TETRA TECH INC
Address:
City/State/Zip: SEE PAGE 1
Phone:
FAX:
Project Name: MRL IA/SV Rnd. 21
Site/location: Block I
PO #: 112IC07671

Project Manager: APANAVAGE
Phone: 301-528-3021
Site Contact: MULLIS
TAL Contact: WALKER

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: JM/WP

11 of 15 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-033-B-21	8/17/16	0806	1606	-30	-4	10240	09800	X							X				
IA-101-B-21	1	0809	1609	-30	-4	09861	09808	X							X				
IA-100-B-21	1	0812	1612	-30	-4	10429	09888	X							X				
		8/18/16																	

Sampled by: JM/WP

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 / 1540	Received by: 8/22/16 0900

TAL Knoxville
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Knoxville, TN 37921
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BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** MANAVAGE	**Sampled By:** JM/WP	12 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-528-3021		
Address:	**Site Contact:** MULLIS		
City/State/Zip SEE PAGE 1	**TAL Contact:** WALKER		
Phone:			
FAX:			
Project Name: MRC SU/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block F	Standard (Specify)		
PO # 112IC07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-093-A-21	8/17/16	0844	0944	-30	0	10454	10782	X									X		
SU-138-A-21		0846	0946	-30	-2	09561	09591	X									X		
SU-116-A-21		0848	0948	-30	0	10052	11108	X									X		
SU-QUP03-A-21		0000	0000	-28	0	10304	10740	X									X		
SU-015-A-21		0857	0957	-28	-4	10870	09667	X									X		
SU-118-A-21		0859	0959	-30	-3	09714	09743	X									X		

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/15/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 / 1540	Received by: [signature] 8/22/16 0900

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Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** APANAVAGE	**Sampled By:** JM/WP	13 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-528-3021		
Address: 20251 Century Blvd.	**Site Contact:** MULLIS		
City/State/Zip	**TAL Contact:** MCFADDEN		
Phone: SEE PAGE 1			
FAX:			
Project Name: MRC SU/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block I	~~Standard~~ (Specify)		
PO # 112IC07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-081-A-21	8/17/16	0903	1003	-30	-3	09654	10980	X									X		
SU-139-A-21		0907	1007	-30	-3	10437	09738	X									X		
SU-DUP04-A-21		0000	0000	-30	-5	09913	11111	X									X		
SU-079-A-21		0911	1011	-30	-3	10057	11257	X									X		
SU-078-A-21		0915	1015	-30	-4	10464	10518	X									X		
SU-136-A-21		0921	1021	-29	-3	10856	11110	X									X		

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 / 1540	Received by: [signature] 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
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BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** ARAVAVAGE	**Sampled By:** JM/WP
Company: TETRA TECH INC	Phone: 301-528-3021	14 of 15 COCs
Address:	Site Contact: MULLIS	
City/State/Zip SEE PAGE 1	TAL Contact: WALKER	
Phone:		
FAX:		
Project Name: MRL SVOA Rnd. 21	**Analysis Turnaround Time**	
Site/location: Block I	~~Standard~~ (Specify)	
PO # 112IC07677	Rush (Specify)	

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-076-A-21	8/17/16	0924	1024	-30	-3	09659	11126	X									X		
SV-075-A-21		0927	1027	-30	-4	10355	10735	X									X		
SV-095-A-21		0929	1029	-29	-5	09703	09632	X									X		
SV-101-B-21		0933	1033	-30	-5	09912	10780	X									X		
SV-100-B-21		0935	1035	-30	-6	11051	10739	X									X		

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 / 1540	Received by: 8/22/16 0900

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Canister Samples Chain of Custody Record

BALTIMORE

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: AVANAUGH	Sampled By: JM/WP	15 of 15 COCs
Company: TETRA TECH EMI	Phone: 701-528-3021		
Address:	Site Contact: NURSES		
City/State/Zip SEE PAGE 1	TAL Contact: WALKER		
Phone:			
FAX:			
Project Name: MIKE SUTEA Amd. 21	Analysis Turnaround Time		
Site/location: Block I	(Standard) (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BCK-1-21	8/16/16	0720	1602	-30	-2	10021	09801	X								X			
BCK-2-21	"	0718	1600	-30	-2	10242	11121	X								X			
BCK-3-21	"	0705	1552	-29	0	11248	11165	X								X			
BCK-4-21	"	0710	1546	-28	-2	10450	11279	X								X			

Sampled by : TA/WP JM

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016/1540	Received by: 8/22/16 0900

APPENDIX B—METHOD DETECTION LIMITS

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

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

APPENDIX C—LABORATORY ANALYTICAL REPORTS

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-001-C-21 | Lab Sample ID: 140-5667-3

Matrix: Air | Lab File ID: GG25P116.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:30

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 02:44

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.76		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.60	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-001-C-21 Lab Sample ID: 140-5667-3

Matrix: Air Lab File ID: GG25P116.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:30

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:44

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6395 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	0.78	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	18		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.57	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-004-C-21 | Lab Sample ID: 140-5667-4

Matrix: Air | Lab File ID: JH24P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:32

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 17:36

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.62	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-004-C-21 | Lab Sample ID: 140-5667-4

Matrix: Air | Lab File ID: JH24P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:32

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 17:36

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.82	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-005-C-21 | Lab Sample ID: 140-5667-5

Matrix: Air | Lab File ID: GG25P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 03:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.89		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	29		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.29	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.83		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-005-C-21 | Lab Sample ID: 140-5667-5

Matrix: Air | Lab File ID: GG25P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 03:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	100		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.6	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-051-C-21 | Lab Sample ID: 140-5667-16

Matrix: Air | Lab File ID: JH24P116.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	8.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.93		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-051-C-21 | Lab Sample ID: 140-5667-16

Matrix: Air | Lab File ID: JH24P116.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	28		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-065-C-21 | Lab Sample ID: 140-5667-17

Matrix: Air | Lab File ID: JH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:03

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 06:43

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	29		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.49		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	9.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-065-C-21 | Lab Sample ID: 140-5667-17

Matrix: Air | Lab File ID: JH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:03

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 06:43

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	100		1.4	0.27
67-66-3	Chloroform	119.38	0.69	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	20		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	35		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.64	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.64	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-088-C-21 | Lab Sample ID: 140-5667-21

Matrix: Air | Lab File ID: GH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:17

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:47

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.090	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.3		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-088-C-21 | Lab Sample ID: 140-5667-21

Matrix: Air | Lab File ID: GH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:17

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:47

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	0.83	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	7.1		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-102-C-21 | Lab Sample ID: 140-5667-6

Matrix: Air | Lab File ID: JH24P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.081	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.54		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.30	J	0.40	0.080
108-88-3	Toluene	92.14	6.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.23	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-102-C-21 | Lab Sample ID: 140-5667-6

Matrix: Air | Lab File ID: JH24P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.7		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	20		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.1	J	2.7	0.54
108-88-3	Toluene	92.14	23		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-113-C-21 | Lab Sample ID: 140-5667-19

Matrix: Air | Lab File ID: JH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 07:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.57		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.082	J	0.40	0.080
108-88-3	Toluene	92.14	4.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.48	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-113-C-21 | Lab Sample ID: 140-5667-19

Matrix: Air | Lab File ID: JH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 07:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.56	J	2.7	0.54
108-88-3	Toluene	92.14	16		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.6	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-115-C-21 | Lab Sample ID: 140-5667-18

Matrix: Air | Lab File ID: JH24P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:10

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 23:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.21	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-115-C-21 | Lab Sample ID: 140-5667-18

Matrix: Air | Lab File ID: JH24P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:10

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 23:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.63	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.96	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-126-C-21 | Lab Sample ID: 140-5667-24

Matrix: Air | Lab File ID: GH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.8		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.92		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.15	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-126-C-21 | Lab Sample ID: 140-5667-24

Matrix: Air | Lab File ID: GH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.4		1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.0		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.82	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-131-C-21 | Lab Sample ID: 140-5667-1

Matrix: Air | Lab File ID: JH24P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:24

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 14:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.96		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-131-C-21 | Lab Sample ID: 140-5667-1

Matrix: Air | Lab File ID: JH24P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:24

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 14:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.72	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-135-C-21 | Lab Sample ID: 140-5667-22

Matrix: Air | Lab File ID: GH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:19

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:30

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.57		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.79	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-135-C-21 | Lab Sample ID: 140-5667-22

Matrix: Air | Lab File ID: GH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:19

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:30

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.63	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.1		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-142-C-21 | Lab Sample ID: 140-5667-20

Matrix: Air | Lab File ID: JH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:15

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 09:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	0.084	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.79		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.47	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.97		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-142-C-21 | Lab Sample ID: 140-5667-20

Matrix: Air | Lab File ID: JH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:15

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 09:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.70	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.6	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.84	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-144-C-21 | Lab Sample ID: 140-5667-12

Matrix: Air | Lab File ID: JH24P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 01:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	14		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.40		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.28		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	9.8	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.28	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-144-C-21 | Lab Sample ID: 140-5667-12

Matrix: Air | Lab File ID: JH24P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 01:22

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.67	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	49		1.4	0.27
67-66-3	Chloroform	119.38	0.67	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	54	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-145-C-21 | Lab Sample ID: 140-5667-14

Matrix: Air | Lab File ID: JH24P114.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:53

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:10

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	15		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.67		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.24		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-145-C-21 | Lab Sample ID: 140-5667-14

Matrix: Air | Lab File ID: JH24P114.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:53

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:10

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	53		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-146-C-21 | Lab Sample ID: 140-5667-13

Matrix: Air | Lab File ID: GG25P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 04:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	11		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.93		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.50		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.77	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-146-C-21 | Lab Sample ID: 140-5667-13

Matrix: Air | Lab File ID: GG25P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 04:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	39		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-149-C-21 | Lab Sample ID: 140-5667-23

Matrix: Air | Lab File ID: GH24P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:33

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.1		0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.26		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.38	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-149-C-21 | Lab Sample ID: 140-5667-23

Matrix: Air | Lab File ID: GH24P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:33

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:12

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.64	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11		1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.4		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-150-C-21 | Lab Sample ID: 140-5667-15

Matrix: Air | Lab File ID: JH24P115DU.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:55

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	14		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.64		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	5.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.69	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-150-C-21 | Lab Sample ID: 140-5667-15

Matrix: Air | Lab File ID: JH24P115DU.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:55

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	50		1.4	0.27
67-66-3	Chloroform	119.38	0.69	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	20		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.8	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-152-C-21 | Lab Sample ID: 140-5667-11

Matrix: Air | Lab File ID: JH24P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 00:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	13		0.40	0.075
67-66-3	Chloroform	119.38	0.081	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.63		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.58		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	22	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-152-C-21 | Lab Sample ID: 140-5667-11

Matrix: Air | Lab File ID: JH24P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 00:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.63	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	44		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	10		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	120	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-153-C-21 | Lab Sample ID: 140-5667-8

Matrix: Air | Lab File ID: JH24P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 21:48

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.2		0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.22	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.87		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-153-C-21 | Lab Sample ID: 140-5667-8

Matrix: Air | Lab File ID: JH24P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 21:48

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.9		1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.67	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.2	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-155-C-21 | Lab Sample ID: 140-5667-7

Matrix: Air | Lab File ID: JH24P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.62		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.70	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-155-C-21 | Lab Sample ID: 140-5667-7

Matrix: Air | Lab File ID: JH24P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	8.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.8	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.2		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP01-C-21 | Lab Sample ID: 140-5667-2

Matrix: Air | Lab File ID: JH24P102.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 15:49

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.78		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.82	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP01-C-21 | Lab Sample ID: 140-5667-2

Matrix: Air | Lab File ID: JH24P102.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 15:49

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.73	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	4.5	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP02-C-21 | Lab Sample ID: 140-5667-9

Matrix: Air | Lab File ID: JH24P109R.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 10:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.099	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.9		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.71		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.30	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP02-C-21 | Lab Sample ID: 140-5667-9

Matrix: Air | Lab File ID: JH24P109R.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 10:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	10		1.4	0.27
67-66-3	Chloroform	119.38	0.50	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.6	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-015-A-21 | Lab Sample ID: 140-5668-21

Matrix: Air | Lab File ID: EH27p103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.55		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.1		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-015-A-21 | Lab Sample ID: 140-5668-21

Matrix: Air | Lab File ID: EH27p103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.59	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-018-A-21 | Lab Sample ID: 140-5668-19

Matrix: Air | Lab File ID: GH26P115.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:23

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 02:02

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.086	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.18	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.29	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.36	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.3		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.43		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-018-A-21 | Lab Sample ID: 140-5668-19

Matrix: Air | Lab File ID: GH26P115.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:23

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 02:02

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.87	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	12		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-079-A-21 | Lab Sample ID: 140-5668-24

Matrix: Air | Lab File ID: EH27p106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:01

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-079-A-21 | Lab Sample ID: 140-5668-24

Matrix: Air | Lab File ID: EH27p106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:01

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.97	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	0.82	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-081-A-21 Lab Sample ID: 140-5668-28

Matrix: Air Lab File ID: EH27p110.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:45

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 02:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.77		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.9		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-081-A-21 | Lab Sample ID: 140-5668-28

Matrix: Air | Lab File ID: EH27p110.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 08/28/2016 02:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	38		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.74	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	17		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-093-A-21 | Lab Sample ID: 140-5668-17

Matrix: Air | Lab File ID: GH26P113.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 00:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.18	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.70	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-093-A-21 | Lab Sample ID: 140-5668-17

Matrix: Air | Lab File ID: GH26P113.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 00:38

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.71	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-097-A-21 | Lab Sample ID: 140-5668-25

Matrix: Air | Lab File ID: EH27p107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.83		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.27	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.7		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-097-A-21 | Lab Sample ID: 140-5668-25

Matrix: Air | Lab File ID: EH27p107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	14		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	20		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-117-A-21 | Lab Sample ID: 140-5668-23

Matrix: Air | Lab File ID: EH27p105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 22:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.54		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-117-A-21 | Lab Sample ID: 140-5668-23

Matrix: Air | Lab File ID: EH27p105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 22:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	0.59	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-118-A-21 | Lab Sample ID: 140-5668-22

Matrix: Air | Lab File ID: EH27p104.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:30

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 21:33

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.45		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.13	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.1		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-118-A-21 | Lab Sample ID: 140-5668-22

Matrix: Air | Lab File ID: EH27p104.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:30

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 21:33

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.2		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.65	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	35		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-138-A-21 Lab Sample ID: 140-5668-18

Matrix: Air Lab File ID: GH26P114.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:22

Sample wt/vol: 100(mL) Date Analyzed: 08/27/2016 01:20

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6396 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.51		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.97		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-138-A-21 | Lab Sample ID: 140-5668-18

Matrix: Air | Lab File ID: GH26P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:22

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 01:20

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.72	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-139-A-21 Lab Sample ID: 140-5668-26

Matrix: Air Lab File ID: EH27p108.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:43

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 00:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.091	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.81		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.63		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.48		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-139-A-21 Lab Sample ID: 140-5668-26

Matrix: Air Lab File ID: EH27p108.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:43

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 00:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.68	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	36		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP03-A-21 | Lab Sample ID: 140-5668-20

Matrix: Air | Lab File ID: EH27p102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:06

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.28	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	4.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.8		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.078	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.40		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP03-A-21 | Lab Sample ID: 140-5668-20

Matrix: Air | Lab File ID: EH27p102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:06

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.1	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	16		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	15		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP04-A-21 | Lab Sample ID: 140-5668-27

Matrix: Air | Lab File ID: EH27p109.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/28/2016 01:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.81		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.65		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.49		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.7		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP04-A-21 Lab Sample ID: 140-5668-27

Matrix: Air Lab File ID: EH27p109.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 01:57

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.4		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	33		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-001-C-21 | Lab Sample ID: 140-5668-3

Matrix: Air | Lab File ID: EH26P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:47

Sample wt/vol: 25(mL) | Date Analyzed: 08/26/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.6	0.46
56-23-5	Carbon tetrachloride	153.81	ND		1.6	0.30
75-45-6	Chlorodifluoromethane	86.47	0.78	J	1.6	0.30
67-66-3	Chloroform	119.38	4.9		1.6	0.30
156-59-2	cis-1,2-Dichloroethene	96.94	57		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	0.59	J	1.6	0.54
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.56	J	1.6	0.54
75-09-2	Methylene Chloride	84.93	ND		4.0	2.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		8.0	1.4
91-20-3	Naphthalene	128.17	ND		0.80	0.80
127-18-4	Tetrachloroethene	165.83	1.3	J	1.6	0.32
108-88-3	Toluene	92.14	ND		2.4	2.4
156-60-5	trans-1,2-Dichloroethene	96.94	15		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.6	0.78
71-55-6	1,1,1-Trichloroethane	133.41	0.40	J	1.6	0.24
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.6	0.42
79-01-6	Trichloroethene	131.39	170		0.80	0.28
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.6	0.68
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.6	0.50
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.6	0.52
75-01-4	Vinyl chloride	62.50	ND		0.80	0.58
1330-20-7	Xylenes, Total	106.17	ND		3.2	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-001-C-21 | Lab Sample ID: 140-5668-3

Matrix: Air | Lab File ID: EH26P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:47

Sample wt/vol: 25(mL) | Date Analyzed: 08/26/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		5.1	1.5
56-23-5	Carbon tetrachloride	153.81	ND		10	1.9
75-45-6	Chlorodifluoromethane	86.47	2.8	J	5.7	1.1
67-66-3	Chloroform	119.38	24		7.8	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	230		6.3	1.9
75-71-8	Dichlorodifluoromethane	120.91	2.9	J	7.9	2.7
75-34-3	1,1-Dichloroethane	98.96	ND		6.5	0.81
107-06-2	1,2-Dichloroethane	98.96	ND		6.5	1.5
75-35-4	1,1-Dichloroethene	96.94	ND		6.3	1.1
100-41-4	Ethylbenzene	106.17	2.4	J	6.9	2.3
75-09-2	Methylene Chloride	84.93	ND		14	9.0
1634-04-4	Methyl tert-butyl ether	88.15	ND		29	4.9
91-20-3	Naphthalene	128.17	ND		4.2	4.2
127-18-4	Tetrachloroethene	165.83	8.8	J	11	2.2
108-88-3	Toluene	92.14	ND		9.0	9.0
156-60-5	trans-1,2-Dichloroethene	96.94	60		6.3	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	2.2	J	8.7	1.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.7	2.3
79-01-6	Trichloroethene	131.39	900		4.3	1.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		7.9	3.3
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		7.9	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		7.9	2.6
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		14	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-004-C-21 | Lab Sample ID: 140-5668-4

Matrix: Air | Lab File ID: EH26P103.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 15:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.54		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	4.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	20		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.17	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.36	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	1.3		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.17	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	47		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-004-C-21 | Lab Sample ID: 140-5668-4

Matrix: Air | Lab File ID: EH26P103.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 15:18

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.4		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	20		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	79		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.69	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	5.1		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.90	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	250		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 | Lab Sample ID: 140-5668-9

Matrix: Air | Lab File ID: EH26P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:02

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.63		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.37	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.78		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	44		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.5		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.17	J	0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.24	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.72		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	13		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.24	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.86		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	*Xylenes, Total*	*106.17*	*320*	*E*	*0.80*	*0.12*

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 | Lab Sample ID: 140-5668-9

Matrix: Air | Lab File ID: EH26P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:02

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	3.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.5	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	190		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	13		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.2	J	2.7	0.54
108-88-3	Toluene	92.14	4.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.96	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.9		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	70		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.2	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	*Xylenes, Total*	*106.17*	*1400*	*E*	*3.5*	*0.52*

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 DL Lab Sample ID: 140-5668-9 DL

Matrix: Air Lab File ID: EH27p101DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:02

Sample wt/vol: 50(mL) Date Analyzed: 08/27/2016 19:21

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	106.17	280		1.6	0.24

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 DL Lab Sample ID: 140-5668-9 DL

Matrix: Air Lab File ID: EH27p101DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:02

Sample wt/vol: 50(mL) Date Analyzed: 08/27/2016 19:21

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	106.17	1200		6.9	1.0

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-088-C-21 | Lab Sample ID: 140-5668-16

Matrix: Air | Lab File ID: GH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:21

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.094	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.0		0.40	0.075
67-66-3	Chloroform	119.38	0.28	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.056	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.31	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.77		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.84		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.26	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.23	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	14		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.30	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-088-C-21 | Lab Sample ID: 140-5668-16

Matrix: Air | Lab File ID: GH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:21

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:57

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.59	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.1		1.4	0.27
67-66-3	Chloroform	119.38	1.4	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	17		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.23	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	76		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.5	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.69	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	16		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-102-C-21 | Lab Sample ID: 140-5668-5

Matrix: Air | Lab File ID: EH26P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 16:02

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.29	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.33	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.083	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	9.7		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.25	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.074	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.39	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	78		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-102-C-21 | Lab Sample ID: 140-5668-5

Matrix: Air | Lab File ID: EH26P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 16:02

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.93	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	14		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.4	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.33	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	42		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	110		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.4	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.40	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	5.6		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.1		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.9	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	340		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-113-C-21 | Lab Sample ID: 140-5668-14

Matrix: Air | Lab File ID: EH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:16

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.50		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	5.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.60		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.62		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	59		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.22	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-113-C-21 | Lab Sample ID: 140-5668-14

Matrix: Air | Lab File ID: EH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:16

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:51

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.9		1.4	0.27
67-66-3	Chloroform	119.38	2.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	36		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	19		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	320		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.89	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 Lab Sample ID: 140-5668-13

Matrix: Air Lab File ID: EH26P102.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 14:30

Soil Aliquot Vol: Dilution Factor: 4

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	91		8.0	2.3
56-23-5	Carbon tetrachloride	153.81	ND		8.0	1.5
75-45-6	Chlorodifluoromethane	86.47	ND		8.0	1.5
67-66-3	Chloroform	119.38	ND		8.0	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	130		8.0	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		8.0	2.7
75-34-3	1,1-Dichloroethane	98.96	ND		8.0	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.0	1.9
75-35-4	1,1-Dichloroethene	96.94	270		8.0	1.4
100-41-4	Ethylbenzene	106.17	ND		8.0	2.7
75-09-2	Methylene Chloride	84.93	ND		20	13
1634-04-4	Methyl tert-butyl ether	88.15	ND		40	6.8
91-20-3	Naphthalene	128.17	5.3		4.0	4.0
127-18-4	Tetrachloroethene	165.83	ND		8.0	1.6
108-88-3	Toluene	92.14	ND		12	12
156-60-5	trans-1,2-Dichloroethene	96.94	11		8.0	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		8.0	3.9
71-55-6	1,1,1-Trichloroethane	133.41	ND		8.0	1.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.0	2.1
79-01-6	Trichloroethene	131.39	170		4.0	1.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		8.0	3.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		8.0	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		8.0	2.6
75-01-4	*Vinyl chloride*	*62.50*	*2000*	*E*	*4.0*	*2.9*
1330-20-7	Xylenes, Total	106.17	ND		16	2.4

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 Lab Sample ID: 140-5668-13

Matrix: Air Lab File ID: EH26P102.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 14:30

Soil Aliquot Vol: Dilution Factor: 4

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	290		26	7.3
56-23-5	Carbon tetrachloride	153.81	ND		50	9.4
75-45-6	Chlorodifluoromethane	86.47	ND		28	5.3
67-66-3	Chloroform	119.38	ND		39	7.3
156-59-2	cis-1,2-Dichloroethene	96.94	530		32	9.5
75-71-8	Dichlorodifluoromethane	120.91	ND		40	13
75-34-3	1,1-Dichloroethane	98.96	ND		32	4.0
107-06-2	1,2-Dichloroethane	98.96	ND		32	7.7
75-35-4	1,1-Dichloroethene	96.94	1100		32	5.6
100-41-4	Ethylbenzene	106.17	ND		35	12
75-09-2	Methylene Chloride	84.93	ND		69	45
1634-04-4	Methyl tert-butyl ether	88.15	ND		140	25
91-20-3	Naphthalene	128.17	28		21	21
127-18-4	Tetrachloroethene	165.83	ND		54	11
108-88-3	Toluene	92.14	ND		45	45
156-60-5	trans-1,2-Dichloroethene	96.94	43		32	7.9
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		59	29
71-55-6	1,1,1-Trichloroethane	133.41	ND		44	6.5
79-00-5	1,1,2-Trichloroethane	133.41	ND		44	11
79-01-6	Trichloroethene	131.39	890		21	7.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		39	17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		39	12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		39	13
75-01-4	*Vinyl chloride*	*62.50*	*5000*	*E*	*10*	*7.4*
1330-20-7	Xylenes, Total	106.17	ND		69	10

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 DL Lab Sample ID: 140-5668-13 DL

Matrix: Air Lab File ID: EH26P102DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 11(mL) Date Analyzed: 08/27/2016 02:58

Soil Aliquot Vol: Dilution Factor: 4

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	1900		7.3	5.3

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 DL Lab Sample ID: 140-5668-13 DL

Matrix: Air Lab File ID: EH26P102DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 11(mL) Date Analyzed: 08/27/2016 02:58

Soil Aliquot Vol: Dilution Factor: 4

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	5000		19	13

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-142-C-21 | Lab Sample ID: 140-5668-15

Matrix: Air | Lab File ID: GH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	2.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.054	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.37		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.19	J	0.40	0.080
108-88-3	Toluene	92.14	0.62		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-142-C-21 | Lab Sample ID: 140-5668-15

Matrix: Air | Lab File ID: GH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:17

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	10		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.22	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.93	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	9.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.3	J	2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.86	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	10		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.4		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-149-C-21 | Lab Sample ID: 140-5668-12

Matrix: Air | Lab File ID: EH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:11

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:08

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.086	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.42		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.99		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.8		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-149-C-21 | Lab Sample ID: 140-5668-12

Matrix: Air | Lab File ID: EH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:11

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:08

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	0.84	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.86	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-150-C-21 | Lab Sample ID: 140-5668-11

Matrix: Air | Lab File ID: EH26P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 20:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	14		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.7		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	10		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-150-C-21 | Lab Sample ID: 140-5668-11

Matrix: Air | Lab File ID: EH26P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 20:24

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.73	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	49		1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	6.9		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	56		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.55	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-152-C-21 Lab Sample ID: 140-5668-10

Matrix: Air Lab File ID: EH26P109.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:04

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 19:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	11		0.40	0.075
67-66-3	Chloroform	119.38	0.082	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.42		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.96		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.089	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-152-C-21 Lab Sample ID: 140-5668-10

Matrix: Air Lab File ID: EH26P109.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:04

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 19:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	38		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	5.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.84	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.48	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-153-C-21 | Lab Sample ID: 140-5668-7

Matrix: Air | Lab File ID: EH26P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:57

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 17:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.38	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	4.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.43		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-153-C-21 | Lab Sample ID: 140-5668-7

Matrix: Air | Lab File ID: EH26P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:57

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 17:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.7		1.4	0.27
67-66-3	Chloroform	119.38	0.57	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	15		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.9		2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.57	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	12		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.83	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-155-C-21 | Lab Sample ID: 140-5668-6

Matrix: Air | Lab File ID: EH26P105.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:54

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 16:46

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.22	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.35	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.38		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.84		0.40	0.080
108-88-3	Toluene	92.14	0.64		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.25		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-155-C-21 Lab Sample ID: 140-5668-6

Matrix: Air Lab File ID: EH26P105.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 09:54

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 16:46

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.4	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.7		1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.7		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.96	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-DUP02-C-21 | Lab Sample ID: 140-5668-8

Matrix: Air | Lab File ID: EH26P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:13

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.0		0.40	0.075
67-66-3	Chloroform	119.38	0.096	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.21	J	0.40	0.080
108-88-3	Toluene	92.14	0.98		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-DUP02-C-21 | Lab Sample ID: 140-5668-8

Matrix: Air | Lab File ID: EH26P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:13

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.1		1.4	0.27
67-66-3	Chloroform	119.38	0.47	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.4	J	2.7	0.54
108-88-3	Toluene	92.14	3.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.68	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	13		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.8		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-1-21 Lab Sample ID: 140-5670-27

Matrix: Air Lab File ID: JG25P112.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:02

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:09

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.093	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.41	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-1-21 Lab Sample ID: 140-5670-27

Matrix: Air Lab File ID: JG25P112.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:02

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:09

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.59	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-2-21 Lab Sample ID: 140-5670-28

Matrix: Air Lab File ID: JG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:03

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	0.41		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.40	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-2-21 Lab Sample ID: 140-5670-28

Matrix: Air Lab File ID: JG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:03

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.70	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.7	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-3-21 Lab Sample ID: 140-5670-29

Matrix: Air Lab File ID: JG25P114.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:56

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-3-21 Lab Sample ID: 140-5670-29

Matrix: Air Lab File ID: JG25P114.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:56

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.71	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-4-21 Lab Sample ID: 140-5670-30

Matrix: Air Lab File ID: JG25P115.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 04:50

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	0.55		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-4-21 Lab Sample ID: 140-5670-30

Matrix: Air Lab File ID: JG25P115.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 04:50

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	2.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-021-A-21 | Lab Sample ID: 140-5670-4

Matrix: Air | Lab File ID: EG25P106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:57

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 19:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.12	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.75		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.24	J	0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-021-A-21 Lab Sample ID: 140-5670-4

Matrix: Air Lab File ID: EG25P106.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:57

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:00

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.78	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.6	J	2.7	0.54
108-88-3	Toluene	92.14	5.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-033-B-21 Lab Sample ID: 140-5670-7

Matrix: Air Lab File ID: EG25P109.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:06

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 21:14

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	16		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.44		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-033-B-21 | Lab Sample ID: 140-5670-7

Matrix: Air | Lab File ID: EG25P109.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:06

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 21:14

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	57		1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-075-A-21 | Lab Sample ID: 140-5670-5

Matrix: Air | Lab File ID: EG25P107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 19:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.86		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.76	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-075-A-21 Lab Sample ID: 140-5670-5

Matrix: Air Lab File ID: EG25P107.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:00

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:45

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.79	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-076-A-21 | Lab Sample ID: 140-5670-3

Matrix: Air | Lab File ID: EG25P105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:54

Sample wt/vol: 266(mL) | Date Analyzed: 08/25/2016 18:16

Soil Aliquot Vol: | Dilution Factor: 2.66

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	4.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-076-A-21 Lab Sample ID: 140-5670-3

Matrix: Air Lab File ID: EG25P105.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:54

Sample wt/vol: 266(mL) Date Analyzed: 08/25/2016 18:16

Soil Aliquot Vol: Dilution Factor: 2.66

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	13		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	17		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.3		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-078-A-21 | Lab Sample ID: 140-5670-1

Matrix: Air | Lab File ID: EG25P103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 16:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.088	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-078-A-21 | Lab Sample ID: 140-5670-1

Matrix: Air | Lab File ID: EG25P103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 16:45

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.60	J	2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.67	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-095-A-21 | Lab Sample ID: 140-5670-6

Matrix: Air | Lab File ID: EG25P108.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:02

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 20:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-095-A-21 Lab Sample ID: 140-5670-6

Matrix: Air Lab File ID: EG25P108.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:02

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 20:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.77	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-100-B-21 | Lab Sample ID: 140-5670-9

Matrix: Air | Lab File ID: EG25P111.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:12

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 22:44

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.75	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-100-B-21 Lab Sample ID: 140-5670-9

Matrix: Air Lab File ID: EG25P111.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:12

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 22:44

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.71	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	16		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-101-B-21 | Lab Sample ID: 140-5670-8

Matrix: Air | Lab File ID: EG25P110.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:09

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 21:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.4		0.40	0.075
67-66-3	Chloroform	119.38	0.077	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.54		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.9		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-101-B-21 Lab Sample ID: 140-5670-8

Matrix: Air Lab File ID: EG25P110.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:09

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 21:59

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	8.6		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.89	J	2.7	0.54
108-88-3	Toluene	92.14	5.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.64	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-136-A-21 | Lab Sample ID: 140-5670-2

Matrix: Air | Lab File ID: EG25P104.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 17:29

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.23	J	0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.40	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-136-A-21 Lab Sample ID: 140-5670-2

Matrix: Air Lab File ID: EG25P104.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:52

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 17:29

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.6	J	2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.7	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-015-A-21 Lab Sample ID: 140-5670-14

Matrix: Air Lab File ID: EG25P101.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:57

Sample wt/vol: 20(mL) Date Analyzed: 08/25/2016 15:15

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3	J	2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.91	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	1.8	J	2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.6		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	13		2.0	0.35
100-41-4	Ethylbenzene	106.17	0.80	J	2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	2.8		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	6.5		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	1.4	J	4.0	0.60

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-015-A-21 Lab Sample ID: 140-5670-14

Matrix: Air Lab File ID: EG25P101.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:57

Sample wt/vol: 20(mL) Date Analyzed: 08/25/2016 15:15

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.0	J	6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	3.2	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	7.2	J	7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	19		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	50		7.9	1.4
100-41-4	Ethylbenzene	106.17	3.5	J	8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	15		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	35		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	6.1	J	17	2.6

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-075-A-21 | Lab Sample ID: 140-5670-23

Matrix: Air | Lab File ID: JG25P108.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 22:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	20		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.66		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.55		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	7.6		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	15		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	5.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-075-A-21 | Lab Sample ID: 140-5670-23

Matrix: Air | Lab File ID: JG25P108.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 22:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.1		1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.92	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	110		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.63	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	37		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	73		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	29		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-076-A-21 | Lab Sample ID: 140-5670-22

Matrix: Air | Lab File ID: JG25P107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:24

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 21:41

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.84		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.81		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.87		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.92		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.28	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	14		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	7.6		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	9.6		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-076-A-21 Lab Sample ID: 140-5670-22

Matrix: Air Lab File ID: JG25P107.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:24

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 21:41

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	0.83	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.5	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	69		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	37		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	47		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	26		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-078-A-21 Lab Sample ID: 140-5670-20

Matrix: Air Lab File ID: JG25P105.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:15

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:54

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.091	J	0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.26	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.4		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-078-A-21 | Lab Sample ID: 140-5670-20

Matrix: Air | Lab File ID: JG25P105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:15

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 19:54

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	0.56	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.4	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	13		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-079-A-21 Lab Sample ID: 140-5670-19

Matrix: Air Lab File ID: JG25P104.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:11

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:01

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.72		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.20		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.1		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.40		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	23		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	10		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-079-A-21 Lab Sample ID: 140-5670-19

Matrix: Air Lab File ID: JG25P104.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:11

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:01

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	0.80	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	10		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.4		2.7	0.54
108-88-3	Toluene	92.14	8.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.2		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	120		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	44		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-081-A-21 Lab Sample ID: 140-5670-16

Matrix: Air Lab File ID: JG25P101DL.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:03

Sample wt/vol: 40(mL) Date Analyzed: 08/26/2016 06:37

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	3.3		1.0	0.19
67-66-3	Chloroform	119.38	1.0		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.75	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	ND		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	ND		1.0	0.18
100-41-4	Ethylbenzene	106.17	0.93	J	1.0	0.34
75-09-2	Methylene Chloride	84.93	3.5		2.5	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	1.8		0.50	0.50
127-18-4	Tetrachloroethene	165.83	0.31	J	1.0	0.20
108-88-3	Toluene	92.14	3.0		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	1.7		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	ND		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	110		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	18		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	4.6		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-081-A-21 Lab Sample ID: 140-5670-16

Matrix: Air Lab File ID: JG25P101DL.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:03

Sample wt/vol: 40(mL) Date Analyzed: 08/26/2016 06:37

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.8		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	12		3.5	0.66
67-66-3	Chloroform	119.38	4.9		4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	3.7	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.69
100-41-4	Ethylbenzene	106.17	4.0	J	4.3	1.5
75-09-2	Methylene Chloride	84.93	12		8.7	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	9.5		2.6	2.6
127-18-4	Tetrachloroethene	165.83	2.1	J	6.8	1.4
108-88-3	Toluene	92.14	11		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	9.2		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	ND		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	530		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	90		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	21		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	20		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-093-A-21 | Lab Sample ID: 140-5670-10

Matrix: Air | Lab File ID: EG25P112.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:44

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 23:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.069	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.21	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.092	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-093-A-21 Lab Sample ID: 140-5670-10

Matrix: Air Lab File ID: EG25P112.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:44

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 23:27

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.28	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.85	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	7.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-095-A-21 Lab Sample ID: 140-5670-24

Matrix: Air Lab File ID: EH26P114.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:29

Sample wt/vol: 100(mL) Date Analyzed: 08/27/2016 00:03

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.85		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.37	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	12		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	2.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.088	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	4.0		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	4.7		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	2.7		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-095-A-21 | Lab Sample ID: 140-5670-24

Matrix: Air | Lab File ID: EH26P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:29

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 00:03

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	66		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	9.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.48	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	10		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	20		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	23		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	13		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-100-B-21 Lab Sample ID: 140-5670-26

Matrix: Air Lab File ID: EH26P115.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:35

Sample wt/vol: 176(mL) Date Analyzed: 08/27/2016 00:46

Soil Aliquot Vol: Dilution Factor: 1.76

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	5.0		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	1.9		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.92		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.84		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.66		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.82		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-100-B-21 Lab Sample ID: 140-5670-26

Matrix: Air Lab File ID: EH26P115.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:35

Sample wt/vol: 176(mL) Date Analyzed: 08/27/2016 00:46

Soil Aliquot Vol: Dilution Factor: 1.76

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	32		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	9.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.7		2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.6		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	38		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	5.6		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-101-B-21 Lab Sample ID: 140-5670-25

Matrix: Air Lab File ID: JG25P110.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:33

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 00:21

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.73		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.15	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.2		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.1		0.20	0.20
127-18-4	Tetrachloroethene	165.83	11		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	47		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	22		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	3.0		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	5.3		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	2.1		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-101-B-21 | Lab Sample ID: 140-5670-25

Matrix: Air | Lab File ID: JG25P110.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:33

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 00:21

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	4.6		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	0.75	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	6.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.70	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	5.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	74		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	260		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	120		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	15		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	26		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	10		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-116-A-21 | Lab Sample ID: 140-5670-12

Matrix: Air | Lab File ID: EG25P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 00:56

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.38	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.43		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.35		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	0.66		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-116-A-21 | Lab Sample ID: 140-5670-12

Matrix: Air | Lab File ID: EG25P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 00:56

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.9	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	21		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.86	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.94	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-118-A-21 | Lab Sample ID: 140-5670-15

Matrix: Air | Lab File ID: EG25P102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:59

Sample wt/vol: 20(mL) | Date Analyzed: 08/25/2016 15:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.80	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	18		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.3		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	38		2.0	0.35
100-41-4	Ethylbenzene	106.17	1.3	J	2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	1.3	J	2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	0.65	J	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	170		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	11		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-118-A-21 | Lab Sample ID: 140-5670-15

Matrix: Air | Lab File ID: EG25P102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:59

Sample wt/vol: 20(mL) | Date Analyzed: 08/25/2016 15:59

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	2.8	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	70		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	17		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	150		7.9	1.4
100-41-4	Ethylbenzene	106.17	5.4	J	8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	5.0	J	7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	3.6	J	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	890		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	3.8	J	9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	49		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 | Lab Sample ID: 140-5670-21

Matrix: Air | Lab File ID: JG25P106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:21

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 20:47

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	10		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.12	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.36	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.14	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*190*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 Lab Sample ID: 140-5670-21

Matrix: Air Lab File ID: JG25P106.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:21

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 20:47

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	50		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.5		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.48	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	13		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.56	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1000*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.9		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 DL Lab Sample ID: 140-5670-21 DL

Matrix: Air Lab File ID: EH26P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:21

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 23:19

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	160		1.0	0.35

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 DL Lab Sample ID: 140-5670-21 DL

Matrix: Air Lab File ID: EH26P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:21

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 23:19

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	850		5.4	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-138-A-21 Lab Sample ID: 140-5670-11

Matrix: Air Lab File ID: EG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 00:12

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.7		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.92		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	4.4		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.50		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.30	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.14	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	27		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-138-A-21 Lab Sample ID: 140-5670-11

Matrix: Air Lab File ID: EG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 00:12

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	0.65	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	18		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.0	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.57	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	150		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-139-A-21 Lab Sample ID: 140-5670-17

Matrix: Air Lab File ID: JG25P102.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:07

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 17:15

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.76		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.75		0.40	0.080
108-88-3	Toluene	92.14	0.68		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.28		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.8		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.9		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-139-A-21 Lab Sample ID: 140-5670-17

Matrix: Air Lab File ID: JG25P102.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:07

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 17:15

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.99	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.1		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.59	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	14		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	6.4		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	30		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP03-A-21 Lab Sample ID: 140-5670-13

Matrix: Air Lab File ID: EG25P115D.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:26

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.29	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.41		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.33		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.21	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.60	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP03-A-21 Lab Sample ID: 140-5670-13

Matrix: Air Lab File ID: EG25P115D.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:26

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.4	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.6		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.7		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	21		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP04-A-21 Lab Sample ID: 140-5670-18

Matrix: Air Lab File ID: JG25P103.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 18:08

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.091	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.62		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.6		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.78		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.29		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.8		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP04-A-21 | Lab Sample ID: 140-5670-18

Matrix: Air | Lab File ID: JG25P103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 18:08

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	0.67	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	13		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.3		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.57	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	14		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	6.5		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	30		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

APPENDIX D—DATA-VALIDATION REPORTS

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **OCTOBER 17, 2016**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-5667-1

SAMPLES: 23 / Air / VOC

IA-001-C-21	IA-004-C-21	IA-005-C-21
IA-051-C-21	IA-065-C-21	IA-088-C-21
IA-102-C-21	IA-113-C-21	IA-115-C-21
IA-126-C-21	IA-131-C-21	IA-135-C-21
IA-142-C-21	IA-144-C-21	IA-145-C-21
IA-146-C-21	IA-149-C-21	IA-150-C-21
IA-152-C-21	IA-153-C-21	IA-155-C-21
IA-DUP01-C-21	IA-DUP02-C-21	

OVERVIEW

The sample set for LMC - MRC, SDG 140-5667-1, consists of twenty-three (23) indoor air environmental samples. All samples were analyzed for select volatile organic compounds (VOC). Two (2) field duplicate sample pairs were included in this SDG: IA-131-C-21 (original) / IA-DUP01-C-21 (duplicate), and IA-153-C-21 (original) / IA-DUP02-C-21 (duplicate).

The samples were collected by Tetra Tech, Inc. on August 16, 2016 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

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

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The initial calibration performed on 06/22/16 on instrument MJ had a percent relative standard deviation (%RSD) that was greater than the 30% quality control limit for naphthalene. Samples IA-131-C-21, IA-DUP01-C-21, IA-004-C-21, IA-102-C-21, IA-155-C-21, IA-153-C-21, IA-115-C-21, IA-152-C-21, IA-144-C-21, IA-145-C-21, IA-150-C-21, IA-051-C-21, IA-065-C-21, IA-113-C-21, IA-142-C-21, and IA-DUP02-C-21 were affected. Detected and non-detected results for naphthalene were qualified as estimated (J and UJ, respectively) in the affected samples.

- The continuing calibration performed on 08/24/16 at 11:57 on instrument MJ had a percent difference (%D) for naphthalene that was greater than the 30% quality control limit. Samples IA-131-C-21, IA-DUP01-C-21, IA-004-C-21, IA-102-C-21, IA-155-C-21, IA-153-C-21, IA-115-C-21, IA-152-C-21, IA-144-C-21, IA-145-C-21, IA-150-C-21, IA-051-C-21, IA-065-C-21, IA-113-C-21, IA-142-C-21, and IA-DUP02-C-21 were affected. Detected and non-detected results for

naphthalene were qualified as estimated (J and UJ, respectively) in the affected samples.

- The relative percent difference (RPD) for toluene exceeded the 50% quality control limit in the field duplicate pair IA-131-C-21 / IA-DUP01-C-21. The detected results for toluene were qualified as estimated (J) in samples IA-131-C-21 and IA-DUP01-C-21 due to field duplicate imprecision.

- Detected results reported below the reporting limit (RL) limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

The laboratory case narrative report includes the following notes about sample receipt:

- "The container for sample IA-DUP01-C-21 (140-5667-2) did not match the information listed on the Chain-of-Custody (COC). The COC showed canister ID as 10309; the canister ID was11309." The discrepancy appears to be a transcription error. No action was required.

- "Sample IA-060-C-21 (140-5667-10) was received with the canister valve in the open position. The sample was at ambient pressure (approximately 0 psi). The sample integrity could have been jeopardized due to changes in ambient pressure after the sample was taken (i.e., ambient air not associated with the sampling event could have been introduced into the canister at any point after the sampling was completed). The client was contacted and instructed the lab to cancel analysis of the sample."

Sample IA-060-C-21 was listed on the chain of custody but was not analyzed, as explained in the laboratory case narrative note above.

Non-detected results were reported to the MDL.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

The following analyte was detected in the method blanks at the following maximum concentration:

Analyte	Maximum Concentration
1,1,1-Trichloroethane	0.157 ug/m^3 (1)

1 – Maximum concentration detected in method blank associated with preparation batch 140-6409 affecting samples IA-131-C-21, IA-DUP01-C-21, IA-004-C-21, IA-102-C-21, IA-155-C-21, IA-153-C-21, IA-115-C-21, IA-152-C-21, IA-144-C-21, IA-145-C-21, IA-150-C-21, IA-051-C-21, IA-065-C-21, IA-113-C-21, IA-142-C-21, and IA-DUP02-C-21.

An action level of the maximum concentration was used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were considered in evaluating for blank contamination. No action was necessary, as detected results for 1,1,1-trichloroethane were greater than the action levels for the affected samples.

EXECUTIVE SUMMARY

Laboratory Performance: Some detected and non-detected naphthalene results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for one analyte in one field

duplicate pairs. Results above the MDL but below the RL were estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Superfund Organic Methods Data Review" (August 2014) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

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

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

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

PROJ_NO: 07671	NSAMPLE	IA-001-C-21			IA-004-C-21			IA-005-C-21			IA-051-C-21		
SDG: 140-5667-1	LAB_ID	140-5667-3			140-5667-4			140-5667-5			140-5667-16		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.57	J	P	0.82	J	P	1.6	J	P	0.72	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.42	J	P	0.37	U		0.59	J	P	0.47	J	P
CARBON TETRACHLORIDE		0.58	J	P	0.47	U		0.53	J	P	0.47	J	P
CHLORODIFLUOROMETHANE		2.7			2.7			3.1			28		
CHLOROFORM		0.78	J	P	0.37	U		0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.3			2.9			2.5			2.7		
ETHYLBENZENE		0.59	U		0.59	U		0.68	J	P	0.76	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		18			4.7			100			6.1		
NAPHTHALENE		1	U		1	UJ	C	1	U		1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		4			2.4			4.7			8.7		
TOTAL XYLENES		2.6	J	P	2.7	J	P	3.6			4		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-065-C-21			IA-088-C-21			IA-102-C-21			IA-113-C-21		
SDG: 140-5667-1	LAB_ID	140-5667-17			140-5667-21			140-5667-6			140-5667-19		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.64	J	P	7.1			5.2			2.6		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.64	J	P	0.61	U		1.1	J	P	1	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.42	J	P	0.37	U		0.57	J	P	0.81	J	P
CARBON TETRACHLORIDE		0.62	J	P	0.56	J	P	0.49	J	P	0.53	J	P
CHLORODIFLUOROMETHANE		100			0.27	U		6.7			7.5		
CHLOROFORM		0.69	J	P	0.83	J	P	0.4	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		3.3			2.7			2.9			3.5		
ETHYLBENZENE		2.1			0.88	J	P	2.3			2.5		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		20			2.6	J	P	20			7.5		
NAPHTHALENE		1	UJ	C	1	U		1	UJ	C	1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		2.1	J	P	0.56	J	P
TOLUENE		35			4.1			23			16		
TOTAL XYLENES		10			4.6			10			11		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		1.1		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-115-C-21			IA-126-C-21			IA-131-C-21			IA-135-C-21		
SDG: 140-5667-1	LAB_ID	140-5667-18			140-5667-24			140-5667-1			140-5667-22		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.1	J	P	5			5.2			3.1		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.96	J	P	0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.48	J	P	0.37	U		0.4	J	P	0.46	J	P
CARBON TETRACHLORIDE		0.63	J	P	0.47	U		0.52	J	P	0.53	J	P
CHLORODIFLUOROMETHANE		6.9			6.4			4.2			0.27	U	
CHLOROFORM		0.37	U		0.61	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		3.5			2.6			2.8			2.6		
ETHYLBENZENE		0.99	J	P	0.59	U		0.72	J	P	0.63	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		7.1			4.3			6.4			4.2		
NAPHTHALENE		1	UJ	C	1	U		1	UJ	C	1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		7.4			2.3	U		9.7	J	G	4.1		
TOTAL XYLENES		5.9			0.52	U		4.2			3.4	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.82	J	P	0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-142-C-21			IA-144-C-21			IA-145-C-21			IA-146-C-21		
SDG: 140-5667-1	LAB_ID	140-5667-20			140-5667-12			140-5667-14			140-5667-13		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		2.6			54			5.2			2.8		
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.84	J	P	1.4	J	P	0.71	J	P	0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.37	U		0.51	J	P	0.46	J	P	0.37	U	
CARBON TETRACHLORIDE		0.7	J	P	0.67	J	P	0.61	J	P	0.47	U	
CHLORODIFLUOROMETHANE		9.8			49			53			39		
CHLOROFORM		0.41	J	P	0.67	J	P	0.49	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		3.9			3.3			3.3			2.2		
ETHYLBENZENE		0.76	J	P	1.7			1.2	J	P	0.65	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		8.8			11			7.2			8.2		
NAPHTHALENE		1	UJ	C	1.4	J	C	1	UJ	C	1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		9.9			8.7			8.4			3.5		
TOTAL XYLENES		4.2			10			6.6			3.3	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		1.3			0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-149-C-21			IA-150-C-21			IA-152-C-21			IA-153-C-21		
SDG: 140-5667-1	LAB_ID	140-5667-23			140-5667-15			140-5667-11			140-5667-8		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		2.1	J	P	3.8			120			1.2	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.62	J	P	0.78	J	P	1.2	J	P	0.67	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.51	J	P	0.37	U		0.46	J	P	0.45	J	P
CARBON TETRACHLORIDE		0.64	J	P	0.61	J	P	0.63	J	P	0.47	U	
CHLORODIFLUOROMETHANE		11			50			44			7.9		
CHLOROFORM		1.2	J	P	0.69	J	P	0.4	J	P	1.2	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.5			3.2			3.1			2.8		
ETHYLBENZENE		0.85	J	P	1.5	J	P	1.5	J	P	0.67	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		5.7			6			10			5.8		
NAPHTHALENE		1.4			1	UJ	C	3	J	C	1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		6.7			20			6.7			4.2		
TOTAL XYLENES		4.4			8.4			8.4			3.8		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-155-C-21			IA-DUP01-C-21			IA-DUP02-C-21		
SDG: 140-5667-1	LAB_ID	140-5667-7			140-5667-2			140-5667-9		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			FD			FD		
	UNITS	UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS									
	DUP_OF				IA-131-C-21			IA-153-C-21		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.8			4.5			1.6	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		1	J	P	0.61	U		1.2	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U	
BENZENE		0.52	J	P	0.42	J	P	0.61	J	P
CARBON TETRACHLORIDE		0.56	J	P	0.52	J	P	0.62	J	P
CHLORODIFLUOROMETHANE		8.2			4.5			10		
CHLOROFORM		0.37	U		0.37	U		0.5	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		3			3			3.5		
ETHYLBENZENE		1.1	J	P	0.73	J	P	0.99	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		3.5			7			8		
NAPHTHALENE		1	UJ	C	1	UJ	C	1.2	J	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U	
TOLUENE		5.9			2.9	J	G	5.3		
TOTAL XYLENES		6.2			3.8			6		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U	

Appendix B

Results as Reported by the Laboratory

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-001-C-21 | Lab Sample ID: 140-5667-3

Matrix: Air | Lab File ID: GG25P116.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:30

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 02:44

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.76		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.60	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-001-C-21 Lab Sample ID: 140-5667-3

Matrix: Air Lab File ID: GG25P116.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:30

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:44

Soil Aliquot Vol: Dilution Factor: 1

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

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6395 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	0.78	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	18		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.57	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-004-C-21 | Lab Sample ID: 140-5667-4

Matrix: Air | Lab File ID: JH24P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:32

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 17:36

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.77		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.62	J	0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-004-C-21 | Lab Sample ID: 140-5667-4

Matrix: Air | Lab File ID: JH24P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:32

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 17:36

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.82	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.7	J	3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-005-C-21 | Lab Sample ID: 140-5667-5

Matrix: Air | Lab File ID: GG25P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 03:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.89		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	29		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.29	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.83		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-005-C-21 | Lab Sample ID: 140-5667-5

Matrix: Air | Lab File ID: GG25P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 03:27

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6395 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.59	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.1		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.68	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	100		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.6	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-051-C-21 | Lab Sample ID: 140-5667-16

Matrix: Air | Lab File ID: JH24P116.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	8.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.13	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.93		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-051-C-21 | Lab Sample ID: 140-5667-16

Matrix: Air | Lab File ID: JH24P116.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:50

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	28		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.72	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-065-C-21 | Lab Sample ID: 140-5667-17

Matrix: Air | Lab File ID: JH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:03

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 06:43

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	29		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.49		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	9.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-065-C-21 | Lab Sample ID: 140-5667-17

Matrix: Air | Lab File ID: JH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:03

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 06:43

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	100		1.4	0.27
67-66-3	Chloroform	119.38	0.69	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.1		1.7	0.59
75-09-2	Methylene Chloride	84.93	20		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	35		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.64	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.64	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-088-C-21 | Lab Sample ID: 140-5667-21

Matrix: Air | Lab File ID: GH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:17

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:47

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.090	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.74	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.3		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-088-C-21 | Lab Sample ID: 140-5667-21

Matrix: Air | Lab File ID: GH24P201.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:17

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:47

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	0.83	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.88	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.6	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	7.1		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-102-C-21 | Lab Sample ID: 140-5667-6

Matrix: Air | Lab File ID: JH24P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.18	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.081	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.54		0.40	0.14
75-09-2	Methylene Chloride	84.93	5.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.30	J	0.40	0.080
108-88-3	Toluene	92.14	6.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.23	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-102-C-21 | Lab Sample ID: 140-5667-6

Matrix: Air | Lab File ID: JH24P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:00

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.7		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	20		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.1	J	2.7	0.54
108-88-3	Toluene	92.14	23		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-113-C-21 | Lab Sample ID: 140-5667-19

Matrix: Air | Lab File ID: JH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 07:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.25	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.1		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.57		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.082	J	0.40	0.080
108-88-3	Toluene	92.14	4.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.48	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-113-C-21 | Lab Sample ID: 140-5667-19

Matrix: Air | Lab File ID: JH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:13

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 07:37

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.81	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.56	J	2.7	0.54
108-88-3	Toluene	92.14	16		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.6	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-115-C-21 | Lab Sample ID: 140-5667-18

Matrix: Air | Lab File ID: JH24P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:10

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 23:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.21	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-115-C-21 | Lab Sample ID: 140-5667-18

Matrix: Air | Lab File ID: JH24P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:10

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 23:34

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.63	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.1	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.96	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-126-C-21 | Lab Sample ID: 140-5667-24

Matrix: Air | Lab File ID: GH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.8		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.92		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.15	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-126-C-21 | Lab Sample ID: 140-5667-24

Matrix: Air | Lab File ID: GH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.4		1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.0		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.82	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

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

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-131-C-21 | Lab Sample ID: 140-5667-1

Matrix: Air | Lab File ID: JH24P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:24

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 14:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.96		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

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

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-131-C-21 | Lab Sample ID: 140-5667-1

Matrix: Air | Lab File ID: JH24P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:24

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 14:55

Soil Aliquot Vol: | Dilution Factor: 1

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

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

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.72	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-135-C-21 | Lab Sample ID: 140-5667-22

Matrix: Air | Lab File ID: GH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:19

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	ND		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.57		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.79	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-135-C-21 | Lab Sample ID: 140-5667-22

Matrix: Air | Lab File ID: GH24P202.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:19

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	ND		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.63	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.1		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-142-C-21 | Lab Sample ID: 140-5667-20

Matrix: Air | Lab File ID: JH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:15

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 09:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	0.084	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.79		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.47	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.97		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-142-C-21 | Lab Sample ID: 140-5667-20

Matrix: Air | Lab File ID: JH24P204.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:15

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 09:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.70	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.8		1.4	0.27
67-66-3	Chloroform	119.38	0.41	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.76	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.6	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.84	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-144-C-21 | Lab Sample ID: 140-5667-12

Matrix: Air | Lab File ID: JH24P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 01:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	14		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.40		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.28		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	9.8	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.28	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-144-C-21 | Lab Sample ID: 140-5667-12

Matrix: Air | Lab File ID: JH24P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 01:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.67	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	49		1.4	0.27
67-66-3	Chloroform	119.38	0.67	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.7		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	54	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-145-C-21 | Lab Sample ID: 140-5667-14

Matrix: Air | Lab File ID: JH24P114.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:53

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	15		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.67		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.24		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-145-C-21 | Lab Sample ID: 140-5667-14

Matrix: Air | Lab File ID: JH24P114.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:53

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 03:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	53		1.4	0.27
67-66-3	Chloroform	119.38	0.49	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-146-C-21 | Lab Sample ID: 140-5667-13

Matrix: Air | Lab File ID: GG25P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 04:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6395 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	11		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.93		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.50		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.77	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-146-C-21 | Lab Sample ID: 140-5667-13

Matrix: Air | Lab File ID: GG25P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 04:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6395 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	39		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.8		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-149-C-21 | Lab Sample ID: 140-5667-23

Matrix: Air | Lab File ID: GH24P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:33

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.1		0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.26		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.38	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-149-C-21 | Lab Sample ID: 140-5667-23

Matrix: Air | Lab File ID: GH24P203.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 16:33

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 05:12

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6338 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.51	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.64	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11		1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.4		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.1	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-150-C-21 | Lab Sample ID: 140-5667-15

Matrix: Air | Lab File ID: JH24P115DU.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:55

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	14		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.64		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	5.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.69	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-150-C-21 | Lab Sample ID: 140-5667-15

Matrix: Air | Lab File ID: JH24P115DU.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:55

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 04:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	50		1.4	0.27
67-66-3	Chloroform	119.38	0.69	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	20		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.8	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-152-C-21 | Lab Sample ID: 140-5667-11

Matrix: Air | Lab File ID: JH24P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 00:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	13		0.40	0.075
67-66-3	Chloroform	119.38	0.081	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.63		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.34	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.58		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	22	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-152-C-21 | Lab Sample ID: 140-5667-11

Matrix: Air | Lab File ID: JH24P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 00:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.63	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	44		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	10		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	120	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-153-C-21 | Lab Sample ID: 140-5667-8

Matrix: Air | Lab File ID: JH24P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 21:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.2		0.40	0.075
67-66-3	Chloroform	119.38	0.24	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.22	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.87		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-153-C-21 | Lab Sample ID: 140-5667-8

Matrix: Air | Lab File ID: JH24P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 21:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.45	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.9		1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.67	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.2	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.67	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-155-C-21 | Lab Sample ID: 140-5667-7

Matrix: Air | Lab File ID: JH24P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.16	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.62		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.70	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-155-C-21 | Lab Sample ID: 140-5667-7

Matrix: Air | Lab File ID: JH24P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 20:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.52	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	8.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.8	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP01-C-21 | Lab Sample ID: 140-5667-2

Matrix: Air | Lab File ID: JH24P102.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 15:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.78		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.82	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP01-C-21 | Lab Sample ID: 140-5667-2

Matrix: Air | Lab File ID: JH24P102.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/24/2016 15:49

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.73	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	4.5	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP02-C-21 | Lab Sample ID: 140-5667-9

Matrix: Air | Lab File ID: JH24P109R.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 10:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.099	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.9		0.40	0.075
67-66-3	Chloroform	119.38	0.10	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.71		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.23	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.23		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.30	J B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.25	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-DUP02-C-21 | Lab Sample ID: 140-5667-9

Matrix: Air | Lab File ID: JH24P109R.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 10:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.61	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	10		1.4	0.27
67-66-3	Chloroform	119.38	0.50	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.99	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.2		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.6	J B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

Appendix C

Support Documentation

Job Narrative
140-5667-1

Receipt
The samples were received on 8/22/2016 at 9:00 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions
The container for sample IA-DUP01-C-21 (140-5667-2) did not match the information listed on the Chain-of-Custody (COC). The COC showed canister ID as 10309; the canister ID was11309.

Sample IA-060-C-21 (140-5667-10) was received with the canister valve in the open position. The sample was at ambient pressure (approximately 0 psi). The sample integrity could have been jeopardized due to changes in ambient pressure after the sample was taken (i.e., ambient air not associated with the sampling event could have been introduced into the canister at any point after the sampling was completed). The client was contacted and instructed the lab to cancel analysis of the sample.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-6409 exhibited % difference of > 30% for naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SV/IA - Round 21 - Block I

TestAmerica Job ID: 140-5667-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SV/IA - Round 21 - Block I

TestAmerica Job ID: 140-5667-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5667-1	IA-131-C-21	Air	08/16/16 15:24	08/22/16 09:00
140-5667-2	IA-DUP01-C-21	Air	08/16/16 00:00	08/22/16 09:00
140-5667-3	IA-001-C-21	Air	08/16/16 15:30	08/22/16 09:00
140-5667-4	IA-004-C-21	Air	08/16/16 15:32	08/22/16 09:00
140-5667-5	IA-005-C-21	Air	08/16/16 15:34	08/22/16 09:00
140-5667-6	IA-102-C-21	Air	08/16/16 15:38	08/22/16 09:00
140-5667-7	IA-155-C-21	Air	08/16/16 15:40	08/22/16 09:00
140-5667-8	IA-153-C-21	Air	08/16/16 15:45	08/22/16 09:00
140-5667-9	IA-DUP02-C-21	Air	08/16/16 00:00	08/22/16 09:00
140-5667-11	IA-152-C-21	Air	08/16/16 15:48	08/22/16 09:00
140-5667-12	IA-144-C-21	Air	08/16/16 15:50	08/22/16 09:00
140-5667-13	IA-146-C-21	Air	08/16/16 15:52	08/22/16 09:00
140-5667-14	IA-145-C-21	Air	08/16/16 15:53	08/22/16 09:00
140-5667-15	IA-150-C-21	Air	08/16/16 15:55	08/22/16 09:00
140-5667-16	IA-051-C-21	Air	08/16/16 16:00	08/22/16 09:00
140-5667-17	IA-065-C-21	Air	08/16/16 16:03	08/22/16 09:00
140-5667-18	IA-115-C-21	Air	08/16/16 16:10	08/22/16 09:00
140-5667-19	IA-113-C-21	Air	08/16/16 16:13	08/22/16 09:00
140-5667-20	IA-142-C-21	Air	08/16/16 16:15	08/22/16 09:00
140-5667-21	IA-088-C-21	Air	08/16/16 16:17	08/22/16 09:00
140-5667-22	IA-135-C-21	Air	08/16/16 16:19	08/22/16 09:00
140-5667-23	IA-149-C-21	Air	08/16/16 16:33	08/22/16 09:00
140-5667-24	IA-126-C-21	Air	08/16/16 16:34	08/22/16 09:00

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** Tony Aprahamian	**Sampled By:** JM/WP	1 of 15 COCs
Company: TETRA TECH INC	Phone: 301-528-3021		
Address: 20251 Century Blvd. Ste. 200	Site Contact: Joe Mullis		
City/State/Zip Germantown, MD 20874	TAL Contact: Terry Walker		
Phone: 301-528-3021			
FAX: —			
Project Name: MRC SUSTA Rnd. 21	**Analysis Turnaround Time**	140-5667 Chain of Custody	
Site/location: Block E	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-131-C-21	8/16/16	0724	1524	-30	-4	10175	09660	X							X				
IA-DUP01-C-21		0000	0000	-30	-4	09854	10309	X							X				
IA-001-C-21		0730	1530	-30	-3	10299	11161	X							X				
IA-004-C-21		0732	1532	-29	-3	11266	10334	X							X				
IA-005-C-21		0734	1534	-30	-3	11238	09790	X							X				
IA-102-C-21		0738	1538	-30	-3	10360	09885	X							X				

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)	Interior	Ambient
Start		
Stop		

Received @ ambient (20°C)
J. Boxer, No custody seal
Fedex Sc. tr# 777o 3842 8063
" " 7961
" " 7446

KW 8/22/16

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:	
Relinquished by:	Date/Time: 8-19-2016/1540	Received by:	8/22/16 000

24 cans
23 flows
2 Ts

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

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Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** AMANAVAGE	**Sampled By:** JM/WP	2 of 15 COCs
Company: TETRA TECH INC	Phone: 301-528-3021		
Address: 20251 Century Blvd Ste. 200	Site Contact: MILLS		
City/State/Zip Germantown, MD, 20874	TAL Contact: WALKER		
Phone: 301-528-3021			
FAX:			
Project Name: MPL SW/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block I	Standard (Specify)		
PO # 112IC07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type: Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-155-C-21	8/16/16	0740	1540	-30	-3.5	11498	10973	X						X				
IA-153-C-21	"	0745	1545	-30	-4	10347	10924	X						X				
IA-DUP02-C-21	"	0000	0000	-30	-4	11307	09747	X						X				
IA-060-C-21	"	0746	1546	-29	-1	10879	09822	X						X				
IA-152-C-21	"	0748	1548	-30	-4	10158	10494	X						X				
IA-144-C-21	"	0750	1550	-30	-3	10173	11256	X						X				

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: SEE PAGE 1
Address:
City/State/Zip
Phone:
FAX:
Project Name: MRC SU/IA Rnd. 21
Site/location: Block I
PO # 112IC07671

Project Manager: APANAVAGE
Phone: 301-528-3021
Site Contact: MULLIS
TAL Contact: WALKER

Sampled By: JM/WP

3 of 15 COCs

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-146-C-21	8/16/16	0752	1552	-30	-3	11239	10495	X							X				
IA-145-C-21		0753	1553	-30	-2	11263	10923	X							X				
IA-150-C-21		0755	1555	-29	-2	10587	11133	X							X				
IA-051-C-21		0800	1600	-30	-2	09855	10341	X							X				
IA-065-C-21		0803	1603	-30	-6	09842	09645	X							X				
IA-115-C-21		0810	1610	-30	-1	10878	10340	X							X				

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 /1540	Received by: [signature] 8/22/16 0600

08/31/2016

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: AMANUAGE	Sampled By: TM/WP	4 of 15 COCs
Company: TETRA TECH	Phone: 301-528-3021		
Address:	Site Contact: MULLIS		
City/State/Zip SEE PAGE 1	TAL Contact: WALKER		
Phone:			
FAX:			
Project Name: MRL SI/IA Ind. 21	Analysis Turnaround Time		
Site/location: Block I	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-113-C-21	8/16/16	0813	1613	-29	-1	10854	09835	X							X				
IA-142-C-21	"	0815	1615	-30	-4	09702	10496	X							X				
IA-088-C-21	"	0817	1617	-29	0	10661	09588	X							X				
IA-135-C-21	"	0819	1619	-29	-2	10292	09741	X							X				
IA-149-C-21	"	0833	1633	-29	-1	11283	11164	X							X				
IA-126-C-21	"	0834	1634	-30	0	10620	09806	X							X				

Sampled by : TM/WP

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

08/31/2016

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 8/23/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-5667-a-1	09660	5483	B	1	-3.9	15:27	
HMT	140-5667-a-2	11309	5490	B	1	-3.4	15:28	
HMT	140-5667-a-3	11161	5429	B	1	-3.7	15:29	
HMT	140-5667-a-4	10334	5429	B	1	-3.4	15:30	
HMT	140-5667-a-5	09790	5493	B	1	-3.7	15:31	
HMT	140-5667-a-6	09885	5495	B	1	0.0	15:32	
HMT	140-5667-a-7	10973	5490	B	1	-3.3	15:33	
HMT	140-5667-a-8	10924	5490	B	1	-2.4	15:34	
HMT	140-5667-a-9	09747	5429	B	1	-4.6	15:35	
HMT	140-5667-a-10	09822	5483	B	1	0.0	15:36	can open tag reads -1
HMT	140-5667-A-11	10494	5493	B	1	-2.9	15:37	
HMT	140-5667-A-12	11256	5466	B	1	-2.6	15:38	
HMT	140-5667-A-13	10495	5429	B	1	-2.6	15:39	
HMT	140-5667-A-14	10923	5483	B	1	-2.9	15:40	
HMT	140-5667-A-15	11133	5493	B	1	-1.4	15:41	
HMT	140-5667-A-16	10341	5495	B	1	-2.9	15:42	
HMT	140-5667-A-17	09645	5493	B	1	-4.7	15:43	
HMT	140-5667-A-18	10340	5495	B	1	-2.1	15:44	
HMT	140-5667-A-19	09835	5188	B	1	-2.8	15:45	
HMT	140-5667-A-20	10496	5466	B	1	-3.6	15:46	
HMT	140-5667-A-21	09588	5429	B	1	-2.6	15:47	
HMT	140-5667-A-22	09741	5466	B	1	-2.9	15:48	
HMT	140-5667-A-23	11164	5429	B	1	-2.9	15:49	
HMT	140-5667-A-24	09806	5483	B	1	0.0	15:50	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 140-5667-1

Login Number: 5667
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

FIELD DUPLICATE PRECISION - IA-131-C-21 / IA-DUP01-C-21							
ANALYTE	**IA-131-C-21**	**QUAL**	**IA-DUP01-C-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	5.2		4.5		14.43	0.7	2.2
BENZENE	0.4	J	0.42	J	4.88	0.02	1.3
CARBON TETRACHLORIDE	0.52	J	0.52	J	0	0	2.5
CHLORODIFLUOROMETHANE	4.2		4.5		6.90	0.3	1.4
DICHLORODIFLUOROMETHANE	2.8		3		6.90	0.2	2
ETHYLBENZENE	0.72	J	0.73	J	1.38	0.01	1.7
METHYLENE CHLORIDE	6.4		7		8.96	0.6	3.5
TOLUENE	9.7		2.9		107.9	6.8	2.3
TOTAL XYLENES	4.2		3.8		10.00	0.4	3.5

FIELD DUPLICATE PRECISION - IA-153-C-21 / IA-DUP02-C-21							
ANALYTE	**IA-153-C-21**	**QUAL**	**IA-DUP01-C-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	1.2	J	1.6	J	28.57	0.4	2.2
1,2,4-TRIMETHYLBENZENE	0.67	J	1.2	J	56.68	0.53	2
BENZENE	0.45	J	0.61	J	30.19	0.16	1.3
CARBON TETRACHLORIDE	0.47	U	0.62	J	27.52	0.15	2.5
CHLORODIFLUOROMETHANE	7.9		10		23.46	2.1	1.4
CHLOROFORM	1.2	J	0.5	J	82.35	0.7	2
DICHLORODIFLUOROMETHANE	2.8		3.5		22.22	0.7	2
ETHYLBENZENE	0.67	J	0.99	J	38.55	0.32	1.7
METHYLENE CHLORIDE	5.8		8		31.88	2.2	3.5
NAPHTHALENE	1	U	1.2	J	18.18	0.2	1
TOLUENE	4.2		5.3		23.16	1.1	2.3
TOTAL XYLENES	3.8		6		44.90	2.2	3.5

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: GBFBG20.D BFB Injection Date: 07/20/2016

Instrument ID: MG BFB Injection Time: 14:02

Analysis Batch No.: 5925

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	53.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	92.0	
175	5.0 - 9.0 % of mass 174	6.3	(6.9) 1
176	95.0 - 101.0 % of mass 174	89.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5925/2	GG20ICL1.D	07/20/2016	14:35
	IC 140-5925/3	GG20ICL2.D	07/20/2016	15:19
	IC 140-5925/4	GG20ICL3.D	07/20/2016	16:03
	IC 140-5925/5	GG20ICL4.D	07/20/2016	16:46
	IC 140-5925/6	GG20ICL5.D	07/20/2016	17:27
	ICIS 140-5925/7	GG20ICL6.D	07/20/2016	18:08
	IC 140-5925/8	GG20ICL7.D	07/20/2016	18:53
	IC 140-5925/9	GG20ICL8.D	07/20/2016	19:37
	IC 140-5925/10	GG20ICL9.D	07/20/2016	20:22
	ICV 140-5925/12	GG20ICV.D	07/20/2016	21:45

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5925/2	GG20ICL1.D
Level 2	IC 140-5925/3	GG20ICL2.D
Level 3	IC 140-5925/4	GG20ICL3.D
Level 4	IC 140-5925/5	GG20ICL4.D
Level 5	IC 140-5925/6	GG20ICL5.D
Level 6	ICIS 140-5925/7	GG20ICL6.D
Level 7	IC 140-5925/8	GG20ICL7.D
Level 8	IC 140-5925/9	GG20ICL8.D
Level 9	IC 140-5925/10	GG20ICL9.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.4176 0.3715	0.3314 0.3158	0.2752 0.3389	0.2816 0.3059	0.3534	Ave		0.3324				13.5		30.0			
Propene	1.9018 1.3612	1.6567 1.2036	1.6806 1.2095	1.3925 1.1119	1.3024	Ave		1.4245				18.6		30.0			
Dichlorodifluoromethane	4.0679 3.5253	3.6296 3.1789	3.5575 3.2621	3.3450 3.0355	3.3547	Ave		3.4396				8.8		30.0			
Chloromethane	+++++ 0.4044	0.4314 0.3689	0.4505 0.3690	0.3908 0.3259	0.3753	Ave		0.3895				10.1		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.4258 2.1948	2.2175 2.0397	2.2075 2.1131	2.0987 2.0292	2.0970	Ave		2.1581				5.6		30.0			
Acetaldehyde	+++++ 0.5796	+++++ 0.4680	+++++ 0.4427	1.0795 +++++	0.6495	Ave		0.6438				40.0	*	30.0			
Vinyl chloride	1.5206 1.2776	1.2740 1.2203	1.3485 1.1967	1.2046 1.0598	1.2243	Ave		1.2585				10.0		30.0			
1,3-Butadiene	1.2974 1.0489	1.0617 1.0024	1.0853 0.9757	0.9723 0.8721	0.9924	Ave		1.0342				11.3		30.0			
Butane	2.6625 2.2597	2.2558 2.1541	2.4672 2.0816	2.2794 1.8242	2.1462	Ave		2.2368				10.6		30.0			
Bromomethane	1.3106 1.0597	1.1154 1.0397	1.0725 1.0420	0.9964 0.9496	1.0166	Ave		1.0670				9.6		30.0			
Chloroethane	0.7275 0.6086	0.6032 0.6136	0.6314 0.5986	0.5778 0.5436	0.5878	Ave		0.6102				8.3		30.0			
Ethanol	+++++ 0.5761	+++++ 0.5603	0.6964 0.5058	0.5994 0.4913	0.5869	Ave		0.5737				11.8		30.0			
Vinyl bromide	1.2086 1.0161	1.0451 1.0267	1.0333 1.0162	0.9776 0.9332	0.9847	Ave		1.0268				7.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.8562 1.4717	1.5492 1.5440	1.5973 1.4483	1.4121 1.2609	1.4527	Ave		1.5103				10.7		30.0			
Acrolein	+++++ 0.3099	+++++ 0.3033	0.4666 0.2763	0.3756 0.2502	0.3560	LinF		0.2587							0.9920		0.9900
Trichlorofluoromethane	3.7804 3.2737	3.2330 3.1786	3.3182 3.1339	3.0837 2.9455	3.1391	Ave		3.2318				7.2		30.0			
Acetonitrile	+++++ 0.4866	0.6128 0.5158	0.5802 0.4494	0.5092 0.4484	0.5064	Ave		0.5136				11.3		30.0			
Acetone	+++++ 0.5322	+++++ 0.4690	+++++ 0.4236	0.8796 0.4264	0.6092	Ave		0.5566				31.1	*	30.0			
Isopropyl alcohol	1.9972 1.7874	1.7803 1.8183	1.8708 1.5904	1.7726 1.5335	1.8433	Ave		1.7771				7.9		30.0			
Pentane	0.2192 0.1876	0.1849 0.1924	0.1863 0.1846	0.1876 0.1618	0.1866	Ave		0.1879				7.8		30.0			
Ethyl ether	1.3881 1.2487	1.2528 1.4318	1.1904 1.2184	1.2581 1.1807	1.3081	Ave		1.2752				6.7		30.0			
1,1-Dichloroethene	1.2070 0.9536	0.9879 0.9949	1.0087 0.9359	0.8875 0.8797	0.9263	Ave		0.9757				10.0		30.0			
Acrylonitrile	0.8198 0.6105	0.6678 0.6996	0.6558 0.5960	0.6070 0.6028	0.6284	Ave		0.6542				10.9		30.0			
tert-Butyl alcohol	1.9088 1.7837	1.7108 1.8163	1.8433 1.4381	1.7437 1.6532	1.8283	Ave		1.7474				7.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.3070 1.9812	1.9444 2.0228	1.9867 1.9189	1.8393 1.8662	1.9127	Ave		1.9755				7.0		30.0			
Methylene Chloride	+++++ 0.9231	+++++ 0.9538	1.2994 0.8944	0.9736 0.8450	0.9255	Ave		0.9736				15.4		30.0			
3-Chloropropene	1.8681 1.3955	1.8157 1.3215	1.3157 1.2967	1.3322 1.1171	1.3275	Ave		1.4211				17.6		30.0			
Carbon disulfide	3.4656 3.4017	3.1082 3.0673	3.0217 3.2077	2.9856 2.9316	3.2357	Ave		3.1584				5.8		30.0			
trans-1,2-Dichloroethene	1.2769 1.2358	1.1873 1.1271	1.2174 1.1341	1.1330 1.0853	1.1667	Ave		1.1737				5.2		30.0			
2-Methylpentane	3.6371 3.1924	2.9202 2.8568	3.0981 2.8539	2.9140 2.6417	3.0595	Ave		3.0193				9.3		30.0			
Methyl tert-butyl ether	3.0459 3.2543	3.0206 3.0849	2.8762 2.9711	3.2007 3.1976	3.2723	Ave		3.1026				4.4		30.0			
1,1-Dichloroethane	2.7908 2.4400	2.4190 2.2440	2.4363 2.2501	2.3103 2.2508	2.3616	Ave		2.3892				7.2		30.0			
Vinyl acetate	3.2076 3.8168	3.3105 3.5951	3.0796 3.5582	3.6186 3.5879	3.8022	Ave		3.5085				7.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5856	+++++ 0.5150	0.8579 0.5053	0.7586 0.5481	0.6034	Lin1	0.0636	0.5273							0.9970		0.9900
Hexane	1.3236 1.0709	1.1242 0.9679	1.0332 0.9843	1.0176 0.9484	1.0435	Ave		1.0571				10.7		30.0			
Isopropyl ether	4.4971 4.8101	4.5987 4.5038	4.3829 4.3067	4.9179 4.5444	4.8377	Ave		4.5999				4.6		30.0			
cis-1,2-Dichloroethene	1.4002 1.2766	1.2083 1.1882	1.2772 1.1904	1.1954 1.1896	1.2090	Ave		1.2372				5.7		30.0			
Ethyl acetate	2.7241 3.1329	2.5922 2.9287	2.5262 2.8410	3.0035 3.0992	3.1280	Ave		2.8862				8.0		30.0			
Chloroform	3.0248 2.7275	2.7773 2.5389	2.6719 2.5163	2.6051 2.5351	2.6486	Ave		2.6717				6.0		30.0			
Tert-butyl ethyl ether	3.2929 3.8929	3.5952 3.6795	3.3458 3.5484	3.8535 3.7899	3.8823	Ave		3.6534				6.2		30.0			
Tetrahydrofuran	1.6108 1.6329	1.6045 1.5190	1.3847 1.4660	1.6202 1.5852	1.6201	Ave		1.5604				5.5		30.0			
1,1,1-Trichloroethane	3.2767 3.0505	2.9523 2.8050	2.9284 2.8299	2.8902 2.8586	2.9315	Ave		2.9470				4.9		30.0			
1,2-Dichloroethane	0.4504 0.4252	0.3890 0.3700	0.4369 0.3802	0.3751 0.3714	0.3760	Ave		0.3971				7.9		30.0			
1-Butanol	+++++ 0.1369	0.1155 0.1121	0.1400 0.0975	0.1200 0.1052	0.1188	Ave		0.1182				12.3		30.0			
Benzene	0.8697 0.7924	0.7384 0.6785	0.8106 0.6816	0.7129 0.6130	0.7132	Ave		0.7345				10.7		30.0			
Cyclohexane	+++++ 0.1381	0.1437 0.1147	0.1539 0.1141	0.1215 0.0997	0.1198	Ave		0.1257				14.3		30.0			
Carbon tetrachloride	0.6350 0.6757	0.5186 0.5861	0.5522 0.6117	0.5659 0.5838	0.4787	Ave		0.5786				10.3		30.0			
2,3-Dimethylpentane	+++++ 0.1919	0.1795 0.1598	0.2092 0.1648	0.1672 0.1533	0.1654	Ave		0.1739				10.7		30.0			
Thiophene	0.5028 0.4542	0.4257 0.3897	0.4773 0.4041	0.3987 0.3822	0.3962	Ave		0.4257				10.1		30.0			
Tert-amyl methyl ether	+++++ 0.7508	0.6078 0.6556	0.7163 0.6454	0.6946 0.6605	0.6737	Ave		0.6756				6.6		30.0			
2,2,4-Trimethylpentane	1.7666 1.4893	1.3656 1.2311	1.6012 1.2595	1.3040 1.1554	1.2845	Ave		1.3841				14.3		30.0			
Heptane	0.3572 0.2968	0.2733 0.2459	0.3167 0.2561	0.2535 0.2358	0.2575	Ave		0.2770				14.2		30.0			
1,2-Dichloropropane	0.3755 0.3168	0.2798 0.2721	0.3290 0.2733	0.2836 0.2624	0.2851	Ave		0.2975				12.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4750 0.3874	0.3763 0.3326	0.4323 0.3434	0.3262 0.3305	0.3271	Ave		0.3701				14.4		30.0			
Dibromomethane	0.4034 0.3383	0.3155 0.2839	0.3568 0.2916	0.2910 0.2776	0.2901	Ave		0.3165				13.3		30.0			
Bromodichloromethane	0.6258 0.6381	0.5199 0.5551	0.6151 0.5684	0.5295 0.5395	0.5434	Ave		0.5705				7.8		30.0			
1,4-Dioxane	0.1071 0.1215	0.0957 0.1018	0.1108 0.0983	0.1039 0.0964	0.1038	Ave		0.1044				7.8		30.0			
Methyl methacrylate	0.3261 0.4401	0.3260 0.3867	0.3739 0.3856	0.6251 0.3969	0.3945	Ave		0.4061				22.0		30.0			
Methylcyclohexane	+++++ 0.6290	0.5956 0.5254	0.6820 0.5324	0.5427 0.4909	0.5477	Ave		0.5682				11.0		30.0			
4-Methyl-2-pentanone (MIBK)	0.8339 0.7201	0.7096 0.6048	1.3212 0.6271	0.7336 0.6278	0.7820	Lin1	0.0257	0.6334							0.9930		0.9900
cis-1,3-Dichloropropene	0.4556 0.4795	0.4206 0.4160	0.4602 0.4280	0.3995 0.4145	0.4217	Ave		0.4329				6.0		30.0			
trans-1,3-Dichloropropene	0.3919 0.4364	0.3907 0.4025	0.4072 0.4159	0.3880 0.4213	0.4136	Ave		0.4075				3.9		30.0			
Toluene Range	+++++ 2.3056	+++++ 1.9961	+++++ 2.0204	1.9927 1.9892	2.0422	Ave		2.0577				6.0		30.0			
Toluene	0.9278 0.9238	0.8626 0.8343	0.9087 0.8392	0.8548 0.8403	0.8772	Ave		0.8743				4.2		30.0			
1,1,2-Trichloroethane	0.2811 0.2682	0.2542 0.2443	0.2689 0.2438	0.2451 0.2426	0.2539	Ave		0.2558				5.4		30.0			
2-Methylthiophene	0.7431 0.7591	0.7199 0.7059	0.7476 0.7259	0.6901 0.7253	0.7391	Ave		0.7284				3.0		30.0			
3-Methylthiophene	0.7505 0.7723	0.6755 0.6891	0.7186 0.7171	0.6719 0.7166	0.7129	Ave		0.7138				4.6		30.0			
2-Hexanone	+++++ 0.3141	0.2521 0.2711	0.2760 0.2794	0.2870 0.2952	0.2949	Ave		0.2837				6.6		30.0			
C8 Range	+++++ 3.4189	+++++ 2.8452	+++++ 2.8230	3.4694 2.5862	3.0118	Ave		3.0258				11.6		30.0			
Octane	0.3733 0.3244	0.3086 0.2836	0.3568 0.2833	0.2916 0.2697	0.2937	Ave		0.3095				11.4		30.0			
Dibromochloromethane	0.4930 0.6097	0.4441 0.5869	0.5221 0.6014	0.5093 0.6091	0.5525	Ave		0.5476				10.8		30.0			
1,2-Dibromoethane (EDB)	0.4693 0.5263	0.4072 0.4777	0.4918 0.4940	0.4665 0.5021	0.4868	Ave		0.4802				6.8		30.0			
Tetrachloroethene	0.4071 0.3571	0.3499 0.3196	0.3921 0.3331	0.3230 0.3355	0.3275	Ave		0.3494				8.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7417 0.7232	0.6915 0.6703	0.7191 0.6813	0.6619 0.6896	0.6823	Ave		0.6957				3.8		30.0			
2,3-Dimethylheptane	1.2726 1.0846	1.0563 0.9485	1.1751 0.9199	1.0154 0.8291	1.0072	Ave		1.0343				12.9		30.0			
Ethylbenzene	1.2055 1.2320	1.0840 1.1239	1.1606 1.1299	1.1580 1.1504	1.1842	Ave		1.1587				3.8		30.0			
2-Ethylthiophene	0.9316 0.9684	0.8379 0.8851	0.9112 0.8962	0.8678 0.9275	0.9194	Ave		0.9050				4.3		30.0			
m-Xylene & p-Xylene	0.9207 0.9598	0.8465 0.8817	0.9090 0.8590	0.8842 0.8849	0.9204	Ave		0.8963				3.9		30.0			
Bromoform	+++++ 0.6523	0.3529 0.6710	0.4855 0.7217	0.4740 0.8409	0.5757	Ave		0.5968				26.2		30.0			
Nonane	0.7249 0.6759	0.6310 0.5854	0.7228 0.5482	0.6202 0.4829	0.6317	Ave		0.6248				12.6		30.0			
Styrene	0.5093 0.6620	0.5535 0.6159	0.5802 0.6128	0.5438 0.6422	0.6157	Ave		0.5928				8.4		30.0			
o-Xylene	1.0587 1.0217	0.9572 0.9179	0.9560 0.9069	0.9299 0.9281	0.9785	Ave		0.9617				5.3		30.0			
1,1,2,2-Tetrachloroethane	0.6523 0.7122	0.6377 0.6389	0.6673 0.6243	0.6559 0.6192	0.6850	Ave		0.6548				4.6		30.0			
1,2,3-Trichloropropane	0.1922 0.2191	0.1892 0.1991	0.2065 0.1977	0.2073 0.2103	0.2112	Ave		0.2036				4.8		30.0			
Isopropylbenzene	1.4614 1.4060	1.3224 1.2815	1.3560 1.2619	1.3243 1.3222	1.3497	Ave		1.3428				4.5		30.0			
Propylbenzene	0.3461 0.3747	0.3341 0.3439	0.3512 0.3401	0.3453 0.3628	0.3613	Ave		0.3511				3.7		30.0			
2-Chlorotoluene	0.3366 0.3437	0.3136 0.3182	0.3319 0.3191	0.3146 0.3341	0.3282	Ave		0.3267				3.3		30.0			
4-Ethyltoluene	1.2466 1.3806	1.2010 1.2828	1.2758 1.2664	1.2451 1.3490	1.3128	Ave		1.2845				4.3		30.0			
1,3,5-Trimethylbenzene	0.6124 0.6480	0.5917 0.5884	0.6318 0.5764	0.6087 0.6284	0.6228	Ave		0.6121				3.8		30.0			
Alpha Methyl Styrene	0.3662 0.5549	0.4035 0.5283	0.4070 0.5262	0.4441 0.5705	0.5163	Ave		0.4797				15.6		30.0			
Decane	0.8274 0.8333	0.7524 0.7290	0.8405 0.6869	0.7696 0.6662	0.7843	Ave		0.7655				8.3		30.0			
tert-Butylbenzene	1.1853 1.2571	1.1305 1.1511	1.1987 1.1243	1.1845 1.2497	1.2234	Ave		1.1894				4.1		30.0			
1,2,4-Trimethylbenzene	1.1108 1.2166	1.0560 1.0958	1.1344 1.0759	1.1141 1.1565	1.1606	Ave		1.1245				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.6429 1.7364	1.5639 1.5725	1.6822 1.5386	1.6145 +++++	1.6773	Ave		1.6285				4.2		30.0			
1,3-Dichlorobenzene	0.6765 0.7717	0.6327 0.7290	0.6862 0.7726	0.6299 0.9476	0.7142	Ave		0.7289				13.3		30.0			
Benzyl chloride	0.7603 0.9945	0.7638 0.9134	0.7063 0.9467	0.7379 1.0434	0.9119	Ave		0.8643				14.3		30.0			
1,4-Dichlorobenzene	0.6459 0.7505	0.6127 0.7087	0.6499 0.7428	0.6112 0.8548	0.6967	Ave		0.6970				11.3		30.0			
4-Isopropyltoluene	1.2649 1.4498	1.2683 1.3103	1.3698 1.2768	1.3241 1.4000	1.3875	Ave		1.3391				4.9		30.0			
1,2,3-Trimethylbenzene	0.8804 0.9359	0.8384 0.8449	0.8913 0.8269	0.8678 0.8847	0.9011	Ave		0.8746				3.9		30.0			
Butylcyclohexane	0.9563 0.9136	0.8657 0.7994	0.9551 0.7674	0.8442 0.7643	0.8682	Ave		0.8593				8.5		30.0			
1,2-Dichlorobenzene	0.6588 0.7505	0.6277 0.7027	0.6743 0.7291	0.6320 0.8988	0.7090	Ave		0.7092				11.6		30.0			
Indane	0.9680 1.0796	0.9192 0.9844	1.0010 0.9759	0.9476 1.1123	1.0305	Ave		1.0021				6.2		30.0			
Indene	0.5695 0.7969	0.6069 0.7457	0.6656 0.7418	0.6609 0.8331	0.7472	Ave		0.7075				12.4		30.0			
Butylbenzene	1.1243 1.3635	1.0927 1.1916	1.2116 1.1438	1.1787 1.2151	1.2901	Ave		1.2012				7.0		30.0			
Undecane	0.8031 0.9273	0.7883 0.7411	0.8546 0.7319	0.8125 0.7280	0.8786	Ave		0.8072				8.6		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.8739 1.0763	0.8610 0.9414	0.9433 0.9268	0.9342 1.0413	1.0185	Ave		0.9574				7.7		30.0			
1,2-Dibromo-3-Chloropropane	0.1783 0.3426	0.1906 0.3279	0.2449 0.3394	0.2412 +++++	0.3210	Ave		0.2733				24.8		30.0			
1,2,4,5-Tetramethylbenzene	1.0955 1.3016	1.0574 1.1032	1.1326 1.1193	1.1334 1.2562	1.2498	Ave		1.1610				7.4		30.0			
1,2,3,5-Tetramethylbenzene	0.6856 0.7923	0.6642 0.6718	0.7120 0.6771	0.6935 0.7564	0.7657	Ave		0.7132				6.5		30.0			
1,2,3,4-Tetramethylbenzene	0.9112 1.0789	0.8782 0.8751	0.9517 0.8984	0.9110 1.0300	1.0335	Ave		0.9520				8.0		30.0			
Dodecane	0.6773 0.8283	0.6538 0.4968	0.7791 0.4692	0.5943 0.6402	0.7685	Ave		0.6564				18.8		30.0			
1,2,4-Trichlorobenzene	0.2733 0.5215	0.3050 0.4401	0.3447 0.5438	0.2940 +++++	0.4490	Ave		0.3964				26.7		30.0			
Naphthalene	0.6518 1.1684	0.7006 0.9879	0.8244 1.0580	0.7401 1.2641	1.0340	Ave		0.9366				23.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.5837	0.3528 0.4916	0.3835 0.5651	0.3363 0.7172	0.4970	Ave		0.4909				26.7		30.0			
Hexachlorobutadiene	0.7109 0.7850	0.6191 0.5998	0.6932 0.7538	0.5881 1.0662	0.7201	Ave		0.7262				19.9		30.0			
1,2,3-Trichlorobenzene	0.3325 0.5481	0.3491 0.4290	0.4014 0.4822	0.3206 0.7020	0.4693	Ave		0.4483				27.1		30.0			
2-Methylnaphthalene	0.0751 0.1278	0.0728 0.0695	0.0974 0.0585	0.0494 0.1386	0.0927	Ave		0.0869				34.9		50.0			
1-Methylnaphthalene	0.0908 0.1245	0.0843 0.0603	0.1173 0.0464	0.0489 0.1088	0.0963	Ave		0.0864				33.5		50.0			
4-Bromofluorobenzene (Surr)	0.6829 0.7120	0.6883 0.7011	0.6876 0.7138	0.6850 0.7107	0.7027	Ave		0.6982				1.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5925/2	GG20ICL1.D
Level 2	IC 140-5925/3	GG20ICL2.D
Level 3	IC 140-5925/4	GG20ICL3.D
Level 4	IC 140-5925/5	GG20ICL4.D
Level 5	IC 140-5925/6	GG20ICL5.D
Level 6	ICIS 140-5925/7	GG20ICL6.D
Level 7	IC 140-5925/8	GG20ICL7.D
Level 8	IC 140-5925/9	GG20ICL8.D
Level 9	IC 140-5925/10	GG20ICL9.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	1547 75728	2694 140925	4318 294779	11690 572180	39289	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	7045 277489	13468 537146	26368 1052036	57800 2080056	144801	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	15069 718672	29507 1418649	55817 2837454	138848 5678698	372975	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 82440	3507 164623	7069 320957	16220 609751	41724	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	8986 447434	18027 910251	34635 1838047	87116 3796193	233143	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 590744	+++++ 1044207	+++++ 1925305	224034 +++++	361069	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 +++++	5.01
Vinyl chloride	CBM	Ave	5633 260455	10357 544569	21158 1040943	50003 1982700	136120	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	4806 213821	8631 447350	17029 848637	40358 1631451	110336	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	9863 460671	18339 961293	38711 1810606	94615 3412597	238615	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	4855 216035	9068 463986	16828 906390	41360 1776563	113027	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	2695 124069	4904 273844	9907 520661	23985 1017022	65347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 587204	+++++ 1250268	54635 2199820	124400 4595132	326275	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4477 207147	8496 458193	16212 883890	40581 1745819	109477	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	6876 300017	12594 689050	25061 1259754	58613 2358887	161516	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	LinF	+++++ 63175	+++++ 135357	7321 240321	15589 468106	39576	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	14004 667379	26283 1418491	52062 2725911	128002 5510367	349002	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 99206	4982 230175	9104 390880	21135 838856	56302	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 325482	+++++ 628006	+++++ 1105348	109538 2393008	203195	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	22197 1093196	43421 2434453	88063 4150358	220750 8606848	614867	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	812 38243	1503 85847	2923 160577	7785 302707	20748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	5142 254567	10185 638944	18677 1059778	52222 2208901	145434	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4471 194396	8031 443982	15826 814101	36839 1645708	102984	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3037 124462	5429 312198	10289 518387	25197 1127607	69861	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	7071 363626	13908 810529	28922 1250840	72380 3092811	203267	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	8546 403883	15807 902704	31171 1669094	76349 3491297	212654	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 188182	+++++ 425652	20388 777986	40414 1580832	102893	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	6920 284484	14761 589745	20643 1127926	55298 2089875	147592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	12838 693483	25268 1368836	47411 2790120	123930 5484341	359745	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4730 251928	9652 502964	19101 986464	47030 2030259	129717	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	13473 650811	23740 1274908	48610 2482383	120956 4941904	340158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	11283 663433	24556 1376698	45127 2584305	132856 5982006	363810	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	10338 497421	19665 1001436	38225 1957183	95899 4210745	262566	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	11882 778099	26913 1604346	48319 3094950	150204 6712117	422728	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Lin1	+++++ 119374	+++++ 229829	13460 439503	31487 1025422	67091	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	4903 218307	9139 431943	16211 856144	42238 1774228	116017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	16659 980591	37385 2009900	68768 3746031	204136 8501575	537857	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5187 260240	9823 530257	20039 1035396	49621 2225389	134412	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	10091 638678	21073 1306969	39636 2471172	124671 5797784	347773	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	11205 556042	22578 1133039	41922 2188702	108133 4742496	294470	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	12198 793620	29227 1642030	52496 3086444	159955 7089983	431629	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	5967 332891	13044 677897	21726 1275131	67253 2965552	180124	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	12138 621890	24001 1251755	45947 2461478	119970 5347673	325924	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6849 393288	14976 809613	28027 1583306	76599 3499068	210827	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 126607	4445 245344	8982 406109	24496 991421	66599	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	13226 732930	28428 1484756	52001 2838374	145581 5775788	399902	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 127761	5532 251038	9873 475270	24808 939796	67178	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9657 624993	19965 1282659	35421 2547091	115559 5501066	268449	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 177513	6909 349602	13420 686138	34150 1444072	92759	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7646 420121	16390 852768	30615 1682868	81409 3601663	222144	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 694426	23398 1434776	45948 2687722	141838 6223941	377757	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	26865 1377507	52574 2694094	102712 5244819	266288 10887075	720267	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	5432 274520	10522 538079	20319 1066635	51772 2221989	144372	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	5710 293000	10773 595427	21105 1138252	57902 2472759	159885	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	7224 358275	14488 727892	27731 1429915	66604 3113764	183406	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	6134 312941	12148 621397	22886 1214275	59418 2615273	162667	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9516 590155	20014 1214803	39458 2366858	108128 5083580	304736	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1628 112404	3686 222885	7108 409399	21217 908509	58194	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	4959 407019	12550 846160	23982 1605533	127638 3739985	221214	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 581742	22930 1149693	43751 2217029	110813 4625071	307120	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Lin1	12681 666019	27317 1323566	84756 2611294	149808 5915451	438520	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6929 443518	16193 910486	29520 1782292	81576 3905805	236450	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	5941 402450	14284 849574	25766 1677211	75230 3770631	218178	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 2132546	+++++ 4368368	+++++ 8413253	406910 18742881	1145129	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	14065 852047	31541 1761024	57498 3384555	165721 7519659	462787	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	4261 247379	9296 515736	17015 983320	47519 2170821	133925	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	11265 700124	26322 1490032	47302 2927517	133790 6490287	389913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	11377 712290	24697 1454544	45467 2892255	130260 6413165	376064	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 289691	9218 572249	17461 1126926	55647 2641649	155597	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 3162250	+++++ 6226546	+++++ 11755297	708459 24368798	1688858	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	5659 299170	11283 598665	22579 1142582	56540 2413902	154948	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7473 562305	16239 1238836	33035 2425380	98747 5451229	291449	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	7114 485372	14887 1008425	31118 1992293	90434 4493523	256814	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	6171 329333	12793 674647	24811 1343401	62615 3002504	172789	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	11244 666986	25284 1414763	45504 2747935	128321 6171401	359928	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	19292 1000338	38621 2001984	74353 3710240	196860 7419854	531352	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	18275 1136311	39636 2372349	73440 4557088	224500 10294945	624704	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	14123 893182	30635 1868171	57658 3614530	168245 8300460	485035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	27916 1770385	61905 3722315	115035 6929038	342866 15838618	971074	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 601639	12903 1416425	30723 2910893	91899 7524757	303734	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	10989 623372	23073 1235680	45737 2210826	120238 4321223	333247	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	7721 610607	20239 1300041	36710 2471335	105426 5746685	324812	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	16050 942362	34999 1937561	60491 3657474	180292 8305827	516225	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9889 656848	23315 1348615	42226 2517756	127160 5541318	361387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	2914 202045	6919 420291	13068 797241	40193 1881891	111415	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	22155 1296789	48351 2704962	85804 5089295	256740 11832651	712035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	5247 345580	12215 725883	22225 1371697	66953 3246664	190613	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	5103 317015	11465 671656	21002 1286773	60992 2989697	173151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	18898 1273340	43914 2707804	80730 5107728	241403 12071934	692578	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	9284 597652	21634 1241970	39980 2324615	118008 5623085	328580	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	5552 511817	14755 1115202	25754 2122184	86107 5105195	272377	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	12543 768564	27512 1538826	53182 2770165	149202 5961718	413745	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	17969 1159460	41335 2429755	75848 4534578	229646 11183849	645407	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	16840 1122054	38609 2312993	71780 4339254	216004 10349390	612274	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	24906 1601492	57180 3319123	106444 6205351	313009 +++++	884851	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	10256 711708	23134 1538740	43420 3115909	122127 8479970	376750	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	11526 917217	27926 1927976	44693 3818134	143068 9337492	481091	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	9791 692146	22401 1495925	41125 2995986	118493 7649318	367560	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	19176 1337200	46373 2765837	86672 5149340	256709 12528309	731974	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	13347 863187	30656 1783307	56396 3334853	168236 7917381	475356	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	14497 842624	31653 1687274	60434 3094954	163667 6839303	458033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	9987 692181	22949 1483244	42668 2940684	122531 8043047	374034	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	14675 995741	33608 2077957	63339 3935778	183718 9954063	543635	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	8633 734983	22189 1574119	42119 2991580	128140 7455713	394183	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	17044 1257550	39952 2515175	76663 4612993	228522 10873634	680564	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	12174 855225	28821 1564414	54075 2951690	157514 6514704	463504	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	13248 992689	31480 1987013	59691 3737734	181126 9318425	537320	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2703 315944	6970 692179	15497 1368982	46771 +++++	169349	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	16608 1200509	38662 2328684	71665 4514417	219745 11241452	659341	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	10394 730752	24284 1418105	45051 2730948	134443 6768797	403928	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	13813 995050	32110 1847176	60221 3623503	176627 9217215	545244	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	10268 763908	23904 1048634	49301 1892159	115217 5728932	405424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	4143 480973	11153 928916	21812 2193038	56997 +++++	236858	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	9881 1077641	25617 2085327	52166 4267074	143483 11312702	545497	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 538371	12900 1037580	24268 2279072	65199 6418518	262210	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	10777 724015	22637 1266018	43865 3039984	114011 9541683	379882	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	5041 505500	12765 905583	25402 1944963	62151 6282415	247563	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	3556 368362	8318 458682	19263 737024	29920 3876064	152873	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	4302 358836	9634 397822	23188 584180	29603 3041176	158788	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1056433 1315155	1284073 1479778	1096848 1439373	1328113 1590043	1480535	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
LinF = Linear ISTD forced zero

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: ICV 140-5925/12 Calibration Date: 07/20/2016 21:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GG20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3324	0.2827		1.70	2.00	-14.9	35.0
Propene	Ave	1.424	1.221		1.71	2.00	-14.3	35.0
Dichlorodifluoromethane	Ave	3.440	3.196		1.86	2.00	-7.1	35.0
Chloromethane	Ave	0.3895	0.3657		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.158	2.036		1.89	2.00	-5.7	35.0
Acetaldehyde	Ave	0.6438	0.4198		6.52	10.0	-34.8	35.0
Vinyl chloride	Ave	1.259	1.203		1.91	2.00	-4.4	35.0
1,3-Butadiene	Ave	1.034	0.9423		1.82	2.00	-8.9	35.0
Butane	Ave	2.237	2.091		1.87	2.00	-6.5	35.0
Bromomethane	Ave	1.067	0.9493		1.78	2.00	-11.0	35.0
Chloroethane	Ave	0.6102	0.5530		1.81	2.00	-9.4	35.0
Ethanol	Ave	0.5737	0.4252		7.41	10.0	-25.9	35.0
Vinyl bromide	Ave	1.027	0.9865		1.92	2.00	-3.9	35.0
2-Methylbutane	Ave	1.510	1.383		1.83	2.00	-8.5	35.0
Acrolein	LinF		0.1944		1.50	2.00	-24.9	35.0
Trichlorofluoromethane	Ave	3.232	2.964		1.83	2.00	-8.3	35.0
Acetonitrile	Ave	0.5136	0.3905		1.52	2.00	-24.0	35.0
Acetone	Ave	0.5566	0.3882		4.18	6.00	-30.3	35.0
Isopropyl alcohol	Ave	1.777	1.268		4.28	6.00	-28.7	35.0
Pentane	Ave	0.1879	0.1796		1.91	2.00	-4.4	35.0
Ethyl ether	Ave	1.275	1.053		1.65	2.00	-17.4	35.0
1,1-Dichloroethene	Ave	0.9757	0.8675		1.78	2.00	-11.1	35.0
Acrylonitrile	Ave	0.6542	0.5027		1.54	2.00	-23.2	35.0
tert-Butyl alcohol	Ave	1.747	1.326		1.52	2.00	-24.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.975	1.723		1.74	2.00	-12.8	35.0
Methylene Chloride	Ave	0.9736	0.8200		1.68	2.00	-15.8	35.0
3-Chloropropene	Ave	1.421	1.256		1.77	2.00	-11.6	35.0
Carbon disulfide	Ave	3.158	2.953		1.87	2.00	-6.5	35.0
trans-1,2-Dichloroethene	Ave	1.174	1.073		1.83	2.00	-8.6	35.0
2-Methylpentane	Ave	3.019	2.959		1.96	2.00	-2.0	35.0
Methyl tert-butyl ether	Ave	3.103	2.600		1.68	2.00	-16.2	35.0
1,1-Dichloroethane	Ave	2.389	2.146		1.80	2.00	-10.2	35.0
Vinyl acetate	Ave	3.508	3.049		1.74	2.00	-13.1	35.0
2-Butanone (MEK)	Lin1		0.4381		1.54	2.00	-22.9	35.0
Hexane	Ave	1.057	0.9260		1.75	2.00	-12.4	35.0
Isopropyl ether	Ave	4.600	3.843		1.67	2.00	-16.5	35.0
cis-1,2-Dichloroethene	Ave	1.237	1.141		1.85	2.00	-7.7	35.0
Ethyl acetate	Ave	2.886	2.253		1.56	2.00	-22.0	35.0
Chloroform	Ave	2.672	2.377		1.78	2.00	-11.0	35.0
Tert-butyl ethyl ether	Ave	3.653	3.363		1.84	2.00	-8.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: ICV 140-5925/12 Calibration Date: 07/20/2016 21:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GG20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.560	1.294		1.66	2.00	-17.1	35.0
1,1,1-Trichloroethane	Ave	2.947	2.600		1.76	2.00	-11.8	35.0
1,2-Dichloroethane	Ave	0.3971	0.3436		1.73	2.00	-13.5	35.0
1-Butanol	Ave	0.1182	0.0946		1.60	2.00	-20.0	35.0
Benzene	Ave	0.7345	0.6552		1.78	2.00	-10.8	35.0
Cyclohexane	Ave	0.1257	0.1110		1.77	2.00	-11.7	35.0
Carbon tetrachloride	Ave	0.5786	0.5318		1.84	2.00	-8.1	35.0
2,3-Dimethylpentane	Ave	0.1739	0.1389		1.60	2.00	-20.1	35.0
Thiophene	Ave	0.4257	0.3772		1.77	2.00	-11.4	35.0
Tert-amyl methyl ether	Ave	0.6756	0.5898		1.75	2.00	-12.7	35.0
2,2,4-Trimethylpentane	Ave	1.384	1.181		1.71	2.00	-14.7	35.0
Heptane	Ave	0.2770	0.2324		1.68	2.00	-16.1	35.0
1,2-Dichloropropane	Ave	0.2975	0.2474		1.66	2.00	-16.9	35.0
Trichloroethene	Ave	0.3701	0.3429		1.85	2.00	-7.3	35.0
Dibromomethane	Ave	0.3165	0.2749		1.74	2.00	-13.1	35.0
Bromodichloromethane	Ave	0.5705	0.5035		1.76	2.00	-11.8	35.0
1,4-Dioxane	Ave	0.1044	0.0758		1.45	2.00	-27.4	35.0
Methyl methacrylate	Ave	0.4061	0.2999		1.48	2.00	-26.2	35.0
Methylcyclohexane	Ave	0.5682	0.3956		1.39	2.00	-30.4	35.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.4853		1.49	2.00	-25.4	35.0
cis-1,3-Dichloropropene	Ave	0.4329	0.3821		1.77	2.00	-11.7	35.0
trans-1,3-Dichloropropene	Ave	0.4075	0.3650		1.79	2.00	-10.4	35.0
Toluene	Ave	0.8743	0.7891		1.81	2.00	-9.7	35.0
1,1,2-Trichloroethane	Ave	0.2558	0.2205		1.72	2.00	-13.8	35.0
2-Methylthiophene	Ave	0.7284	0.6844		1.88	2.00	-6.0	35.0
3-Methylthiophene	Ave	0.7138	0.6911		1.94	2.00	-3.2	35.0
2-Hexanone	Ave	0.2837	0.2165		1.53	2.00	-23.7	35.0
Octane	Ave	0.3095	0.2805		1.81	2.00	-9.4	35.0
Dibromochloromethane	Ave	0.5476	0.5157		1.88	2.00	-5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4802	0.4452		1.85	2.00	-7.3	35.0
Tetrachloroethene	Ave	0.3494	0.3057		1.75	2.00	-12.5	35.0
Chlorobenzene	Ave	0.6957	0.6312		1.81	2.00	-9.3	35.0
2,3-Dimethylheptane	Ave	1.034	0.9584		1.85	2.00	-7.3	35.0
Ethylbenzene	Ave	1.159	0.9946		1.72	2.00	-14.2	35.0
2-Ethylthiophene	Ave	0.9050	0.7687		1.70	2.00	-15.1	35.0
m-Xylene & p-Xylene	Ave	0.8963	0.7742		3.46	4.00	-13.6	35.0
Bromoform	Ave	0.5968	0.4907		1.64	2.00	-17.8	35.0
Nonane	Ave	0.6248	0.5951		1.90	2.00	-4.8	35.0
Styrene	Ave	0.5928	0.5256		1.77	2.00	-11.3	35.0
o-Xylene	Ave	0.9617	0.8025		1.67	2.00	-16.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6548	0.5341		1.63	2.00	-18.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: ICV 140-5925/12 Calibration Date: 07/20/2016 21:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GG20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2036	0.1708		1.68	2.00	-16.1	35.0
Isopropylbenzene	Ave	1.343	1.138		1.69	2.00	-15.3	35.0
Propylbenzene	Ave	0.3511	0.3037		1.73	2.00	-13.5	35.0
2-Chlorotoluene	Ave	0.3267	0.2943		1.80	2.00	-9.9	35.0
4-Ethyltoluene	Ave	1.284	1.046		1.63	2.00	-18.6	35.0
1,3,5-Trimethylbenzene	Ave	0.6121	0.5130		1.68	2.00	-16.2	35.0
Alpha Methyl Styrene	Ave	0.4797	0.4107		1.71	2.00	-14.4	35.0
Decane	Ave	0.7655	0.7159		1.87	2.00	-6.5	35.0
tert-Butylbenzene	Ave	1.189	0.995		1.67	2.00	-16.3	35.0
1,2,4-Trimethylbenzene	Ave	1.125	0.9550		1.70	2.00	-15.1	35.0
sec-Butylbenzene	Ave	1.629	1.369		1.68	2.00	-15.9	35.0
1,3-Dichlorobenzene	Ave	0.7289	0.6390		1.75	2.00	-12.3	35.0
Benzyl chloride	Ave	0.8643	0.7160		1.66	2.00	-17.2	35.0
1,4-Dichlorobenzene	Ave	0.6970	0.6269		1.80	2.00	-10.1	35.0
4-Isopropyltoluene	Ave	1.339	1.101		1.64	2.00	-17.8	35.0
1,2,3-Trimethylbenzene	Ave	0.8746	0.7705		1.76	2.00	-11.9	35.0
Butylcyclohexane	Ave	0.8593	0.7469		1.74	2.00	-13.1	35.0
1,2-Dichlorobenzene	Ave	0.7092	0.6118		1.73	2.00	-13.7	35.0
Indane	Ave	1.002	0.7900		1.58	2.00	-21.2	35.0
Indene	Ave	0.7075	0.7388		2.09	2.00	4.4	35.0
Butylbenzene	Ave	1.201	1.051		1.75	2.00	-12.5	35.0
Undecane	Ave	0.8072	0.7426		1.84	2.00	-8.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9574	0.9793		2.05	2.00	2.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2733	0.1823		1.33	2.00	-33.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.161	1.030		1.77	2.00	-11.3	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7132	0.6474		1.82	2.00	-9.2	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.9520	0.8232		1.73	2.00	-13.5	35.0
Dodecane	Ave	0.6564	0.5719		1.74	2.00	-12.9	35.0
1,2,4-Trichlorobenzene	Ave	0.3964	0.4207		2.12	2.00	6.1	35.0
Naphthalene	Ave	0.9366	0.8955		1.91	2.00	-4.4	35.0
Benzo(b)thiophene	Ave	0.4909	0.4439		1.81	2.00	-9.6	35.0
Hexachlorobutadiene	Ave	0.7262	0.6190		1.70	2.00	-14.8	35.0
1,2,3-Trichlorobenzene	Ave	0.4483	0.4315		1.93	2.00	-3.7	35.0
2-Methylnaphthalene	Ave	0.0869	0.1128		8.11	6.25	29.8	50.0
1-Methylnaphthalene	Ave	0.0864	0.1182		8.55	6.25	36.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7125		4.08	4.00	2.0	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: GBFBG24.D BFB Injection Date: 08/24/2016

Instrument ID: MG BFB Injection Time: 10:07

Analysis Batch No.: 6338

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.3	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	97.1	
175	5.0 - 9.0 % of mass 174	6.5	(6.7) 1
176	95.0 - 101.0 % of mass 174	94.1	(96.9) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6338/2	GCCVG24.D	08/24/2016	10:39
	LCS 140-6338/1002	GCCVG24-LCS.d	08/24/2016	10:39
	MB 140-6338/4	GMB500G24.D	08/24/2016	12:10
IA-088-C-21	140-5667-21	GH24P201.D	08/25/2016	03:47
IA-135-C-21	140-5667-22	GH24P202.D	08/25/2016	04:30
IA-149-C-21	140-5667-23	GH24P203.D	08/25/2016	05:12
IA-126-C-21	140-5667-24	GH24P204.D	08/25/2016	05:55

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6338/2 Calibration Date: 08/24/2016 10:39

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVG24.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3324	0.3729		2.24	2.00	12.2	30.0
Propene	Ave	1.424	1.125		1.58	2.00	-21.0	30.0
Dichlorodifluoromethane	Ave	3.440	3.528		2.05	2.00	2.6	30.0
Chloromethane	Ave	0.3895	0.3587		1.84	2.00	-7.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.158	2.202		2.04	2.00	2.0	30.0
Acetaldehyde	Ave	0.6438	0.4431		6.88	10.0	-31.2*	30.0
Vinyl chloride	Ave	1.259	1.161		1.84	2.00	-7.8	30.0
1,3-Butadiene	Ave	1.034	0.9380		1.81	2.00	-9.3	30.0
Butane	Ave	2.237	2.061		1.84	2.00	-7.8	30.0
Bromomethane	Ave	1.067	1.055		1.98	2.00	-1.1	30.0
Chloroethane	Ave	0.6102	0.5959		1.95	2.00	-2.4	30.0
Ethanol	Ave	0.5737	0.5529		9.64	10.0	-3.6	30.0
Vinyl bromide	Ave	1.027	1.069		2.08	2.00	4.1	30.0
2-Methylbutane	Ave	1.510	1.524		2.02	2.00	0.9	30.0
Acrolein	LinF		0.3620		2.80	2.00	39.9*	30.0
Trichlorofluoromethane	Ave	3.232	3.734		2.31	2.00	15.5	30.0
Acetonitrile	Ave	0.5136	0.5169		2.01	2.00	0.6	30.0
Acetone	Ave	0.5566	0.4900		5.28	6.00	-12.0	30.0
Pentane	Ave	0.1879	0.2002		2.13	2.00	6.6	30.0
Isopropyl alcohol	Ave	1.777	1.610		5.44	6.00	-9.4	30.0
Ethyl ether	Ave	1.275	1.434		2.25	2.00	12.5	30.0
1,1-Dichloroethene	Ave	0.9757	1.038		2.13	2.00	6.4	30.0
Acrylonitrile	Ave	0.6542	0.7256		2.22	2.00	10.9	30.0
tert-Butyl alcohol	Ave	1.747	2.065		2.36	2.00	18.2	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.975	2.243		2.27	2.00	13.5	30.0
Methylene Chloride	Ave	0.9736	0.9295		1.91	2.00	-4.5	30.0
3-Chloropropene	Ave	1.421	1.318		1.86	2.00	-7.2	30.0
Carbon disulfide	Ave	3.158	3.025		1.92	2.00	-4.2	30.0
trans-1,2-Dichloroethene	Ave	1.174	1.127		1.92	2.00	-4.0	30.0
2-Methylpentane	Ave	3.019	2.760		1.83	2.00	-8.6	30.0
Methyl tert-butyl ether	Ave	3.103	3.273		2.11	2.00	5.5	30.0
1,1-Dichloroethane	Ave	2.389	2.258		1.89	2.00	-5.5	30.0
Vinyl acetate	Ave	3.508	3.659		2.09	2.00	4.3	30.0
2-Butanone (MEK)	Lin1		0.4993		1.77	2.00	-11.3	30.0
Hexane	Ave	1.057	0.9714		1.84	2.00	-8.1	30.0
Isopropyl ether	Ave	4.600	4.592		2.00	2.00	-0.2	30.0
cis-1,2-Dichloroethene	Ave	1.237	1.196		1.93	2.00	-3.3	30.0
Ethyl acetate	Ave	2.886	2.976		2.06	2.00	3.1	30.0
Chloroform	Ave	2.672	2.733		2.05	2.00	2.3	30.0
Tert-butyl ethyl ether	Ave	3.653	3.893		2.13	2.00	6.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6338/2 Calibration Date: 08/24/2016 10:39

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVG24.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.560	1.504		1.93	2.00	-3.6	30.0
1,1,1-Trichloroethane	Ave	2.947	3.181		2.16	2.00	7.9	30.0
1,2-Dichloroethane	Ave	0.3971	0.3977		2.00	2.00	0.1	30.0
Benzene	Ave	0.7345	0.6852		1.87	2.00	-6.7	30.0
Cyclohexane	Ave	0.1257	0.1148		1.83	2.00	-8.7	30.0
1-Butanol	Ave	0.1182	0.1041		1.76	2.00	-12.0	30.0
Carbon tetrachloride	Ave	0.5786	0.6554		2.27	2.00	13.3	30.0
2,3-Dimethylpentane	Ave	0.1739	0.1573		1.81	2.00	-9.5	30.0
Thiophene	Ave	0.4257	0.3801		1.79	2.00	-10.7	30.0
Tert-amyl methyl ether	Ave	0.6756	0.7091		2.10	2.00	5.0	30.0
2,2,4-Trimethylpentane	Ave	1.384	1.254		1.81	2.00	-9.4	30.0
Heptane	Ave	0.2770	0.2499		1.80	2.00	-9.8	30.0
1,2-Dichloropropane	Ave	0.2975	0.2727		1.83	2.00	-8.3	30.0
Trichloroethene	Ave	0.3701	0.3343		1.81	2.00	-9.7	30.0
Dibromomethane	Ave	0.3165	0.2983		1.89	2.00	-5.7	30.0
Bromodichloromethane	Ave	0.5705	0.5838		2.05	2.00	2.3	30.0
1,4-Dioxane	Ave	0.1044	0.0869		1.67	2.00	-16.7	30.0
Methyl methacrylate	Ave	0.4061	0.3904		1.92	2.00	-3.9	30.0
Methylcyclohexane	Ave	0.5682	0.5360		1.89	2.00	-5.7	30.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.6132		1.90	2.00	-5.2	30.0
cis-1,3-Dichloropropene	Ave	0.4329	0.4174		1.93	2.00	-3.6	30.0
trans-1,3-Dichloropropene	Ave	0.4075	0.4130		2.03	2.00	1.4	30.0
Toluene	Ave	0.8743	0.8666		1.98	2.00	-0.9	30.0
1,1,2-Trichloroethane	Ave	0.2558	0.2508		1.96	2.00	-1.9	30.0
2-Methylthiophene	Ave	0.7284	0.7069		1.94	2.00	-3.0	30.0
3-Methylthiophene	Ave	0.7138	0.6986		1.96	2.00	-2.1	30.0
2-Hexanone	Ave	0.2837	0.2544		1.79	2.00	-10.3	30.0
Octane	Ave	0.3095	0.2896		1.87	2.00	-6.4	30.0
Dibromochloromethane	Ave	0.5476	0.5947		2.17	2.00	8.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.4802	0.4958		2.07	2.00	3.3	30.0
Tetrachloroethene	Ave	0.3494	0.3494		2.00	2.00	-0.0	30.0
Chlorobenzene	Ave	0.6957	0.6874		1.98	2.00	-1.2	30.0
2,3-Dimethylheptane	Ave	1.034	0.9803		1.90	2.00	-5.2	30.0
Ethylbenzene	Ave	1.159	1.222		2.11	2.00	5.5	30.0
2-Ethylthiophene	Ave	0.9050	0.9524		2.10	2.00	5.2	30.0
m-Xylene & p-Xylene	Ave	0.8963	0.9503		4.24	4.00	6.0	30.0
Bromoform	Ave	0.5968	0.6236		2.09	2.00	4.5	30.0
Nonane	Ave	0.6248	0.6143		1.97	2.00	-1.7	30.0
Styrene	Ave	0.5928	0.6414		2.16	2.00	8.2	30.0
o-Xylene	Ave	0.9617	1.009		2.10	2.00	4.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6548	0.6711		2.05	2.00	2.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6338/2 Calibration Date: 08/24/2016 10:39

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVG24.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2036	0.2239		2.20	2.00	10.0	30.0
Isopropylbenzene	Ave	1.343	1.407		2.09	2.00	4.7	30.0
Propylbenzene	Ave	0.3511	0.3624		2.06	2.00	3.2	30.0
2-Chlorotoluene	Ave	0.3267	0.3340		2.04	2.00	2.2	30.0
4-Ethyltoluene	Ave	1.284	1.332		2.07	2.00	3.7	30.0
1,3,5-Trimethylbenzene	Ave	0.6121	0.6075		1.99	2.00	-0.7	30.0
Alpha Methyl Styrene	Ave	0.4797	0.4911		2.05	2.00	2.4	30.0
Decane	Ave	0.7655	0.6949		1.82	2.00	-9.2	30.0
tert-Butylbenzene	Ave	1.189	1.196		2.01	2.00	0.6	30.0
1,2,4-Trimethylbenzene	Ave	1.125	1.131		2.01	2.00	0.6	30.0
sec-Butylbenzene	Ave	1.629	1.582		1.94	2.00	-2.9	30.0
1,3-Dichlorobenzene	Ave	0.7289	0.7020		1.93	2.00	-3.7	30.0
Benzyl chloride	Ave	0.8643	0.8588		1.99	2.00	-0.6	30.0
1,4-Dichlorobenzene	Ave	0.6970	0.6743		1.93	2.00	-3.3	30.0
4-Isopropyltoluene	Ave	1.339	1.290		1.93	2.00	-3.6	30.0
1,2,3-Trimethylbenzene	Ave	0.8746	0.8324		1.90	2.00	-4.8	30.0
Butylcyclohexane	Ave	0.8593	0.7444		1.73	2.00	-13.4	30.0
1,2-Dichlorobenzene	Ave	0.7092	0.6703		1.89	2.00	-5.5	30.0
Indane	Ave	1.002	0.9331		1.86	2.00	-6.9	30.0
Indene	Ave	0.7075	0.6511		1.84	2.00	-8.0	30.0
Butylbenzene	Ave	1.201	1.123		1.87	2.00	-6.5	30.0
Undecane	Ave	0.8072	0.6490		1.61	2.00	-19.6	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9574	0.8291		1.73	2.00	-13.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2733	0.2463		1.80	2.00	-9.9	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.161	0.9590		1.65	2.00	-17.4	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7132	0.5826		1.63	2.00	-18.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9520	0.7392		1.55	2.00	-22.4	30.0
Dodecane	Ave	0.6564	0.5206		1.59	2.00	-20.7	30.0
1,2,4-Trichlorobenzene	Ave	0.3964	0.3267		1.65	2.00	-17.6	30.0
Naphthalene	Ave	0.9366	0.7198		1.54	2.00	-23.1	30.0
Benzo(b)thiophene	Ave	0.4909	0.3012		1.23	2.00	-38.6*	30.0
Hexachlorobutadiene	Ave	0.7262	0.5643		1.55	2.00	-22.3	30.0
1,2,3-Trichlorobenzene	Ave	0.4483	0.3261		1.46	2.00	-27.2	30.0
2-Methylnaphthalene	Ave	0.0869	0.0922		6.63	6.25	6.1	50.0
1-Methylnaphthalene	Ave	0.0864	0.0937		6.78	6.25	8.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7194		4.12	4.00	3.0	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: GBFBG25.D BFB Injection Date: 08/25/2016

Instrument ID: MG BFB Injection Time: 10:04

Analysis Batch No.: 6395

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.8	
75	30.0 - 60.0 % of mass 95	54.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.3	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	96.9	
175	5.0 - 9.0 % of mass 174	6.6	(6.9) 1
176	95.0 - 101.0 % of mass 174	95.2	(98.2) 1
177	5.0 - 9.0 % of mass 176	6.3	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6395/2	GCCVG25.D	08/25/2016	10:37
	LCS 140-6395/1002	GCCVG25-LCS.d	08/25/2016	10:37
	MB 140-6395/6	G500G25.D	08/25/2016	12:18
IA-001-C-21	140-5667-3	GG25P116.D	08/26/2016	02:44
IA-005-C-21	140-5667-5	GG25P201.D	08/26/2016	03:27
IA-146-C-21	140-5667-13	GG25P203.D	08/26/2016	04:54

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6395/2 Calibration Date: 08/25/2016 10:37

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVG25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3324	0.3862		2.32	2.00	16.2	30.0
Propene	Ave	1.424	1.143		1.60	2.00	-19.8	30.0
Dichlorodifluoromethane	Ave	3.440	3.573		2.08	2.00	3.9	30.0
Chloromethane	Ave	0.3895	0.3641		1.87	2.00	-6.5	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.158	2.208		2.05	2.00	2.3	30.0
Acetaldehyde	Ave	0.6438	0.4226		6.56	10.0	-34.4*	30.0
Vinyl chloride	Ave	1.259	1.176		1.87	2.00	-6.5	30.0
1,3-Butadiene	Ave	1.034	0.9542		1.85	2.00	-7.7	30.0
Butane	Ave	2.237	2.072		1.85	2.00	-7.3	30.0
Bromomethane	Ave	1.067	1.057		1.98	2.00	-0.9	30.0
Chloroethane	Ave	0.6102	0.5906		1.94	2.00	-3.2	30.0
Ethanol	Ave	0.5737	0.5042		8.79	10.0	-12.1	30.0
Vinyl bromide	Ave	1.027	1.043		2.03	2.00	1.6	30.0
2-Methylbutane	Ave	1.510	1.473		1.95	2.00	-2.5	30.0
Acrolein	LinF		0.3266		2.53	2.00	26.3	30.0
Trichlorofluoromethane	Ave	3.232	3.710		2.30	2.00	14.8	30.0
Acetonitrile	Ave	0.5136	0.4574		1.78	2.00	-10.9	30.0
Acetone	Ave	0.5566	0.4427		4.77	6.00	-20.5	30.0
Isopropyl alcohol	Ave	1.777	1.498		5.06	6.00	-15.7	30.0
Pentane	Ave	0.1879	0.1891		2.01	2.00	0.6	30.0
Ethyl ether	Ave	1.275	1.277		2.00	2.00	0.1	30.0
1,1-Dichloroethene	Ave	0.9757	0.9878		2.02	2.00	1.2	30.0
Acrylonitrile	Ave	0.6542	0.6227		1.90	2.00	-4.8	30.0
tert-Butyl alcohol	Ave	1.747	1.863		2.13	2.00	6.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.975	2.144		2.17	2.00	8.5	30.0
Methylene Chloride	Ave	0.9736	0.8649		1.78	2.00	-11.2	30.0
3-Chloropropene	Ave	1.421	1.295		1.82	2.00	-8.9	30.0
Carbon disulfide	Ave	3.158	3.037		1.92	2.00	-3.8	30.0
trans-1,2-Dichloroethene	Ave	1.174	1.125		1.92	2.00	-4.1	30.0
2-Methylpentane	Ave	3.019	2.817		1.87	2.00	-6.7	30.0
Methyl tert-butyl ether	Ave	3.103	3.150		2.03	2.00	1.5	30.0
1,1-Dichloroethane	Ave	2.389	2.258		1.89	2.00	-5.5	30.0
Vinyl acetate	Ave	3.508	3.509		2.00	2.00	0.0	30.0
2-Butanone (MEK)	Lin1		0.4891		1.73	2.00	-13.3	30.0
Hexane	Ave	1.057	0.9766		1.85	2.00	-7.6	30.0
Isopropyl ether	Ave	4.600	4.429		1.93	2.00	-3.7	30.0
cis-1,2-Dichloroethene	Ave	1.237	1.180		1.91	2.00	-4.6	30.0
Ethyl acetate	Ave	2.886	2.875		1.99	2.00	-0.4	30.0
Chloroform	Ave	2.672	2.699		2.02	2.00	1.0	30.0
Tert-butyl ethyl ether	Ave	3.653	3.728		2.04	2.00	2.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6395/2 Calibration Date: 08/25/2016 10:37

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVG25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.560	1.456		1.87	2.00	-6.7	30.0
1,1,1-Trichloroethane	Ave	2.947	3.152		2.14	2.00	7.0	30.0
1,2-Dichloroethane	Ave	0.3971	0.4153		2.09	2.00	4.6	30.0
1-Butanol	Ave	0.1182	0.1101		1.86	2.00	-6.9	30.0
Benzene	Ave	0.7345	0.6922		1.88	2.00	-5.8	30.0
Cyclohexane	Ave	0.1257	0.1202		1.91	2.00	-4.3	30.0
Carbon tetrachloride	Ave	0.5786	0.6796		2.35	2.00	17.4	30.0
2,3-Dimethylpentane	Ave	0.1739	0.1632		1.88	2.00	-6.2	30.0
Thiophene	Ave	0.4257	0.3983		1.87	2.00	-6.4	30.0
Tert-amyl methyl ether	Ave	0.6756	0.6808		2.02	2.00	0.8	30.0
2,2,4-Trimethylpentane	Ave	1.384	1.306		1.89	2.00	-5.6	30.0
Heptane	Ave	0.2770	0.2594		1.87	2.00	-6.3	30.0
1,2-Dichloropropane	Ave	0.2975	0.2764		1.86	2.00	-7.1	30.0
Trichloroethene	Ave	0.3701	0.3549		1.92	2.00	-4.1	30.0
Dibromomethane	Ave	0.3165	0.3113		1.97	2.00	-1.6	30.0
Bromodichloromethane	Ave	0.5705	0.6065		2.13	2.00	6.3	30.0
1,4-Dioxane	Ave	0.1044	0.0899		1.72	2.00	-13.9	30.0
Methyl methacrylate	Ave	0.4061	0.3922		1.93	2.00	-3.4	30.0
Methylcyclohexane	Ave	0.5682	0.5493		1.93	2.00	-3.3	30.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.5928		1.83	2.00	-8.4	30.0
cis-1,3-Dichloropropene	Ave	0.4329	0.4301		1.99	2.00	-0.6	30.0
trans-1,3-Dichloropropene	Ave	0.4075	0.4257		2.09	2.00	4.5	30.0
Toluene	Ave	0.8743	0.8543		1.95	2.00	-2.3	30.0
1,1,2-Trichloroethane	Ave	0.2558	0.2539		1.98	2.00	-0.8	30.0
2-Methylthiophene	Ave	0.7284	0.7055		1.94	2.00	-3.1	30.0
3-Methylthiophene	Ave	0.7138	0.7252		2.03	2.00	1.6	30.0
2-Hexanone	Ave	0.2837	0.2481		1.75	2.00	-12.6	30.0
Octane	Ave	0.3095	0.2969		1.92	2.00	-4.1	30.0
Dibromochloromethane	Ave	0.5476	0.6052		2.21	2.00	10.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.4802	0.4986		2.08	2.00	3.8	30.0
Tetrachloroethene	Ave	0.3494	0.3544		2.03	2.00	1.4	30.0
Chlorobenzene	Ave	0.6957	0.6899		1.98	2.00	-0.8	30.0
2,3-Dimethylheptane	Ave	1.034	1.002		1.94	2.00	-3.2	30.0
Ethylbenzene	Ave	1.159	1.194		2.06	2.00	3.0	30.0
2-Ethylthiophene	Ave	0.9050	0.9387		2.07	2.00	3.7	30.0
m-Xylene & p-Xylene	Ave	0.8963	0.9405		4.20	4.00	4.9	30.0
Bromoform	Ave	0.5968	0.6240		2.09	2.00	4.6	30.0
Nonane	Ave	0.6248	0.6186		1.98	2.00	-1.0	30.0
Styrene	Ave	0.5928	0.6273		2.12	2.00	5.8	30.0
o-Xylene	Ave	0.9617	0.9940		2.07	2.00	3.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6548	0.6636		2.03	2.00	1.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6395/2 Calibration Date: 08/25/2016 10:37

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVG25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2036	0.2210		2.17	2.00	8.5	30.0
Isopropylbenzene	Ave	1.343	1.368		2.04	2.00	1.9	30.0
Propylbenzene	Ave	0.3511	0.3509		2.00	2.00	-0.0	30.0
2-Chlorotoluene	Ave	0.3267	0.3211		1.97	2.00	-1.7	30.0
4-Ethyltoluene	Ave	1.284	1.292		2.01	2.00	0.6	30.0
1,3,5-Trimethylbenzene	Ave	0.6121	0.5907		1.93	2.00	-3.5	30.0
Alpha Methyl Styrene	Ave	0.4797	0.4826		2.01	2.00	0.6	30.0
Decane	Ave	0.7655	0.6893		1.80	2.00	-10.0	30.0
tert-Butylbenzene	Ave	1.189	1.156		1.94	2.00	-2.8	30.0
1,2,4-Trimethylbenzene	Ave	1.125	1.097		1.95	2.00	-2.5	30.0
sec-Butylbenzene	Ave	1.629	1.540		1.89	2.00	-5.4	30.0
1,3-Dichlorobenzene	Ave	0.7289	0.6913		1.90	2.00	-5.2	30.0
Benzyl chloride	Ave	0.8643	0.8884		2.06	2.00	2.8	30.0
1,4-Dichlorobenzene	Ave	0.6970	0.6692		1.92	2.00	-4.0	30.0
4-Isopropyltoluene	Ave	1.339	1.253		1.87	2.00	-6.5	30.0
1,2,3-Trimethylbenzene	Ave	0.8746	0.8084		1.85	2.00	-7.6	30.0
Butylcyclohexane	Ave	0.8593	0.7346		1.71	2.00	-14.5	30.0
1,2-Dichlorobenzene	Ave	0.7092	0.6468		1.82	2.00	-8.8	30.0
Indane	Ave	1.002	0.9055		1.81	2.00	-9.6	30.0
Indene	Ave	0.7075	0.6442		1.82	2.00	-9.0	30.0
Butylbenzene	Ave	1.201	1.118		1.86	2.00	-6.9	30.0
Undecane	Ave	0.8072	0.6722		1.67	2.00	-16.7	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9574	0.8312		1.74	2.00	-13.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2733	0.2500		1.83	2.00	-8.5	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.161	0.9411		1.62	2.00	-18.9	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7132	0.5774		1.62	2.00	-19.0	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9520	0.7293		1.53	2.00	-23.4	30.0
Dodecane	Ave	0.6564	0.4993		1.52	2.00	-23.9	30.0
1,2,4-Trichlorobenzene	Ave	0.3964	0.3463		1.75	2.00	-12.6	30.0
Naphthalene	Ave	0.9366	0.7450		1.59	2.00	-20.5	30.0
Benzo(b)thiophene	Ave	0.4909	0.3312		1.35	2.00	-32.5*	30.0
Hexachlorobutadiene	Ave	0.7262	0.5559		1.53	2.00	-23.5	30.0
1,2,3-Trichlorobenzene	Ave	0.4483	0.3356		1.50	2.00	-25.1	30.0
2-Methylnaphthalene	Ave	0.0869	0.0945		6.80	6.25	8.8	50.0
1-Methylnaphthalene	Ave	0.0864	0.0931		6.73	6.25	7.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7059		4.04	4.00	1.1	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: JBFBF22Z.D BFB Injection Date: 06/22/2016

Instrument ID: MJ BFB Injection Time: 15:21

Analysis Batch No.: 5523

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.9	
75	30.0 - 60.0 % of mass 95	52.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	114.8	
175	5.0 - 9.0 % of mass 174	9.0	(7.9) 1
176	95.0 - 101.0 % of mass 174	111.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5523/2	JF22IC01.D	06/22/2016	15:49
	IC 140-5523/3	JF22IC02.D	06/22/2016	16:44
	IC 140-5523/4	JF22IC03.D	06/22/2016	17:38
	IC 140-5523/5	JF22IC04.D	06/22/2016	18:32
	IC 140-5523/6	JF22IC05.D	06/22/2016	19:26
	ICIS 140-5523/7	JF22IC06.D	06/22/2016	20:20
	IC 140-5523/8	JF22IC07.D	06/22/2016	21:14
	IC 140-5523/9	JF22IC08.D	06/22/2016	22:07
	IC 140-5523/10	JF22IC09.D	06/22/2016	23:00
	ICV 140-5523/17	JF22ICVR.D	06/23/2016	09:52

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5042	0.5590 0.4610	0.5175 0.4813	0.4967 0.4379	0.5141	Ave		0.4965				7.5		30.0			
Propene	+++++ 1.1654	+++++ 1.0702	1.3313 1.0844	1.2623 0.8964	1.2696	Ave		1.1542				13.0		30.0			
Dichlorodifluoromethane	+++++ 4.4166	4.8390 4.2049	4.6794 4.1701	4.5997 3.4026	4.8596	Ave		4.3965				10.9		30.0			
Chloromethane	+++++ 0.3110	+++++ 0.2838	0.3981 0.2566	0.3567 0.2332	0.3351	Ave		0.3106				18.6		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.5211	2.7057 2.3404	2.5717 2.3442	2.5081 1.8650	2.6621	Ave		2.4398				10.9		30.0			
Acetaldehyde	+++++ 0.2760	+++++ 0.2256	+++++ 0.2022	0.3974 0.2058	0.3104	Ave		0.2696				28.1		30.0			
Vinyl chloride	1.3247 1.0033	1.1693 0.9547	1.1093 0.8894	1.1001 0.8297	1.0972	Ave		1.0531				14.4		30.0			
1,3-Butadiene	+++++ 0.7042	+++++ 0.6593	0.7516 0.6084	0.7719 0.5749	0.7683	Ave		0.6912				11.5		30.0			
Butane	+++++ 1.1108	+++++ 1.0854	1.3903 0.9510	1.3397 0.8927	1.2784	Ave		1.1498				16.7		30.0			
Bromomethane	+++++ 0.9572	1.2135 0.9001	1.0838 0.8839	1.0122 0.8550	1.0221	Ave		0.9910				12.0		30.0			
Chloroethane	+++++ 0.3713	0.4395 0.3551	0.4065 0.3441	0.3781 0.3371	0.3895	Ave		0.3777				9.0		30.0			
Ethanol	+++++ 0.1580	+++++ 0.1433	0.1952 0.1267	0.1606 0.1294	0.1687	Ave		0.1546				15.5		30.0			
Vinyl bromide	+++++ 1.2066	1.2166 1.1251	1.2066 1.1391	1.1666 1.0824	1.2299	Ave		1.1716				4.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.4563	+++++ 1.3127	1.5024 1.2679	1.4848 1.0960	1.5352	Ave		1.3793				11.6		30.0			
Trichlorofluoromethane	+++++ 4.2191	4.3771 3.8766	4.2739 3.8302	4.1645 3.4211	4.3784	Ave		4.0676				8.2		30.0			
Acrolein	+++++ 0.3452	+++++ 0.3014	0.4460 0.2782	0.3277 0.2999	0.3533	Ave		0.3360				16.5		30.0			
Acetonitrile	+++++ 0.3905	+++++ 0.3504	0.4332 0.3275	0.3310 0.3740	0.3713	Ave		0.3683				10.0		30.0			
Acetone	+++++ 0.4995	+++++ 0.3749	+++++ 0.3337	0.6209 0.3831	0.5374	Ave		0.4583				24.4		30.0			
Isopropyl alcohol	+++++ 1.6846	+++++ 1.4120	1.7563 1.3941	1.5917 1.1233	1.7285	Ave		1.5272				15.0		30.0			
Pentane	+++++ 0.1768	+++++ 0.1611	0.1866 0.1627	0.1887 0.1441	0.1856	Ave		0.1722				9.7		30.0			
Ethyl ether	+++++ 0.8543	+++++ 0.7808	0.8344 0.6842	0.7323 0.7660	0.8240	Ave		0.7823				7.7		30.0			
1,1-Dichloroethene	+++++ 1.2103	1.2889 1.1318	1.1478 1.1609	1.1752 1.1003	1.2527	Ave		1.1835				5.3		30.0			
tert-Butyl alcohol	+++++ 2.1544	2.3633 1.8642	2.1846 2.0640	2.0389 1.8350	2.1692	Ave		2.0842				8.4		30.0			
Acrylonitrile	+++++ 0.7316	0.8425 0.6684	0.7037 0.6289	0.6206 0.7025	0.7106	Ave		0.7011				9.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8940	3.0400 2.6051	2.8530 2.5798	2.8273 2.3385	2.9837	Ave		2.7652				8.6		30.0			
Methylene Chloride	+++++ 1.1059	+++++ 0.9818	1.3956 0.9738	1.1804 0.9093	1.1484	Ave		1.0993				15.0		30.0			
3-Chloropropene	+++++ 1.1096	1.3296 0.9480	1.0951 0.9570	1.0768 0.8054	1.1176	Ave		1.0549				14.7		30.0			
Carbon disulfide	+++++ 3.4879	3.7064 3.1922	3.4140 3.2589	3.3188 2.9260	3.5637	Ave		3.3585				7.2		30.0			
trans-1,2-Dichloroethene	+++++ 1.2345	1.2722 1.1378	1.2480 1.1094	1.1895 1.0359	1.2737	Ave		1.1876				7.3		30.0			
2-Methylpentane	+++++ 2.5988	2.7409 2.2724	2.6201 2.1287	2.5383 1.7920	2.7029	Ave		2.4243				13.7		30.0			
Methyl tert-butyl ether	+++++ 2.6733	+++++ 2.4385	2.4636 2.2127	2.2707 2.4681	2.5559	Ave		2.4404				6.5		30.0			
1,1-Dichloroethane	+++++ 2.5611	2.6814 2.2112	2.5084 2.1727	2.4933 2.1386	2.5672	Ave		2.4168				8.7		30.0			
Vinyl acetate	+++++ 2.2123	+++++ 2.0875	1.9035 1.8409	1.7361 2.1276	2.0974	Ave		2.0007				8.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3871	+++++ 0.3312	0.5093 0.3229	0.3971 0.3467	0.3930	Ave		0.3839				16.4		30.0			
Hexane	+++++ 1.1210	1.0912 0.9657	1.1007 0.9551	1.0917 0.8804	1.1344	Ave		1.0425				9.1		30.0			
Isopropyl ether	+++++ 3.2904	3.6307 2.9115	3.0105 2.6766	2.8081 2.7075	3.1314	Ave		3.0208				10.7		30.0			
cis-1,2-Dichloroethene	+++++ 1.2327	1.3301 1.0874	1.2146 1.0707	1.1880 1.1014	1.2398	Ave		1.1831				7.6		30.0			
Ethyl acetate	+++++ 1.7615	+++++ 1.5655	1.5737 1.5009	1.5300 1.5623	1.7015	Ave		1.5994				6.0		30.0			
Chloroform	+++++ 2.8139	2.9572 2.4353	2.8805 2.3198	2.7803 2.3852	2.8515	Ave		2.6780				9.5		30.0			
Tert-butyl ethyl ether	+++++ 3.2339	3.5685 2.8582	2.9393 2.7149	2.6805 2.8523	3.0716	Ave		2.9899				9.9		30.0			
Tetrahydrofuran	+++++ 0.9293	+++++ 0.8424	0.8383 0.7823	0.7949 0.8926	0.8890	Ave		0.8527				6.3		30.0			
1,1,1-Trichloroethane	+++++ 3.3351	3.2168 2.9132	3.2372 2.7334	3.2140 2.7851	3.3406	Ave		3.0969				8.0		30.0			
1,2-Dichloroethane	+++++ 0.4569	0.4832 0.3864	0.4749 0.3701	0.4633 0.3885	0.4718	Ave		0.4369				10.7		30.0			
1-Butanol	+++++ 0.0639	+++++ 0.0558	+++++ 0.0671	0.0551 0.0618	0.0622	Ave		0.0610				7.7		30.0			
Cyclohexane	+++++ 0.1302	0.1149 0.1101	0.1184 0.1040	0.1260 0.0955	0.1376	Ave		0.1171				11.9		30.0			
Benzene	+++++ 0.7322	0.8437 0.6046	0.7950 0.5722	0.7510 0.5312	0.7564	Ave		0.6983				16.3		30.0			
Carbon tetrachloride	0.7843 0.8287	0.7618 0.6999	0.7098 0.6615	0.8109 0.6518	0.7826	Ave		0.7435				8.7		30.0			
2,3-Dimethylpentane	+++++ 0.1712	0.1714 0.1427	0.1694 0.1404	0.1761 0.1395	0.1745	Ave		0.1606				10.3		30.0			
Thiophene	+++++ 0.4165	0.4347 0.3632	0.4135 0.3555	0.4081 0.3680	0.4313	Ave		0.3988				8.0		30.0			
Tert-amyl methyl ether	+++++ 0.6605	0.7406 0.5623	0.6416 0.5191	0.6024 0.5263	0.6679	Ave		0.6151				12.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.3875	1.5390 1.1576	1.4751 1.0883	1.4432 0.9871	1.4449	Ave		1.3153				15.7		30.0			
Heptane	+++++ 0.2442	+++++ 0.2109	0.2503 0.2088	0.2439 0.2062	0.2496	Ave		0.2306				9.0		30.0			
1,2-Dichloropropane	+++++ 0.3010	0.3185 0.2604	0.2894 0.2489	0.2858 0.2435	0.3065	Ave		0.2817				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4078 0.3542	0.3744 0.3116	0.3733 0.3033	0.3548 0.3216	0.3704	Ave		0.3524				9.7		30.0			
Dibromomethane	+++++ 0.3291	0.3266 0.2856	0.3204 0.2795	0.3280 0.2908	0.3356	Ave		0.3120				7.3		30.0			
Bromodichloromethane	0.5980 0.6148	0.5486 0.5461	0.5576 0.5252	0.5596 0.5377	0.6308	Ave		0.5687				6.5		30.0			
1,4-Dioxane	+++++ 0.0907	+++++ 0.0795	0.0796 0.0853	0.0803 0.0765	0.0906	Ave		0.0832				6.8		30.0			
Methyl methacrylate	+++++ 0.2190	0.2024 0.1965	0.1813 0.1935	0.3185 0.2086	0.2018	Ave		0.2152				20.1		30.0			
Methylcyclohexane	+++++ 0.5679	0.5877 0.4747	0.5782 0.4633	0.5735 0.4476	0.5931	Ave		0.5358				11.6		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4572	0.5094 0.3912	0.6711 0.4240	0.4244 0.3787	0.5230	Ave		0.4724				20.2		30.0			
cis-1,3-Dichloropropene	0.3836 0.4002	0.3632 0.3656	0.3419 0.3525	0.3346 0.3814	0.3874	Ave		0.3678				6.0		30.0			
trans-1,3-Dichloropropene	+++++ 0.3595	0.3152 0.3337	0.2950 0.3226	0.2686 0.3655	0.3573	Ave		0.3272				10.4		30.0			
Toluene	+++++ 0.9093	1.0070 0.7987	0.8963 0.6980	0.8459 0.7268	0.9326	Ave		0.8518				12.4		30.0			
Toluene Range	+++++ 2.0809	+++++ 1.9007	+++++ 1.6308	1.8813 1.7440	2.1031	Ave		1.8901				9.8		30.0			
1,1,2-Trichloroethane	+++++ 0.2634	0.2733 0.2315	0.2567 0.2104	0.2485 0.2212	0.2692	Ave		0.2468				9.4		30.0			
2-Methylthiophene	+++++ 0.7820	0.7234 0.6802	0.7793 0.6080	0.6860 0.6275	0.7941	Ave		0.7101				10.1		30.0			
3-Methylthiophene	+++++ 0.7359	0.7177 0.6520	0.7055 0.5863	0.6857 0.6160	0.7508	Ave		0.6812				8.6		30.0			
2-Hexanone	+++++ 0.2800	+++++ 0.2386	0.2217 0.2430	0.2392 0.2307	0.2834	Ave		0.2481				9.7		30.0			
Octane	+++++ 0.3030	0.3024 0.2605	0.2978 0.2316	0.2891 0.2326	0.3146	Ave		0.2789				11.8		30.0			
C8 Range	+++++ 2.8050	+++++ 2.3297	+++++ 2.0345	2.8095 1.9518	2.9926	Ave		2.4872				17.8		30.0			
Dibromochloromethane	0.5674 0.6659	0.5543 0.5923	0.5728 0.5443	0.5770 0.5832	0.6580	Ave		0.5906				7.3		30.0			
1,2-Dibromoethane (EDB)	0.4552 0.4797	0.4768 0.4280	0.4555 0.4034	0.4307 0.4503	0.4785	Ave		0.4509				5.8		30.0			
Tetrachloroethene	0.4875 0.4016	0.4396 0.3385	0.4357 0.3067	0.4287 0.3230	0.4309	Ave		0.3991				15.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.8566	1.0104 0.6661	0.9749 0.5494	0.9109 0.4479	0.9375	Ave		0.7942				26.7		30.0			
Chlorobenzene	+++++ 0.6770	0.7480 0.5890	0.6968 0.5278	0.6430 0.5490	0.6927	Ave		0.6404				12.2		30.0			
Ethylbenzene	+++++ 1.0567	1.1550 0.9468	0.9801 0.8178	0.8973 0.8923	1.0251	Ave		0.9714				11.0		30.0			
2-Ethylthiophene	+++++ 0.8055	0.8105 0.7294	0.7199 0.6458	0.6669 0.7164	0.7795	Ave		0.7342				8.3		30.0			
m-Xylene & p-Xylene	0.9369 0.8068	0.8738 0.6978	0.7634 0.5911	0.6968 0.6181	0.8006	Ave		0.7539				15.1		30.0			
Nonane	+++++ 0.6451	0.5885 0.5662	0.5459 0.4907	0.5382 0.4585	0.6311	Ave		0.5580				11.5		30.0			
Bromoform	+++++ 0.5090	0.3393 0.4915	0.3617 0.4772	0.3571 0.5497	0.4679	Ave		0.4442				18.0		30.0			
Styrene	0.5013 0.5292	0.4332 0.4944	0.3824 0.4484	0.3826 0.5156	0.4866	Ave		0.4637				11.9		30.0			
o-Xylene	+++++ 0.8703	0.9793 0.7561	0.8386 0.6600	0.7655 0.7338	0.8759	Ave		0.8099				12.4		30.0			
1,1,2,2-Tetrachloroethane	0.5577 0.5616	0.5348 0.5019	0.4870 0.4665	0.4817 0.4930	0.5584	Ave		0.5159				7.2		30.0			
1,2,3-Trichloropropane	+++++ 0.1561	0.1432 0.1434	0.1415 0.1353	0.1349 0.1602	0.1554	Ave		0.1463				6.7		30.0			
Isopropylbenzene	+++++ 1.1442	+++++ 1.0035	1.0700 0.8681	0.9886 0.9337	1.1229	Ave		1.0187				9.8		30.0			
Propylbenzene	+++++ 0.2806	0.2553 0.2565	0.2405 0.2426	0.2166 0.2918	0.2618	Ave		0.2557				9.2		30.0			
2-Chlorotoluene	+++++ 0.2906	0.2913 0.2672	0.2599 0.2412	0.2428 0.2871	0.2787	Ave		0.2699				7.6		30.0			
4-Ethyltoluene	+++++ 0.9839	0.8822 0.8719	0.8073 0.8004	0.7766 0.8681	0.9414	Ave		0.8665				8.2		30.0			
1,3,5-Trimethylbenzene	+++++ 0.5002	0.5144 0.4334	0.4547 0.4008	0.4225 0.4561	0.4860	Ave		0.4585				8.6		30.0			
Alpha Methyl Styrene	+++++ 0.3517	+++++ 0.3492	0.2284 0.3478	0.2209 0.4145	0.3127	Ave		0.3179				22.2		30.0			
Decane	+++++ 0.6574	0.6037 0.5756	0.5696 0.4989	0.5427 0.4758	0.6398	Ave		0.5704				11.2		30.0			
tert-Butylbenzene	+++++ 1.0212	+++++ 0.8699	0.9497 0.7834	0.8998 0.8218	1.0369	Ave		0.9118				10.6		30.0			
1,2,4-Trimethylbenzene	+++++ 0.8794	0.8435 0.7418	0.7504 0.6841	0.7285 0.7099	0.8721	Ave		0.7762				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.2919	+++++ 1.0984	1.1691 0.9877	1.0927 0.9921	1.2854	Ave		1.1310				11.0		30.0			
1,3-Dichlorobenzene	+++++ 0.4099	0.3775 0.3972	0.3536 0.4064	0.3342 0.5042	0.3891	Ave		0.3965				12.8		30.0			
Benzyl chloride	+++++ 0.4101	+++++ 0.4053	0.2838 0.4575	0.2701 0.5420	0.3568	Ave		0.3894				24.6		30.0			
1,4-Dichlorobenzene	+++++ 0.3467	0.3085 0.3409	0.2862 0.3681	0.2766 0.4691	0.3181	Ave		0.3393				17.9		30.0			
4-Isopropyltoluene	+++++ 1.0572	0.9805 0.8935	0.8980 0.8441	0.8621 0.8504	1.0514	Ave		0.9296				9.5		30.0			
1,2,3-Trimethylbenzene	+++++ 0.6839	0.6824 0.5727	0.5992 0.5466	0.5790 0.5862	0.6829	Ave		0.6166				9.2		30.0			
Butylcyclohexane	+++++ 0.7573	0.7963 0.6471	0.6759 0.5621	0.6417 0.5557	0.7464	Ave		0.6728				13.2		30.0			
Indane	+++++ 0.7243	0.6832 0.6413	0.6020 0.6072	0.5803 0.6525	0.6998	Ave		0.6488				7.9		30.0			
1,2-Dichlorobenzene	+++++ 0.4281	0.3879 0.4016	0.3773 0.4016	0.3434 0.4773	0.4106	Ave		0.4035				9.7		30.0			
Butylbenzene	+++++ 0.8271	0.6800 0.7161	0.6905 0.7000	0.6278 0.6951	0.8050	Ave		0.7177				9.2		30.0			
Indene	+++++ 0.4211	0.3055 0.3945	0.3055 0.4031	0.2953 0.4594	0.3928	Ave		0.3721				16.6		30.0			
Undecane	+++++ 0.6130	0.5334 0.5348	0.5637 0.5122	0.5086 0.4720	0.6159	Ave		0.5442				9.3		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6948	0.5622 0.5936	0.5720 0.6048	0.5150 0.6225	0.6684	Ave		0.6042				9.6		30.0			
1,2-Dibromo-3-Chloropropane	0.1652 0.1391	0.0826 0.1371	0.0917 0.1612	0.0919 0.1992	0.1259	Ave		0.1327				29.5		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8351	0.7116 0.7142	0.7250 0.7364	0.6413 0.7290	0.8195	Ave		0.7390				8.4		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.5341	0.4665 0.4486	0.4771 0.4694	0.4161 0.4778	0.5255	Ave		0.4769				8.0		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.6468	0.5792 0.5569	0.5811 0.5902	0.5017 0.6010	0.6481	Ave		0.5881				8.1		30.0			
Dodecane	+++++ 0.5636	+++++ 0.4338	+++++ 0.4825	0.4346 0.4212	0.5682	Ave		0.4840				13.8		30.0			
1,2,4-Trichlorobenzene	+++++ 0.1153	0.0949 0.1129	0.0905 0.1585	0.0762 +++++	0.1009	Ave		0.1070				24.6		30.0			
Naphthalene	0.4313 0.2773	0.1979 0.2653	0.2048 0.3417	0.1751 0.4174	0.2443	Ave		0.2839				33.0	*	30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1041	0.0933 0.1002	0.0961 0.1397	0.0715 +++++	0.0929	Ave		0.0997				20.5		30.0			
Hexachlorobutadiene	+++++ 0.4409	0.4968 0.3652	0.4626 0.3871	0.3746 0.4182	0.4657	Ave		0.4264				11.2		30.0			
1,2,3-Trichlorobenzene	+++++ 0.1169	0.0919 0.1090	0.1024 0.1470	0.0774 0.1883	0.1070	Ave		0.1175				29.8		30.0			
2-Methylnaphthalene	+++++ 0.0188	0.0182 0.0142	0.0198 0.0234	0.0101 0.0285	0.0152	Ave		0.0185				30.6		50.0			
1-Methylnaphthalene	+++++ 0.0200	0.0201 0.0147	0.0205 0.0246	0.0098 0.0272	0.0188	Ave		0.0195				27.8		50.0			
4-Bromofluorobenzene (Surr)	0.5569 0.6060	0.5729 0.6183	0.5669 0.6052	0.5617 0.6393	0.5880	Ave		0.5906				4.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 74322	3758 143302	6560 288544	15197 568696	38466	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 171785	+++++ 332692	16876 650144	38620 1164099	94985	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 651005	32532 1307229	59316 2500166	140732 4418618	363576	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 45845	+++++ 88214	5046 153848	10913 302773	25067	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 371615	18190 727582	32599 1405458	76736 2421902	199170	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 203386	+++++ 350643	+++++ 606067	60801 1336036	116129	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4184 147890	7861 296801	14061 533221	33657 1077395	82084	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 103801	+++++ 204963	9528 364739	23616 746524	57483	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 163737	+++++ 337432	17623 570149	40990 1159255	95645	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 141086	8158 279818	13738 529966	30969 1110251	76471	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 54729	2955 110409	5153 206332	11567 437796	29140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 116482	+++++ 222729	12374 379778	24561 840205	63110	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 177848	8179 349781	15295 682940	35692 1405653	92013	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 214661	+++++ 408100	19045 760188	45429 1423234	114860	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 621893	29427 1205159	54177 2296411	127417 4442645	327570	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 50881	+++++ 93702	5654 166781	10026 389500	26432	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 57557	+++++ 108943	5491 196326	10126 485627	27782	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 220910	+++++ 349669	+++++ 600267	56991 1492629	120631	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 744962	+++++ 1317035	66795 2507678	146107 4376471	387973	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 26066	+++++ 50079	2365 97557	5773 187143	13885	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 125926	+++++ 242733	10577 410197	22404 994775	61651	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 178394	8665 351859	14550 696021	35955 1428851	93723	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 317555	15888 579563	27692 1237494	62382 2382939	162292	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 107837	5664 207783	8920 377050	18989 912254	53165	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	+++++ 426570	20438 809888	36165 1546698	86503 3036710	223225	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 163012	+++++ 305232	17691 583873	36114 1180787	85918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 163557	8939 294729	13881 573796	32947 1045840	83611	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 514119	24918 992410	43276 1953890	101542 3799723	266620	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 181960	8553 353708	15820 665147	36395 1345260	95290	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 383056	18427 706451	33213 1276291	77661 2327114	202218	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 394051	+++++ 758096	31229 1326657	69473 3205110	191223	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 377503	18027 687439	31797 1302641	76286 2777161	192069	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 326088	+++++ 648961	24129 1103728	53117 2762820	156921	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 57065	+++++ 102957	6456 193612	12150 450257	29406	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 165234	7336 300224	13952 572625	33402 1143308	84874	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	+++++ 485009	24409 905127	38161 1604773	85916 3515890	234280	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 181693	8942 338040	15396 641922	36349 1430321	92758	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 259651	+++++ 486683	19949 899864	46813 2028801	127302	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 414764	19881 757083	36514 1390825	85067 3097387	213335	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 476674	23991 888552	37259 1627729	82013 3703920	229807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 136985	+++++ 261903	10627 469029	24321 1159161	66510	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 491600	21626 905660	41035 1638831	98335 3616674	249926	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	+++++ 295685	14298 549094	26030 987874	59968 2263123	151004	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 41337	+++++ 79338	+++++ 179047	7131 360182	19897	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 84227	3400 156430	6492 277573	16308 556586	44050	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 473833	24967 859237	43574 1527500	97218 3094582	242064	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10308 536281	22543 994733	38903 1765814	104966 3797031	250454	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 110794	5072 202801	9283 374753	22790 812542	55859	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	+++++ 269521	12865 516119	22661 949009	52829 2143783	138033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 372876	18473 723980	28733 1344086	64540 3028475	180342	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 897864	45542 1645159	80847 2905240	186825 5750307	462412	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 158034	+++++ 299782	13718 557515	31573 1201125	79881	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 194759	9425 370098	15859 664536	36991 1418404	98083	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5360 229178	11078 442884	20459 809617	45929 1873495	118547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 212934	9666 405928	17561 746153	42461 1694078	107420	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	7859 397868	16234 776050	30563 1402039	72436 3132699	201889	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 58670	+++++ 112981	4364 227685	10391 445938	28993	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 141703	5990 279290	9937 516447	41235 1215024	64577	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 367492	17392 674601	31688 1236865	74236 2607782	189819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295884	15075 556003	36781 1131908	54942 2205881	167376	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	5041 259003	10749 519520	18741 940942	43317 2221824	123970	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 202943	7861 429638	13213 835409	28773 2103301	96475	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 513330	25117 1028413	40141 1807350	90623 4182412	251819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	+++++ 1174730	+++++ 2447394	+++++ 4222753	201557 10035359	567901	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	+++++ 148679	6816 298075	11494 544854	26618 1272593	72695	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 441429	18043 875867	34902 1574396	73492 3610870	214421	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 415433	17901 839568	31597 1518071	73462 3544888	202739	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 158048	+++++ 307291	9927 629308	25630 1327800	76515	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	+++++ 171049	7543 335449	13336 599701	30969 1338237	84942	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 1583480	+++++ 2999823	+++++ 5268215	300990 11231032	808090	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	5891 375901	13827 762654	25651 1409503	61819 3355987	177672	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	4726 270820	11892 551155	20400 1044626	46147 2590955	129201	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5061 226727	10964 435890	19514 794219	45924 1858547	116368	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 483560	25203 857705	43660 1422600	97584 2577374	253140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 382171	18658 758472	31203 1366684	68884 3159295	187036	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	+++++ 596545	28810 1219170	43894 2117749	96127 5134454	276806	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	+++++ 454691	20217 939238	32238 1672366	71448 4122460	210486	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19454 910856	43588 1796987	68375 3061379	149302 7113518	432360	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	+++++ 364149	14679 729041	24448 1270603	57661 2638502	170403	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	+++++ 287325	8464 632872	16198 1235633	38261 3162893	126351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5204 298757	10805 636582	17123 1161198	40993 2966957	131396	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	+++++ 491312	24427 973620	37556 1708918	82015 4222274	236527	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	5790 317051	13340 646257	21810 1208064	51611 2836714	150790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 88107	3572 184661	6337 350332	14455 921976	41958	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 645900	+++++ 1292194	47917 2248024	105917 5373006	303206	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 158414	6367 330331	10769 628117	23208 1679331	70689	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 164057	7267 344057	11641 624631	26016 1651961	75246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 555410	22005 1122676	36155 2072618	83203 4995270	254212	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 282382	12831 558077	20363 1037781	45264 2624406	131247	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 198517	+++++ 449633	10227 900610	23661 2385158	84426	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 371127	15057 741112	25509 1291827	58146 2738103	172771	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 576459	+++++ 1120112	42532 2028581	96405 4729064	279995	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	+++++ 496438	21039 955201	33604 1771506	78046 4084905	235496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 729282	+++++ 1414365	52355 2557663	117070 5708680	347096	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 231407	9415 511453	15837 1052391	35808 2901271	105055	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 231497	+++++ 521842	12711 1184773	28941 3118761	96342	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 195721	7696 438982	12819 953235	29631 2699517	85902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 596789	24457 1150454	40217 2185786	92356 4893500	283900	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 386097	17021 737400	26836 1415266	62027 3373450	184398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	+++++ 427484	19863 833271	30267 1455558	68748 3197669	201539	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	+++++ 408894	17042 825803	26958 1572283	62168 3754466	188971	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 241683	9676 517072	16895 1039806	36785 2746451	110886	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 466916	16960 922062	30924 1812485	67262 3999716	217364	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 237730	7619 507931	13681 1043744	31634 2643801	106078	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 346076	13304 688596	25243 1326289	54486 2716283	166313	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 392201	14022 764381	25618 1566098	55179 3582044	180487	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	1715 78535	2060 176596	4107 417334	9842 1146153	33994	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 471438	17750 919685	32467 1906908	68705 4194777	221281	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 301527	11637 577643	21367 1215600	44578 2749344	141907	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 365106	14446 717139	26023 1528285	53749 3458409	175011	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 318147	+++++ 558539	+++++ 1249421	46563 2423987	153441	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 65109	2368 145399	4052 410410	8167 +++++	27246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	4478 156536	4935 341566	9172 884843	18754 2401988	65976	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 58741	2326 129062	4302 361623	7658 +++++	25086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	+++++ 248901	12392 470300	20717 1002249	40131 2406632	125753	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 66002	2292 140342	4585 380574	8296 1083656	28890	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 33085	1420 57318	2771 189512	3375 511700	12857	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 35332	1563 59070	2867 198948	3284 489210	15840	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	590004 685127	729043 796104	640074 783587	601768 919690	634109	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.4577		1.84	2.00	-7.8	35.0
Propene	Ave	1.154	1.043		1.81	2.00	-9.7	35.0
Dichlorodifluoromethane	Ave	4.396	4.203		1.91	2.00	-4.4	35.0
Chloromethane	Ave	0.3106	0.2987		1.92	2.00	-3.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.325		1.91	2.00	-4.7	35.0
Acetaldehyde	Ave	0.2696	0.2166		8.04	10.0	-19.6	35.0
Vinyl chloride	Ave	1.053	1.005		1.91	2.00	-4.5	35.0
Butane	Ave	1.150	1.143		1.99	2.00	-0.6	35.0
1,3-Butadiene	Ave	0.6912	0.6786		1.96	2.00	-1.8	35.0
Bromomethane	Ave	0.9910	0.8891		1.79	2.00	-10.3	35.0
Chloroethane	Ave	0.3777	0.3535		1.87	2.00	-6.4	35.0
Ethanol	Ave	0.1546	0.1422		9.20	10.0	-8.0	35.0
Vinyl bromide	Ave	1.172	1.174		2.00	2.00	0.2	35.0
2-Methylbutane	Ave	1.379	1.330		1.93	2.00	-3.6	35.0
Trichlorofluoromethane	Ave	4.068	3.824		1.88	2.00	-6.0	35.0
Acrolein	Ave	0.3360	0.2403		1.43	2.00	-28.5	35.0
Acetonitrile	Ave	0.3683	0.3377		1.83	2.00	-8.3	35.0
Acetone	Ave	0.4583	0.4025		5.27	6.00	-12.2	35.0
Isopropyl alcohol	Ave	1.527	1.389		5.46	6.00	-9.0	35.0
Pentane	Ave	0.1722	0.1657		1.92	2.00	-3.8	35.0
Ethyl ether	Ave	0.7823	0.7112		1.82	2.00	-9.1	35.0
1,1-Dichloroethene	Ave	1.183	1.132		1.91	2.00	-4.3	35.0
tert-Butyl alcohol	Ave	2.084	1.947		1.87	2.00	-6.6	35.0
Acrylonitrile	Ave	0.7011	0.6319		1.80	2.00	-9.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.650		1.92	2.00	-4.1	35.0
Methylene Chloride	Ave	1.099	1.018		1.85	2.00	-7.4	35.0
3-Chloropropene	Ave	1.055	1.039		1.97	2.00	-1.5	35.0
Carbon disulfide	Ave	3.359	3.239		1.93	2.00	-3.6	35.0
trans-1,2-Dichloroethene	Ave	1.188	1.152		1.94	2.00	-3.0	35.0
2-Methylpentane	Ave	2.424	2.494		2.06	2.00	2.9	35.0
Methyl tert-butyl ether	Ave	2.440	2.242		1.84	2.00	-8.1	35.0
1,1-Dichloroethane	Ave	2.417	2.338		1.94	2.00	-3.2	35.0
Vinyl acetate	Ave	2.001	1.878		1.88	2.00	-6.1	35.0
2-Butanone (MEK)	Ave	0.3839	0.3342		1.74	2.00	-13.0	35.0
Hexane	Ave	1.043	1.001		1.92	2.00	-3.9	35.0
Isopropyl ether	Ave	3.021	2.743		1.82	2.00	-9.2	35.0
cis-1,2-Dichloroethene	Ave	1.183	1.157		1.96	2.00	-2.2	35.0
Ethyl acetate	Ave	1.599	1.446		1.81	2.00	-9.6	35.0
Chloroform	Ave	2.678	2.528		1.89	2.00	-5.6	35.0
Tert-butyl ethyl ether	Ave	2.990	2.910		1.95	2.00	-2.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.8157		1.91	2.00	-4.3	35.0
1,1,1-Trichloroethane	Ave	3.097	2.981		1.92	2.00	-3.8	35.0
1,2-Dichloroethane	Ave	0.4369	0.4085		1.87	2.00	-6.5	35.0
1-Butanol	Ave	0.0610	0.0607		1.99	2.00	-0.4	35.0
Benzene	Ave	0.6983	0.6894		1.97	2.00	-1.3	35.0
Cyclohexane	Ave	0.1171	0.1196		2.04	2.00	2.2	35.0
Carbon tetrachloride	Ave	0.7435	0.7491		2.02	2.00	0.8	35.0
2,3-Dimethylpentane	Ave	0.1606	0.1409		1.75	2.00	-12.3	35.0
Thiophene	Ave	0.3988	0.4038		2.02	2.00	1.2	35.0
Tert-amyl methyl ether	Ave	0.6151	0.6035		1.96	2.00	-1.9	35.0
2,2,4-Trimethylpentane	Ave	1.315	1.234		1.88	2.00	-6.1	35.0
Heptane	Ave	0.2306	0.2187		1.90	2.00	-5.2	35.0
1,2-Dichloropropane	Ave	0.2817	0.2693		1.91	2.00	-4.4	35.0
Trichloroethene	Ave	0.3524	0.3368		1.91	2.00	-4.4	35.0
Dibromomethane	Ave	0.3120	0.3077		1.97	2.00	-1.4	35.0
Bromodichloromethane	Ave	0.5687	0.5455		1.92	2.00	-4.1	35.0
1,4-Dioxane	Ave	0.0832	0.0813		1.95	2.00	-2.3	35.0
Methyl methacrylate	Ave	0.2152	0.1781		1.66	2.00	-17.2	35.0
Methylcyclohexane	Ave	0.5358	0.4142		1.55	2.00	-22.7	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.3918		1.66	2.00	-17.1	35.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3528		1.92	2.00	-4.1	35.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3191		1.95	2.00	-2.5	35.0
Toluene	Ave	0.8518	0.7994		1.88	2.00	-6.2	35.0
1,1,2-Trichloroethane	Ave	0.2468	0.2300		1.86	2.00	-6.8	35.0
2-Methylthiophene	Ave	0.7101	0.7046		1.98	2.00	-0.8	35.0
3-Methylthiophene	Ave	0.6812	0.6917		2.03	2.00	1.5	35.0
2-Hexanone	Ave	0.2481	0.2334		1.88	2.00	-5.9	35.0
Octane	Ave	0.2789	0.2635		1.89	2.00	-5.5	35.0
Dibromochloromethane	Ave	0.5906	0.5581		1.89	2.00	-5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.4158		1.84	2.00	-7.8	35.0
Tetrachloroethene	Ave	0.3991	0.3509		1.76	2.00	-12.1	35.0
2,3-Dimethylheptane	Ave	0.7942	0.7444		1.87	2.00	-6.3	35.0
Chlorobenzene	Ave	0.6404	0.5994		1.87	2.00	-6.4	35.0
Ethylbenzene	Ave	0.9714	0.8773		1.81	2.00	-9.7	35.0
2-Ethylthiophene	Ave	0.7342	0.6586		1.79	2.00	-10.3	35.0
m-Xylene & p-Xylene	Ave	0.7539	0.6763		3.59	4.00	-10.3	35.0
Nonane	Ave	0.5580	0.5505		1.97	2.00	-1.4	35.0
Bromoform	Ave	0.4442	0.4033		1.82	2.00	-9.2	35.0
Styrene	Ave	0.4637	0.4468		1.93	2.00	-3.6	35.0
o-Xylene	Ave	0.8099	0.7115		1.76	2.00	-12.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4659		1.81	2.00	-9.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1320		1.80	2.00	-9.8	35.0
Isopropylbenzene	Ave	1.019	0.9649		1.89	2.00	-5.3	35.0
Propylbenzene	Ave	0.2557	0.2389		1.87	2.00	-6.6	35.0
2-Chlorotoluene	Ave	0.2699	0.2543		1.88	2.00	-5.8	35.0
4-Ethyltoluene	Ave	0.8665	0.7943		1.83	2.00	-8.3	35.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4105		1.79	2.00	-10.5	35.0
Alpha Methyl Styrene	Ave	0.3179	0.2957		1.86	2.00	-7.0	35.0
Decane	Ave	0.5704	0.5426		1.90	2.00	-4.9	35.0
tert-Butylbenzene	Ave	0.9118	0.8387		1.84	2.00	-8.0	35.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7161		1.85	2.00	-7.7	35.0
sec-Butylbenzene	Ave	1.131	1.069		1.89	2.00	-5.5	35.0
1,3-Dichlorobenzene	Ave	0.3965	0.3740		1.89	2.00	-5.7	35.0
Benzyl chloride	Ave	0.3894	0.3692		1.90	2.00	-5.2	35.0
1,4-Dichlorobenzene	Ave	0.3393	0.3250		1.92	2.00	-4.2	35.0
4-Isopropyltoluene	Ave	0.9296	0.8648		1.86	2.00	-7.0	35.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5929		1.92	2.00	-3.9	35.0
Butylcyclohexane	Ave	0.6728	0.6178		1.84	2.00	-8.2	35.0
1,2-Dichlorobenzene	Ave	0.4035	0.3783		1.88	2.00	-6.2	35.0
Indane	Ave	0.6488	0.5699		1.76	2.00	-12.2	35.0
Butylbenzene	Ave	0.7177	0.6878		1.92	2.00	-4.2	35.0
Indene	Ave	0.3721	0.4470		2.40	2.00	20.1	35.0
Undecane	Ave	0.5442	0.4861		1.79	2.00	-10.7	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.6781		2.24	2.00	12.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0899		1.36	2.00	-32.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.7152		1.94	2.00	-3.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.4575		1.92	2.00	-4.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.5337		1.81	2.00	-9.3	35.0
Dodecane	Ave	0.4840	0.4518		1.87	2.00	-6.7	35.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.1201		2.24	2.00	12.2	35.0
Naphthalene	Ave	0.2839	0.2802		1.97	2.00	-1.3	35.0
Benzo(b)thiophene	Ave	0.0997	0.1163		2.33	2.00	16.7	35.0
Hexachlorobutadiene	Ave	0.4264	0.3419		1.60	2.00	-19.8	35.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.1161		1.98	2.00	-1.2	35.0
2-Methylnaphthalene	Ave	0.0185	0.0246		8.30	6.25	32.8	50.0
1-Methylnaphthalene	Ave	0.0195	0.0272		8.75	6.25	40.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6438		4.36	4.00	9.0	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: JBFBG24A.D BFB Injection Date: 08/24/2016

Instrument ID: MJ BFB Injection Time: 11:31

Analysis Batch No.: 6409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.7	
75	30.0 - 60.0 % of mass 95	53.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	118.4	
175	5.0 - 9.0 % of mass 174	9.1	(7.7) 1
176	95.0 - 101.0 % of mass 174	114.4	(96.6) 1
177	5.0 - 9.0 % of mass 176	7.6	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6409/2	JCCVG24A.D	08/24/2016	11:57
	LCS 140-6409/1002	JCCVG24A-LCS .d	08/24/2016	11:57
	MB 140-6409/4	JMB500G24.D	08/24/2016	14:02
IA-131-C-21	140-5667-1	JH24P101.D	08/24/2016	14:55
IA-DUP01-C-21	140-5667-2	JH24P102.D	08/24/2016	15:49
IA-004-C-21	140-5667-4	JH24P104.D	08/24/2016	17:36
IA-102-C-21	140-5667-6	JH24P106.D	08/24/2016	20:00
IA-155-C-21	140-5667-7	JH24P107.D	08/24/2016	20:54
IA-153-C-21	140-5667-8	JH24P108.D	08/24/2016	21:48
IA-115-C-21	140-5667-18	JH24P110.D	08/24/2016	23:34
IA-152-C-21	140-5667-11	JH24P111.D	08/25/2016	00:27
IA-144-C-21	140-5667-12	JH24P112.D	08/25/2016	01:22
IA-145-C-21	140-5667-14	JH24P114.D	08/25/2016	03:10
IA-150-C-21	140-5667-15	JH24P115DU.D	08/25/2016	04:57
IA-051-C-21	140-5667-16	JH24P116.D	08/25/2016	05:50
IA-065-C-21	140-5667-17	JH24P201.D	08/25/2016	06:43
IA-113-C-21	140-5667-19	JH24P202.D	08/25/2016	07:37
IA-142-C-21	140-5667-20	JH24P204.D	08/25/2016	09:24
IA-DUP02-C-21	140-5667-9	JH24P109R.D	08/25/2016	10:17

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6409/2 Calibration Date: 08/24/2016 11:57

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG24A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.5059		2.04	2.00	1.9	30.0
Propene	Ave	1.154	1.040		1.80	2.00	-9.9	30.0
Dichlorodifluoromethane	Ave	4.396	4.378		1.99	2.00	-0.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.446		2.01	2.00	0.2	30.0
Chloromethane	Ave	0.3106	0.2923		1.88	2.00	-5.9	30.0
Acetaldehyde	Ave	0.2696	0.1716		6.37	10.0	-36.3*	30.0
Vinyl chloride	Ave	1.053	0.9225		1.75	2.00	-12.4	30.0
1,3-Butadiene	Ave	0.6912	0.6765		1.96	2.00	-2.1	30.0
Butane	Ave	1.150	1.189		2.07	2.00	3.4	30.0
Bromomethane	Ave	0.9910	0.8988		1.82	2.00	-9.3	30.0
Chloroethane	Ave	0.3777	0.3621		1.92	2.00	-4.1	30.0
Ethanol	Ave	0.1546	0.1705		11.0	10.0	10.3	30.0
Vinyl bromide	Ave	1.172	0.9752		1.67	2.00	-16.8	30.0
2-Methylbutane	Ave	1.379	1.263		1.83	2.00	-8.4	30.0
Trichlorofluoromethane	Ave	4.068	4.023		1.98	2.00	-1.1	30.0
Acrolein	Ave	0.3360	0.2949		1.76	2.00	-12.2	30.0
Acetonitrile	Ave	0.3683	0.3501		1.90	2.00	-4.9	30.0
Acetone	Ave	0.4583	0.3620		4.74	6.00	-21.0	30.0
Isopropyl alcohol	Ave	1.527	1.249		4.91	6.00	-18.2	30.0
Pentane	Ave	0.1722	0.1400		1.63	2.00	-18.7	30.0
Ethyl ether	Ave	0.7823	0.8045		2.06	2.00	2.8	30.0
1,1-Dichloroethene	Ave	1.183	0.9501		1.61	2.00	-19.7	30.0
tert-Butyl alcohol	Ave	2.084	1.840		1.77	2.00	-11.7	30.0
Acrylonitrile	Ave	0.7011	0.5781		1.65	2.00	-17.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.441		1.77	2.00	-11.7	30.0
Methylene Chloride	Ave	1.099	0.9065		1.65	2.00	-17.5	30.0
3-Chloropropene	Ave	1.055	0.9873		1.87	2.00	-6.4	30.0
Carbon disulfide	Ave	3.359	2.654		1.58	2.00	-21.0	30.0
trans-1,2-Dichloroethene	Ave	1.188	0.9712		1.64	2.00	-18.2	30.0
2-Methylpentane	Ave	2.424	2.528		2.09	2.00	4.3	30.0
Methyl tert-butyl ether	Ave	2.440	2.613		2.14	2.00	7.1	30.0
1,1-Dichloroethane	Ave	2.417	2.318		1.92	2.00	-4.1	30.0
Vinyl acetate	Ave	2.001	2.233		2.23	2.00	11.6	30.0
2-Butanone (MEK)	Ave	0.3839	0.3294		1.72	2.00	-14.2	30.0
Hexane	Ave	1.043	0.9614		1.85	2.00	-7.8	30.0
Isopropyl ether	Ave	3.021	3.162		2.09	2.00	4.7	30.0
cis-1,2-Dichloroethene	Ave	1.183	1.050		1.78	2.00	-11.2	30.0
Ethyl acetate	Ave	1.599	1.807		2.26	2.00	13.0	30.0
Chloroform	Ave	2.678	2.680		2.00	2.00	0.0	30.0
Tert-butyl ethyl ether	Ave	2.990	3.125		2.09	2.00	4.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6409/2 Calibration Date: 08/24/2016 11:57

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG24A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.9353		2.19	2.00	9.7	30.0
1,1,1-Trichloroethane	Ave	3.097	3.248		2.10	2.00	4.9	30.0
1,2-Dichloroethane	Ave	0.4369	0.4459		2.04	2.00	2.1	30.0
1-Butanol	Ave	0.0610	0.0593		1.95	2.00	-2.7	30.0
Benzene	Ave	0.6983	0.5939		1.70	2.00	-14.9	30.0
Cyclohexane	Ave	0.1171	0.0997		1.70	2.00	-14.9	30.0
Carbon tetrachloride	Ave	0.7435	0.7827		2.11	2.00	5.3	30.0
2,3-Dimethylpentane	Ave	0.1606	0.1251		1.56	2.00	-22.1	30.0
Thiophene	Ave	0.3988	0.3441		1.73	2.00	-13.7	30.0
Tert-amyl methyl ether	Ave	0.6151	0.5730		1.86	2.00	-6.8	30.0
2,2,4-Trimethylpentane	Ave	1.315	1.176		1.79	2.00	-10.6	30.0
Heptane	Ave	0.2306	0.1903		1.65	2.00	-17.5	30.0
1,2-Dichloropropane	Ave	0.2817	0.2173		1.54	2.00	-22.9	30.0
Trichloroethene	Ave	0.3524	0.3027		1.72	2.00	-14.1	30.0
Dibromomethane	Ave	0.3120	0.2889		1.85	2.00	-7.4	30.0
Bromodichloromethane	Ave	0.5687	0.5314		1.87	2.00	-6.6	30.0
1,4-Dioxane	Ave	0.0832	0.0714		1.72	2.00	-14.2	30.0
Methyl methacrylate	Ave	0.2152	0.2367		2.20	2.00	10.0	30.0
Methylcyclohexane	Ave	0.5358	0.3752		1.40	2.00	-30.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.4078		1.73	2.00	-13.7	30.0
cis-1,3-Dichloropropene	Ave	0.3678	0.2999		1.63	2.00	-18.5	30.0
trans-1,3-Dichloropropene	Ave	0.3272	0.2683		1.64	2.00	-18.0	30.0
Toluene	Ave	0.8518	0.6558		1.54	2.00	-23.0	30.0
1,1,2-Trichloroethane	Ave	0.2468	0.1802		1.46	2.00	-27.0	30.0
2-Methylthiophene	Ave	0.7101	0.5539		1.56	2.00	-22.0	30.0
3-Methylthiophene	Ave	0.6812	0.5441		1.60	2.00	-20.1	30.0
2-Hexanone	Ave	0.2481	0.2042		1.65	2.00	-17.7	30.0
Octane	Ave	0.2789	0.2101		1.51	2.00	-24.7	30.0
Dibromochloromethane	Ave	0.5906	0.4968		1.68	2.00	-15.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.3380		1.50	2.00	-25.0	30.0
Tetrachloroethene	Ave	0.3991	0.3119		1.56	2.00	-21.9	30.0
2,3-Dimethylheptane	Ave	0.7942	0.6756		1.70	2.00	-14.9	30.0
Chlorobenzene	Ave	0.6404	0.4994		1.56	2.00	-22.0	30.0
Ethylbenzene	Ave	0.9714	0.8881		1.83	2.00	-8.6	30.0
2-Ethylthiophene	Ave	0.7342	0.6473		1.76	2.00	-11.8	30.0
m-Xylene & p-Xylene	Ave	0.7539	0.7105		3.77	4.00	-5.8	30.0
Nonane	Ave	0.5580	0.4705		1.69	2.00	-15.7	30.0
Bromoform	Ave	0.4442	0.3705		1.67	2.00	-16.6	30.0
Styrene	Ave	0.4637	0.4345		1.88	2.00	-6.3	30.0
o-Xylene	Ave	0.8099	0.7503		1.85	2.00	-7.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4179		1.62	2.00	-19.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab Sample ID: CCVIS 140-6409/2 Calibration Date: 08/24/2016 11:57

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG24A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1280		1.75	2.00	-12.5	30.0
Isopropylbenzene	Ave	1.019	1.005		1.97	2.00	-1.4	30.0
Propylbenzene	Ave	0.2557	0.2405		1.88	2.00	-5.9	30.0
2-Chlorotoluene	Ave	0.2699	0.2288		1.70	2.00	-15.2	30.0
4-Ethyltoluene	Ave	0.8665	0.8036		1.86	2.00	-7.3	30.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4125		1.80	2.00	-10.0	30.0
Alpha Methyl Styrene	Ave	0.3179	0.2802		1.76	2.00	-11.9	30.0
Decane	Ave	0.5704	0.4822		1.69	2.00	-15.5	30.0
tert-Butylbenzene	Ave	0.9118	0.8482		1.86	2.00	-7.0	30.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7119		1.84	2.00	-8.3	30.0
sec-Butylbenzene	Ave	1.131	1.011		1.79	2.00	-10.6	30.0
1,3-Dichlorobenzene	Ave	0.3965	0.3097		1.56	2.00	-21.9	30.0
Benzyl chloride	Ave	0.3894	0.3232		1.66	2.00	-17.0	30.0
1,4-Dichlorobenzene	Ave	0.3393	0.2689		1.59	2.00	-20.7	30.0
4-Isopropyltoluene	Ave	0.9296	0.7955		1.71	2.00	-14.4	30.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5661		1.84	2.00	-8.2	30.0
Butylcyclohexane	Ave	0.6728	0.4919		1.46	2.00	-26.9	30.0
1,2-Dichlorobenzene	Ave	0.4035	0.2974		1.47	2.00	-26.3	30.0
Indane	Ave	0.6488	0.5170		1.59	2.00	-20.3	30.0
Butylbenzene	Ave	0.7177	0.6230		1.74	2.00	-13.2	30.0
Indene	Ave	0.3721	0.3662		1.97	2.00	-1.6	30.0
Undecane	Ave	0.5442	0.4886		1.80	2.00	-10.2	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.5934		1.97	2.00	-1.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0579		0.873	2.00	-56.4*	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.6221		1.68	2.00	-15.8	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.3992		1.67	2.00	-16.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.4651		1.58	2.00	-20.9	30.0
Dodecane	Ave	0.4840	0.4436		1.83	2.00	-8.3	30.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.0803		1.50	2.00	-25.0	30.0
Naphthalene	Ave	0.2839	0.1844		1.30	2.00	-35.0*	30.0
Benzo(b)thiophene	Ave	0.0997	0.0800		1.61	2.00	-19.8	30.0
Hexachlorobutadiene	Ave	0.4264	0.2979		1.40	2.00	-30.1*	30.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.0824		1.40	2.00	-29.9	30.0
2-Methylnaphthalene	Ave	0.0185	0.0144		4.87	6.25	-22.2	50.0
1-Methylnaphthalene	Ave	0.0195	0.0136		4.36	6.25	-30.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6589		4.46	4.00	11.6	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: GMB500G24.D Lab Sample ID: MB 140-6338/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 08/24/2016 12:10

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6338/1002	GCCVG24-LCS.d	08/24/2016 10:39
IA-088-C-21	140-5667-21	GH24P201.D	08/25/2016 03:47
IA-135-C-21	140-5667-22	GH24P202.D	08/25/2016 04:30
IA-149-C-21	140-5667-23	GH24P203.D	08/25/2016 05:12
IA-126-C-21	140-5667-24	GH24P204.D	08/25/2016 05:55

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6338/4

Matrix: Air | Lab File ID: GMB500G24.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 08/24/2016 12:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6338 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6338/4

Matrix: Air Lab File ID: GMB500G24.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/24/2016 12:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6338 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVG24-LCS.d

Lab ID: LCS 140-6338/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.87	93	70-130	
Carbon tetrachloride	2.00	2.27	113	70-130	
Chlorodifluoromethane	2.00	2.24	112	60-140	
Chloroform	2.00	2.05	102	70-130	
cis-1,2-Dichloroethene	2.00	1.93	97	70-130	
Dichlorodifluoromethane	2.00	2.05	103	60-140	
1,1-Dichloroethane	2.00	1.89	95	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.13	106	70-130	
Ethylbenzene	2.00	2.11	105	70-130	
Methylene Chloride	2.00	1.91	95	70-130	
Methyl tert-butyl ether	2.00	2.11	105	60-140	
Naphthalene	2.00	1.54	77	60-140	
Tetrachloroethene	2.00	2.00	100	70-130	
Toluene	2.00	1.98	99	70-130	
trans-1,2-Dichloroethene	2.00	1.92	96	70-130	
1,2,4-Trichlorobenzene	2.00	1.65	82	60-140	
1,1,1-Trichloroethane	2.00	2.16	108	70-130	
1,1,2-Trichloroethane	2.00	1.96	98	70-130	
Trichloroethene	2.00	1.81	90	70-130	
1,2,3-Trimethylbenzene	2.00	1.90	95	70-130	
1,2,4-Trimethylbenzene	2.00	2.01	101	70-130	
1,3,5-Trimethylbenzene	2.00	1.99	99	70-130	
Vinyl chloride	2.00	1.84	92	70-130	
Xylenes, Total	6.00	6.34	106	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: G500G25.D Lab Sample ID: MB 140-6395/6

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 08/25/2016 12:18

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
IA-001-C-21	140-5667-3	GG25P116.D	08/26/2016 02:44
IA-005-C-21	140-5667-5	GG25P201.D	08/26/2016 03:27
IA-146-C-21	140-5667-13	GG25P203.D	08/26/2016 04:54

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6395/6

Matrix: Air Lab File ID: G500G25.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/25/2016 12:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6395 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6395/6

Matrix: Air Lab File ID: G500G25.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/25/2016 12:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6395 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVG25-LCS.d

Lab ID: LCS 140-6395/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.88	94	70-130	
Carbon tetrachloride	2.00	2.35	117	70-130	
Chlorodifluoromethane	2.00	2.32	116	60-140	
Chloroform	2.00	2.02	101	70-130	
cis-1,2-Dichloroethene	2.00	1.91	95	70-130	
Dichlorodifluoromethane	2.00	2.08	104	60-140	
1,1-Dichloroethane	2.00	1.89	95	70-130	
1,2-Dichloroethane	2.00	2.09	105	70-130	
1,1-Dichloroethene	2.00	2.02	101	70-130	
Ethylbenzene	2.00	2.06	103	70-130	
Methylene Chloride	2.00	1.78	89	70-130	
Methyl tert-butyl ether	2.00	2.03	102	60-140	
Naphthalene	2.00	1.59	80	60-140	
Tetrachloroethene	2.00	2.03	101	70-130	
Toluene	2.00	1.95	98	70-130	
trans-1,2-Dichloroethene	2.00	1.92	96	70-130	
1,2,4-Trichlorobenzene	2.00	1.75	87	60-140	
1,1,1-Trichloroethane	2.00	2.14	107	70-130	
1,1,2-Trichloroethane	2.00	1.98	99	70-130	
Trichloroethene	2.00	1.92	96	70-130	
1,2,3-Trimethylbenzene	2.00	1.85	92	70-130	
1,2,4-Trimethylbenzene	2.00	1.95	98	70-130	
1,3,5-Trimethylbenzene	2.00	1.93	97	70-130	
Vinyl chloride	2.00	1.87	93	70-130	
Xylenes, Total	6.00	6.27	105	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Lab File ID: JMB500G24.D Lab Sample ID: MB 140-6409/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 08/24/2016 14:02

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6409/1002	JCCVG24A-LCS.d	08/24/2016 11:57
IA-131-C-21	140-5667-1	JH24P101.D	08/24/2016 14:55
IA-DUP01-C-21	140-5667-2	JH24P102.D	08/24/2016 15:49
IA-004-C-21	140-5667-4	JH24P104.D	08/24/2016 17:36
IA-102-C-21	140-5667-6	JH24P106.D	08/24/2016 20:00
IA-155-C-21	140-5667-7	JH24P107.D	08/24/2016 20:54
IA-153-C-21	140-5667-8	JH24P108.D	08/24/2016 21:48
IA-115-C-21	140-5667-18	JH24P110.D	08/24/2016 23:34
IA-152-C-21	140-5667-11	JH24P111.D	08/25/2016 00:27
IA-144-C-21	140-5667-12	JH24P112.D	08/25/2016 01:22
IA-145-C-21	140-5667-14	JH24P114.D	08/25/2016 03:10
IA-150-C-21	140-5667-15	JH24P115DU.D	08/25/2016 04:57
IA-051-C-21	140-5667-16	JH24P116.D	08/25/2016 05:50
IA-065-C-21	140-5667-17	JH24P201.D	08/25/2016 06:43
IA-113-C-21	140-5667-19	JH24P202.D	08/25/2016 07:37
IA-142-C-21	140-5667-20	JH24P204.D	08/25/2016 09:24
IA-DUP02-C-21	140-5667-9	JH24P109R.D	08/25/2016 10:17

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6409/4

Matrix: Air | Lab File ID: JMB500G24.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 08/24/2016 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0287	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6409/4

Matrix: Air | Lab File ID: JMB500G24.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 08/24/2016 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.157	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVG24A-LCS.d

Lab ID: LCS 140-6409/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.70	85	70-130	
Carbon tetrachloride	2.00	2.11	105	70-130	
Chlorodifluoromethane	2.00	2.04	102	60-140	
Chloroform	2.00	2.00	100	70-130	
cis-1,2-Dichloroethene	2.00	1.78	89	70-130	
Dichlorodifluoromethane	2.00	1.99	100	60-140	
1,1-Dichloroethane	2.00	1.92	96	70-130	
1,2-Dichloroethane	2.00	2.04	102	70-130	
1,1-Dichloroethene	2.00	1.61	80	70-130	
Ethylbenzene	2.00	1.83	91	70-130	
Methylene Chloride	2.00	1.65	82	70-130	
Methyl tert-butyl ether	2.00	2.14	107	60-140	
Naphthalene	2.00	1.30	65	60-140	
Tetrachloroethene	2.00	1.56	78	70-130	
Toluene	2.00	1.54	77	70-130	
trans-1,2-Dichloroethene	2.00	1.64	82	70-130	
1,2,4-Trichlorobenzene	2.00	1.50	75	60-140	
1,1,1-Trichloroethane	2.00	2.10	105	70-130	
1,1,2-Trichloroethane	2.00	1.46	73	70-130	
Trichloroethene	2.00	1.72	86	70-130	
1,2,3-Trimethylbenzene	2.00	1.84	92	70-130	
1,2,4-Trimethylbenzene	2.00	1.84	92	70-130	
1,3,5-Trimethylbenzene	2.00	1.80	90	70-130	
Vinyl chloride	2.00	1.75	88	70-130	
Xylenes, Total	6.00	5.62	94	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
IA-131-C-21	140-5667-1	98
IA-DUP01-C-21	140-5667-2	105
IA-001-C-21	140-5667-3	99
IA-004-C-21	140-5667-4	101
IA-005-C-21	140-5667-5	99
IA-102-C-21	140-5667-6	101
IA-155-C-21	140-5667-7	103
IA-153-C-21	140-5667-8	104
IA-DUP02-C-21	140-5667-9	105
IA-152-C-21	140-5667-11	104
IA-144-C-21	140-5667-12	106
IA-146-C-21	140-5667-13	99
IA-145-C-21	140-5667-14	104
IA-150-C-21	140-5667-15	107
IA-051-C-21	140-5667-16	106
IA-065-C-21	140-5667-17	105
IA-115-C-21	140-5667-18	99
IA-113-C-21	140-5667-19	106
IA-142-C-21	140-5667-20	107
IA-088-C-21	140-5667-21	100
IA-135-C-21	140-5667-22	99
IA-149-C-21	140-5667-23	100
IA-126-C-21	140-5667-24	96
	MB 140-6338/4	95
	MB 140-6395/6	94
	MB 140-6409/4	102
	LCS 140-6338/1002	103
	LCS 140-6395/1002	101
	LCS 140-6409/1002	112

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Sample No.: ICIS 140-5925/7 Date Analyzed: 07/20/2016 18:08

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GG20ICL6.D Heated Purge: (Y/N) N

Calibration ID: 721

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		408268	8.50	1852333	10.67	1847073	15.44
UPPER LIMIT		571575	8.83	2593266	11.00	2585902	15.77
LOWER LIMIT		244961	8.17	1111400	10.34	1108244	15.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5925/12		450842	8.49	2234236	10.67	2094327	15.44

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Sample No.: CCVIS 140-6338/2 Date Analyzed: 08/24/2016 10:39

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVG24.D Heated Purge: (Y/N) N

Calibration ID: 721

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		339086	8.48	1692850	10.64	1622771	15.42
UPPER LIMIT		474720	8.81	2369990	10.97	2271879	15.75
LOWER LIMIT		203452	8.15	1015710	10.31	973663	15.09
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6338/1002		339086	8.48	1692850	10.64	1622771	15.42
MB 140-6338/4		326071	8.47	1642115	10.63	1535057	15.41
140-5667-21	IA-088-C-21	305983	8.47	1554148	10.63	1455080	15.41
140-5667-22	IA-135-C-21	333717	8.47	1665418	10.63	1540438	15.41
140-5667-23	IA-149-C-21	302463	8.47	1424975	10.63	1431667	15.41
140-5667-24	IA-126-C-21	296969	8.47	1315846	10.63	1272400	15.41

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Sample No.: CCVIS 140-6395/2 Date Analyzed: 08/25/2016 10:37

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVG25.D Heated Purge: (Y/N) N

Calibration ID: 721

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		335538	8.47	1593668	10.63	1540132	15.41
UPPER LIMIT		469753	8.80	2231135	10.96	2156185	15.74
LOWER LIMIT		201323	8.14	956201	10.30	924079	15.08
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6395/1002		335538	8.47	1593668	10.63	1540132	15.41
MB 140-6395/6		318590	8.47	1569689	10.63	1448991	15.41
140-5667-3	IA-001-C-21	308297	8.47	1469342	10.63	1430297	15.41
140-5667-5	IA-005-C-21	301239	8.47	1459630	10.63	1410634	15.41
140-5667-13	IA-146-C-21	337300	8.48	1721612	10.64	1614184	15.41

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Sample No.: ICIS 140-5523/7 Date Analyzed: 06/22/2016 20:20

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JF22IC06.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		295193	9.39	1295936	11.55	1130543	16.23
UPPER LIMIT		413270	9.72	1814310	11.88	1582760	16.56
LOWER LIMIT		177116	9.06	777562	11.22	678326	15.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5523/17		332894	9.39	1464991	11.55	1301938	16.23

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Sample No.: CCVIS 140-6409/2 Date Analyzed: 08/24/2016 11:57

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVG24A.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		209355	9.34	971939	11.50	923440	16.19
UPPER LIMIT		293097	9.67	1360715	11.83	1292816	16.52
LOWER LIMIT		125613	9.01	583163	11.17	554064	15.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6409/1002		209355	9.34	971939	11.50	923440	16.19
MB 140-6409/4		205124	9.33	873668	11.50	754396	16.19
140-5667-1	IA-131-C-21	183663	9.34	834025	11.50	740554	16.19
140-5667-2	IA-DUP01-C-21	165411	9.34	755182	11.50	702701	16.19
140-5667-4	IA-004-C-21	171591	9.34	811450	11.50	732574	16.19
140-5667-6	IA-102-C-21	181172	9.34	837034	11.50	739104	16.19
140-5667-7	IA-155-C-21	169303	9.35	751089	11.51	668346	16.19
140-5667-8	IA-153-C-21	187796	9.35	863987	11.51	758603	16.19
140-5667-18	IA-115-C-21	163553	9.34	728040	11.50	662500	16.19
140-5667-11	IA-152-C-21	153994	9.34	697203	11.50	644262	16.19
140-5667-12	IA-144-C-21	147775	9.35	651886	11.51	603533	16.19
140-5667-14	IA-145-C-21	144464	9.34	650423	11.50	599395	16.19
140-5667-15	IA-150-C-21	149076	9.35	664191	11.51	618579	16.19
140-5667-16	IA-051-C-21	177723	9.34	819274	11.50	742671	16.19
140-5667-17	IA-065-C-21	159364	9.35	717354	11.50	656392	16.19
140-5667-19	IA-113-C-21	155190	9.34	706734	11.50	647330	16.19
140-5667-20	IA-142-C-21	154916	9.34	698364	11.50	662464	16.19
140-5667-9	IA-DUP02-C-21	148898	9.34	671942	11.50	607874	16.19

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-131-C-21 Lab Sample ID: 140-5667-1

Matrix: Air Lab File ID: JH24P101.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:24

Sample wt/vol: 100(mL) Date Analyzed: 08/24/2016 14:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6409 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.95	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.96		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5667-1

SDG No.:

Client Sample ID: IA-131-C-21 | Lab Sample ID: 140-5667-1

Matrix: Air | Lab File ID: JH24P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 15:24

Sample wt/vol: 100 (mL) | Date Analyzed: 08/24/2016 14:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32 (mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6409 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.72	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	9.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Sample Calculation - Page 3

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160819-3330.b\JH24P101.D
Lims ID: 140-5667-A-1
Client ID: IA-131-C-21
Sample Type: Client
Inject. Date: 24-Aug-2016 14:55:30 ALS Bottle#: 1 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003330-007
Misc. Info.: 140-5667-a-1
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160819-3330.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 24-Aug-2016 17:14:27 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK017

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 17:22:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.340	9.341	-0.001	93	183663	4.00	
* 2 1,4-Difluorobenzene	114	11.503	11.504	-0.001	96	834025	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.189	16.189	0.000	93	740554	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.813	17.814	-0.001	88	430525	3.94	
6 Chlorodifluoromethane	67	3.923	3.919	0.004	94	5455	0.2393	
8 Dichlorodifluoromethane	85	3.988	3.989	-0.001	99	22824	0.1131	
31 Methylene Chloride	84	6.710	6.705	0.005	95	18678	0.3700	
47 1,1,1-Trichloroethane	97	10.395	10.396	-0.001	96	27120	0.1907	
51 Benzene	78	10.987	10.982	0.005	82	3635	0.0250	
52 Carbon tetrachloride	117	10.997	11.004	-0.007	91	2548	0.0164	
68 Toluene	91	14.230	14.231	-0.001	93	81238	0.5151	
79 Ethylbenzene	91	16.511	16.518	-0.007	94	5933	0.0330	
81 m-Xylene & p-Xylene	91	16.673	16.674	-0.001	98	18933	0.1356	
85 o-Xylene	91	17.194	17.201	-0.007	96	8254	0.0550	
S 126 Xylenes, Total	100				0		0.1907	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Concentration = (3635 / 834025) x (4.0 ppbv / 0.6983) = 0.02497 ppbv

(0.02497 ppbv x 500 mL x 78.11) / (24.45 (gas constant) x 100 mL) = 0.3989 ug/m3

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5667-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3871	+++++ 0.3312	0.5093 0.3229	0.3971 0.3467	0.3930	Ave		0.3839				16.4		30.0			
Hexane	+++++ 1.1210	1.0912 0.9657	1.1007 0.9551	1.0917 0.8804	1.1344	Ave		1.0425				9.1		30.0			
Isopropyl ether	+++++ 3.2904	3.6307 2.9115	3.0105 2.6766	2.8081 2.7075	3.1314	Ave		3.0208				10.7		30.0			
cis-1,2-Dichloroethene	+++++ 1.2327	1.3301 1.0874	1.2146 1.0707	1.1880 1.1014	1.2398	Ave		1.1831				7.6		30.0			
Ethyl acetate	+++++ 1.7615	+++++ 1.5655	1.5737 1.5009	1.5300 1.5623	1.7015	Ave		1.5994				6.0		30.0			
Chloroform	+++++ 2.8139	2.9572 2.4353	2.8805 2.3198	2.7803 2.3852	2.8515	Ave		2.6780				9.5		30.0			
Tert-butyl ethyl ether	+++++ 3.2339	3.5685 2.8582	2.9393 2.7149	2.6805 2.8523	3.0716	Ave		2.9899				9.9		30.0			
Tetrahydrofuran	+++++ 0.9293	+++++ 0.8424	0.8383 0.7823	0.7949 0.8926	0.8890	Ave		0.8527				6.3		30.0			
1,1,1-Trichloroethane	+++++ 3.3351	3.2168 2.9132	3.2372 2.7334	3.2140 2.7851	3.3406	Ave		3.0969				8.0		30.0			
1,2-Dichloroethane	+++++ 0.4569	0.4832 0.3864	0.4749 0.3701	0.4633 0.3885	0.4718	Ave		0.4369				10.7		30.0			
1-Butanol	+++++ 0.0639	+++++ 0.0558	+++++ 0.0671	0.0551 0.0618	0.0622	Ave		0.0610				7.7		30.0			
Cyclohexane	+++++ 0.1302	0.1149 0.1101	0.1184 0.1040	0.1260 0.0955	0.1376	Ave		0.1171				11.9		30.0			
Benzene	+++++ 0.7322	0.8437 0.6046	0.7950 0.5722	0.7510 0.5312	0.7564	Ave		0.6983				16.3		30.0			
Carbon tetrachloride	0.7843 0.8287	0.7618 0.6999	0.7098 0.6615	0.8109 0.6518	0.7826	Ave		0.7435				8.7		30.0			
2,3-Dimethylpentane	+++++ 0.1712	0.1714 0.1427	0.1694 0.1404	0.1761 0.1395	0.1745	Ave		0.1606				10.3		30.0			
Thiophene	+++++ 0.4165	0.4347 0.3632	0.4135 0.3555	0.4081 0.3680	0.4313	Ave		0.3988				8.0		30.0			
Tert-amyl methyl ether	+++++ 0.6605	0.7406 0.5623	0.6416 0.5191	0.6024 0.5263	0.6679	Ave		0.6151				12.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.3875	1.5390 1.1576	1.4751 1.0883	1.4432 0.9871	1.4449	Ave		1.3153				15.7		30.0			
Heptane	+++++ 0.2442	+++++ 0.2109	0.2503 0.2088	0.2439 0.2062	0.2496	Ave		0.2306				9.0		30.0			
1,2-Dichloropropane	+++++ 0.3010	0.3185 0.2604	0.2894 0.2489	0.2858 0.2435	0.3065	Ave		0.2817				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **OCTOBER 05, 2016**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-5668-1

SAMPLES: 26 / Air / VOC

IA-015-A-21	IA-018-A-21	IA-079-A-21
IA-081-A-21	IA-093-A-21	IA-097-A-21
IA-117-A-21	IA-118-A-21	IA-138-A-21
IA-139-A-21	IA-DUP03-A-21	IA-DUP04-A-21
SV-001-C-21	SV-004-C-21	SV-060-C-21
SV-088-C-21	SV-102-C-21	SV-113-C-21
SV-126-C-21	SV-142-C-21	SV-149-C-21
SV-150-C-21	SV-152-C-21	SV-153-C-21
SV-155-C-21	SV-DUP02-C-21	

OVERVIEW

The sample set for LMC - MRC, SDG 140-5668-1, consists of twenty-six (26) indoor air/soil vapor environmental samples. All samples were analyzed for select volatile organic compounds (VOC). Three (3) field duplicate sample pairs were included in this SDG: IA-018-A-21 (original) / IA-DUP03-A-21 (duplicate), IA-139-A-21 (original) / IA-DUP04-A-21 (duplicate), and SV-153-C-21 (original) / SV-DUP02-C-21 (duplicate).

The samples were collected by Tetra Tech, Inc. on August 16 and 17, 2016 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, field duplicate precision, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The continuing calibration performed on 08/26/16 at 10:40 on instrument ME had a percent difference (%D) for naphthalene that was greater than the 30% quality control limit. Samples SV-001-C-21, SV-126-C-21, SV-004-C-21, SV-102-C-21, SV-155-C-21, SV-153-C-21, SV-DUP02-C-21, SV-060-C-21, SV-152-C-21, SV-150-C-21, SV-149-C-21, and SV-113-C-21 were affected. Detected and non-detected results for naphthalene were qualified as estimated (J and UJ, respectively) in the affected samples.

- The relative percent difference (RPD) for methylene chloride exceeded the 50% quality control limit in the field duplicate pair IA-018-A-21 / IA-DUP03-A-21. The detected results for methylene chloride were qualified as estimated (J) in samples IA-018-A-21 / IA-DUP03-A-21 due to field

duplicate imprecision.

- The RPD for methylene chloride exceeded the 50% quality control limit in the field duplicate pair SV-153-C-21 / SV-DUP02-C-21. The detected results for methylene chloride were qualified as estimated (J) in samples SV-153-C-21 and SV-DUP02-C-21 due to field duplicate imprecision.

- Detected results reported below the reporting limit (RL) limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

The laboratory case narrative report includes the following notes about sample receipt:

- "Samples SV-131-C-21 (140-5668-1) and SV-DUP01-C-21 (140-5668-2) were received with a pressure of - 26 or lower inches of mercury. Flow controllers are set to take approximately 4 to 5 liters of sample. This would result in an ending pressure of approximately - 5 inches of Hg. In order to proceed with analysis, the canister was pressurized due to insufficient sample. This pressurization (dilution) may result in higher reporting limits than desired. All flow controllers are cleaned and verified to be in good working condition prior to being sent to the field. The flow controllers were also checked upon receipt and were confirmed to be working properly. Moisture was noted in the filters. The client was contacted and instructed the lab to cancel analysis."

Samples SV-DUP01-C-21 and SV-113-C-21 were listed on the chain of custody but were not analyzed, as explained in the laboratory case narrative note above.

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

Sample SV-126-C-21 was analyzed at a dilution factor of 4.

Total xylenes in sample SV-060-C-21 exceeded the instrument calibration range in the original analysis. The result from the dilution was within the calibration range and was selected for validation purposes.

Vinyl chloride in sample SV-126-C-21 exceeded the instrument calibration range in the original analysis. The result from the dilution was within the calibration range and was selected for validation purposes.

EXECUTIVE SUMMARY

Laboratory Performance: Some detected and non-detected naphthalene results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for one analyte in two field duplicate pairs. Results above the MDL but below the RL were estimated.

The data for these analyses were reviewed with reference to the USEPA "National Functional Guidelines for Superfund Organic Methods Data Review" (August 2014) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

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Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07671	NSAMPLE	IA-015-A-21			IA-018-A-21			IA-079-A-21			IA-081-A-21		
SDG: 140-5668-1	LAB_ID	140-5668-21			140-5668-19			140-5668-24			140-5668-28		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.56	J	P	0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		1.2	J	P	0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.72	J	P	0.61	U		0.72	J	P	0.74	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		1.4			0.39	J	P	0.97	J	P	1.6		
CARBON TETRACHLORIDE		0.47	U		0.54	J	P	0.53	J	P	0.47	U	
CHLORODIFLUOROMETHANE		1.7			1.7			1.6			4.7		
CHLOROFORM		0.59	J	P	0.87	J	P	0.82	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.3			2.5			2.8			2.2		
ETHYLBENZENE		2.4			1.6	J	P	2.2			3.4		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		8.1			6.4	J	G	9.1			7.4		
NAPHTHALENE		1	U		12			1	U		1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		12			3.9			4.4			38		
TOTAL XYLENES		13			8.7			13			17		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		2.3			0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-093-A-21			IA-097-A-21			IA-117-A-21			IA-118-A-21		
SDG: 140-5668-1	LAB_ID	140-5668-17			140-5668-25			140-5668-23			140-5668-22		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.71	J	P	0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		1.3	J	P	0.61	U		2.2		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.65	J	P
BENZENE		0.37	U		1.7			0.42	J	P	4.2		
CARBON TETRACHLORIDE		0.55	J	P	0.51	J	P	0.52	J	P	0.47	U	
CHLORODIFLUOROMETHANE		1.6			1.7			1.5			2.8		
CHLOROFORM		0.37	U		0.37	U		0.59	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.5			2.7			2.8			2.7		
ETHYLBENZENE		0.59	U		3.6			2.3			6.4		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		6.1			8.6			6.9			6.1		
NAPHTHALENE		1	U		1	U		1.1			1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		4.5			14			3.1			12		
TOTAL XYLENES		3	J	P	20			14			35		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		6			0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-138-A-21			IA-139-A-21			IA-DUP03-A-21			IA-DUP04-A-21		
SDG: 140-5668-1	LAB_ID	140-5668-18			140-5668-26			140-5668-20			140-5668-27		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			FD			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF							IA-018-A-21			IA-139-A-21		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.43	J	P	0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.56	J	P	0.28	U		1.1	J	P	0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		2.3			0.61	U		2.4		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.68	J	P	0.64	U		0.64	U	
BENZENE		0.37	U		5.1			0.55	J	P	4.9		
CARBON TETRACHLORIDE		0.55	J	P	0.57	J	P	0.47	U		0.52	J	P
CHLORODIFLUOROMETHANE		1.4	J	P	2.9			1.3	J	P	2.9		
CHLOROFORM		0.37	U		0.37	U		0.61	J	P	0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.5			3.1			2.2			3.2		
ETHYLBENZENE		0.72	J	P	6.6			1.4	J	P	5.8		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		8.5			14			16	J	G	14		
NAPHTHALENE		1	U		1	U		15			1	U	
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		8			12			2.6			12		
TOTAL XYLENES		4.2			36			8.7			33		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		2.7			0.38	U		2.1			0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-001-C-21			SV-004-C-21			SV-060-C-21			SV-060-C-21DL		
SDG: 140-5668-1	LAB_ID	140-5668-3			140-5668-4			140-5668-9			140-5668-9		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		2.2	J	P	0.9	J	P	3.9					
1,1,2-TRICHLOROETHANE		2.3	U		0.57	U		0.57	U				
1,1-DICHLOROETHANE		0.81	U		0.2	U		3.2					
1,1-DICHLOROETHENE		1.1	U		0.69	J	P	0.28	U				
1,2,3-TRIMETHYLBENZENE		3.3	U		0.84	U		1.2	J	P			
1,2,4-TRICHLOROBENZENE		5.8	U		1.4	U		1.4	U				
1,2,4-TRIMETHYLBENZENE		2.5	U		0.61	U		5.2					
1,2-DICHLOROETHANE		1.5	U		0.38	U		0.38	U				
1,3,5-TRIMETHYLBENZENE		2.6	U		0.64	U		4.2					
BENZENE		1.5	U		0.37	J	P	0.37	U				
CARBON TETRACHLORIDE		1.9	U		3.4			0.47	U				
CHLORODIFLUOROMETHANE		2.8	J	P	1.7			17					
CHLOROFORM		24			20			3.1					
CIS-1,2-DICHLOROETHENE		230			79			1.5	J	P			
DICHLORODIFLUOROMETHANE		2.9	J	P	2.6			2.9					
ETHYLBENZENE		2.4	J	P	0.59	U		190					
METHYL TERT-BUTYL ETHER		4.9	U		1.2	U		1.2	U				
METHYLENE CHLORIDE		9	U		5.7			11					
NAPHTHALENE		4.2	UJ	C	1.1	J	C	13	J	C			
TETRACHLOROETHENE		8.8	J	P	2.4	J	P	1.2	J	P			
TOLUENE		9	U		2.3	U		4.8					
TOTAL XYLENES		2.1	U		0.52	U					1200		
TRANS-1,2-DICHLOROETHENE		60			5.1			0.96	J	P			
TRICHLOROETHENE		900			250			70					
VINYL CHLORIDE		1.5	U		0.37	U		0.37	U				

PROJ_NO: 07671	NSAMPLE	SV-088-C-21			SV-102-C-21			SV-113-C-21			SV-126-C-21		
SDG: 140-5668-1	LAB_ID	140-5668-16			140-5668-5			140-5668-14			140-5668-13		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.3	J	P	1.4	J	P	1	J	P	6.5	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		11	U	
1,1-DICHLOROETHANE		0.23	J	P	1.4	J	P	0.2	U		4	U	
1,1-DICHLOROETHENE		0.28	U		0.33	J	P	0.28	U		1100		
1,2,3-TRIMETHYLBENZENE		1.5	J	P	5.6			0.89	J	P	17	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		29	U	
1,2,4-TRIMETHYLBENZENE		1.8	J	P	5.1			1.1	J	P	12	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		7.7	U	
1,3,5-TRIMETHYLBENZENE		0.69	J	P	1.9	J	P	0.64	U		13	U	
BENZENE		0.47	J	P	0.93	J	P	0.37	U		290		
CARBON TETRACHLORIDE		0.59	J	P	0.47	J	P	0.51	J	P	9.4	U	
CHLORODIFLUOROMETHANE		7.1			14			5.9			5.3	U	
CHLOROFORM		1.4	J	P	0.37	U		2.5			7.3	U	
CIS-1,2-DICHLOROETHENE		17			0.48	U		36			530		
DICHLORODIFLUOROMETHANE		2.4			2.5			3			13	U	
ETHYLBENZENE		1.4	J	P	42			0.65	J	P	12	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		25	U	
METHYLENE CHLORIDE		3.7			4.8			19			45	U	
NAPHTHALENE		4			110	J	C	3.1	J	C	28	J	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		11	U	
TOLUENE		3.2			11			2.3			45	U	
TOTAL XYLENES		16			340			4			10	U	
TRANS-1,2-DICHLOROETHENE		1	J	P	0.4	U		0.4	U		43		
TRICHLOROETHENE		76			0.4	J	P	320			890		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U				

PROJ_NO: 07671	NSAMPLE	SV-126-C-21DL			SV-142-C-21			SV-149-C-21			SV-150-C-21		
SDG: 140-5668-1	LAB_ID	140-5668-13			140-5668-15			140-5668-12			140-5668-11		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE					0.86	J	P	0.86	J	P	56		
1,1,2-TRICHLOROETHANE					0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE					0.22	J	P	0.2	U		6.9		
1,1-DICHLOROETHENE					0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE					0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE					1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE					0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE					0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE					0.64	U		0.64	U		0.64	U	
BENZENE					0.37	U		0.6	J	P	0.73	J	P
CARBON TETRACHLORIDE					0.69	J	P	0.54	J	P	0.62	J	P
CHLORODIFLUOROMETHANE					4.2			3.7			49		
CHLOROFORM					10			0.84	J	P	0.61	J	P
CIS-1,2-DICHLOROETHENE					0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE					2.5			2.7			3		
ETHYLBENZENE					0.93	J	P	1.8			1.8		
METHYL TERT-BUTYL ETHER					1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE					9.4			12			4.1		
NAPHTHALENE					2			1	UJ	C	1	UJ	C
TETRACHLOROETHENE					1.3	J	P	0.57	J	P	0.54	U	
TOLUENE					2.3			7.4			6.3		
TOTAL XYLENES					7.4			12			10		
TRANS-1,2-DICHLOROETHENE					0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE					10			5.3			0.55	J	P
VINYL CHLORIDE		5000			0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-152-C-21			SV-153-C-21			SV-155-C-21			SV-DUP02-C-21		
SDG: 140-5668-1	LAB_ID	140-5668-10			140-5668-7			140-5668-6			140-5668-8		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			FD		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF										SV-153-C-21		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.84	J	P	0.57	J	P	0.96	J	P	0.68	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.79	J	P	0.83	J	P	0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		1.3			0.38	J	P	0.37	U		0.37	U	
CARBON TETRACHLORIDE		0.47	U		0.49	J	P	1.4	J	P	0.47	U	
CHLORODIFLUOROMETHANE		38			6.7			5.7			7.1		
CHLOROFORM		0.4	J	P	0.57	J	P	1.7	J	P	0.47	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.8			2.6			2.5			2.8		
ETHYLBENZENE		1.8			1.6	J	P	1.2	J	P	1.4	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		12			15	J	G	3.3	J	P	8	J	G
NAPHTHALENE		5	J	C	1	UJ	C	2	J	C	1	UJ	C
TETRACHLOROETHENE		0.54	U		2.9			5.7			1.4	J	P
TOLUENE		5.5			4.9			2.4			3.7		
TOTAL XYLENES		7.9			11			8.6			9.8		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.48	J	P	12			1.4			13		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-015-A-21 | Lab Sample ID: 140-5668-21

Matrix: Air | Lab File ID: EH27p103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.47		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.55		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-015-A-21 | Lab Sample ID: 140-5668-21

Matrix: Air | Lab File ID: EH27p103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.4		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.59	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-018-A-21 | Lab Sample ID: 140-5668-19

Matrix: Air | Lab File ID: GH26P115.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:23

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 02:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.086	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	0.18	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.29	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.36	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.3		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.43		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-018-A-21 | Lab Sample ID: 140-5668-19

Matrix: Air | Lab File ID: GH26P115.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:23

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 02:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	0.87	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.2	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	12		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.56	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-079-A-21 | Lab Sample ID: 140-5668-24

Matrix: Air | Lab File ID: EH27p106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.30	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.084	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.52		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-079-A-21 | Lab Sample ID: 140-5668-24

Matrix: Air | Lab File ID: EH27p106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:38

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:01

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.97	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	0.82	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.2		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.72	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	13		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-081-A-21 Lab Sample ID: 140-5668-28

Matrix: Air Lab File ID: EH27p110.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:45

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 02:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.49		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.3		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.45		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.77		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	10		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.15	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-081-A-21 | Lab Sample ID: 140-5668-28

Matrix: Air | Lab File ID: EH27p110.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 08/28/2016 02:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	38		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.74	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	17		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-093-A-21 | Lab Sample ID: 140-5668-17

Matrix: Air | Lab File ID: GH26P113.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 00:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.18	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.70	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-093-A-21 | Lab Sample ID: 140-5668-17

Matrix: Air | Lab File ID: GH26P113.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 00:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.71	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.0		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-097-A-21 | Lab Sample ID: 140-5668-25

Matrix: Air | Lab File ID: EH27p107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.54		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.83		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.27	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	4.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-097-A-21 | Lab Sample ID: 140-5668-25

Matrix: Air | Lab File ID: EH27p107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:40

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 23:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.7		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	14		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.3	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	20		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-117-A-21 | Lab Sample ID: 140-5668-23

Matrix: Air | Lab File ID: EH27p105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 22:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.082	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.54		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.81		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-117-A-21 | Lab Sample ID: 140-5668-23

Matrix: Air | Lab File ID: EH27p105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:34

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 22:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	0.59	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	14		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-118-A-21 | Lab Sample ID: 140-5668-22

Matrix: Air | Lab File ID: EH27p104.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:30

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 21:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.78		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.45		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.13	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-118-A-21 | Lab Sample ID: 140-5668-22

Matrix: Air | Lab File ID: EH27p104.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:30

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 21:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.2		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.8		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.65	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	35		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-138-A-21 Lab Sample ID: 140-5668-18

Matrix: Air Lab File ID: GH26P114.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:22

Sample wt/vol: 100(mL) Date Analyzed: 08/27/2016 01:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6396 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.14	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.17	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.51		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.97		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-138-A-21 | Lab Sample ID: 140-5668-18

Matrix: Air | Lab File ID: GH26P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:22

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 01:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.56	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.72	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-139-A-21 Lab Sample ID: 140-5668-26

Matrix: Air Lab File ID: EH27p108.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:43

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 00:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.6		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.091	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.81		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.63		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.5		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.48		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	8.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-139-A-21 Lab Sample ID: 140-5668-26

Matrix: Air Lab File ID: EH27p108.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:43

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 00:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	6.6		1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.3		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.68	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	36		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP03-A-21 | Lab Sample ID: 140-5668-20

Matrix: Air | Lab File ID: EH27p102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.44		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.28	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	4.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.8		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.078	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.40		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP03-A-21 | Lab Sample ID: 140-5668-20

Matrix: Air | Lab File ID: EH27p102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 20:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.1	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	16		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	15		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.43	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP04-A-21 | Lab Sample ID: 140-5668-27

Matrix: Air | Lab File ID: EH27p109.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/28/2016 01:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.81		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.65		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.49		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: IA-DUP04-A-21 Lab Sample ID: 140-5668-27

Matrix: Air Lab File ID: EH27p109.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/28/2016 01:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	12		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.4		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	33		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-001-C-21 | Lab Sample ID: 140-5668-3

Matrix: Air | Lab File ID: EH26P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:47

Sample wt/vol: 25(mL) | Date Analyzed: 08/26/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.6	0.46
56-23-5	Carbon tetrachloride	153.81	ND		1.6	0.30
75-45-6	Chlorodifluoromethane	86.47	0.78	J	1.6	0.30
67-66-3	Chloroform	119.38	4.9		1.6	0.30
156-59-2	cis-1,2-Dichloroethene	96.94	57		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	0.59	J	1.6	0.54
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.56	J	1.6	0.54
75-09-2	Methylene Chloride	84.93	ND		4.0	2.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		8.0	1.4
91-20-3	Naphthalene	128.17	ND		0.80	0.80
127-18-4	Tetrachloroethene	165.83	1.3	J	1.6	0.32
108-88-3	Toluene	92.14	ND		2.4	2.4
156-60-5	trans-1,2-Dichloroethene	96.94	15		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.6	0.78
71-55-6	1,1,1-Trichloroethane	133.41	0.40	J	1.6	0.24
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.6	0.42
79-01-6	Trichloroethene	131.39	170		0.80	0.28
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.6	0.68
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.6	0.50
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.6	0.52
75-01-4	Vinyl chloride	62.50	ND		0.80	0.58
1330-20-7	Xylenes, Total	106.17	ND		3.2	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-001-C-21 | Lab Sample ID: 140-5668-3

Matrix: Air | Lab File ID: EH26P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:47

Sample wt/vol: 25(mL) | Date Analyzed: 08/26/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		5.1	1.5
56-23-5	Carbon tetrachloride	153.81	ND		10	1.9
75-45-6	Chlorodifluoromethane	86.47	2.8	J	5.7	1.1
67-66-3	Chloroform	119.38	24		7.8	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	230		6.3	1.9
75-71-8	Dichlorodifluoromethane	120.91	2.9	J	7.9	2.7
75-34-3	1,1-Dichloroethane	98.96	ND		6.5	0.81
107-06-2	1,2-Dichloroethane	98.96	ND		6.5	1.5
75-35-4	1,1-Dichloroethene	96.94	ND		6.3	1.1
100-41-4	Ethylbenzene	106.17	2.4	J	6.9	2.3
75-09-2	Methylene Chloride	84.93	ND		14	9.0
1634-04-4	Methyl tert-butyl ether	88.15	ND		29	4.9
91-20-3	Naphthalene	128.17	ND		4.2	4.2
127-18-4	Tetrachloroethene	165.83	8.8	J	11	2.2
108-88-3	Toluene	92.14	ND		9.0	9.0
156-60-5	trans-1,2-Dichloroethene	96.94	60		6.3	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	2.2	J	8.7	1.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.7	2.3
79-01-6	Trichloroethene	131.39	900		4.3	1.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		7.9	3.3
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		7.9	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		7.9	2.6
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		14	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-004-C-21 | Lab Sample ID: 140-5668-4

Matrix: Air | Lab File ID: EH26P103.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 15:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.54		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.49		0.40	0.075
67-66-3	Chloroform	119.38	4.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	20		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.17	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.36	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	1.3		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.17	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	47		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-004-C-21 | Lab Sample ID: 140-5668-4

Matrix: Air | Lab File ID: EH26P103.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 15:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	3.4		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	20		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	79		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.69	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.4	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	5.1		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.90	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	250		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 | Lab Sample ID: 140-5668-9

Matrix: Air | Lab File ID: EH26P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:02

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.9		0.40	0.075
67-66-3	Chloroform	119.38	0.63		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.37	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.78		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	44		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.5		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.17	J	0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.24	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.72		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	13		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.24	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.86		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	*Xylenes, Total*	*106.17*	*320*	*E*	*0.80*	*0.12*

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 | Lab Sample ID: 140-5668-9

Matrix: Air | Lab File ID: EH26P108.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:02

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	17		1.4	0.27
67-66-3	Chloroform	119.38	3.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.5	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	190		1.7	0.59
75-09-2	Methylene Chloride	84.93	11		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	13		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.2	J	2.7	0.54
108-88-3	Toluene	92.14	4.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.96	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.9		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	70		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.2	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	*Xylenes, Total*	*106.17*	*1400*	*E*	*3.5*	*0.52*

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 DL Lab Sample ID: 140-5668-9 DL

Matrix: Air Lab File ID: EH27p101DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:02

Sample wt/vol: 50(mL) Date Analyzed: 08/27/2016 19:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	106.17	280		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-060-C-21 DL Lab Sample ID: 140-5668-9 DL

Matrix: Air Lab File ID: EH27p101DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:02

Sample wt/vol: 50(mL) Date Analyzed: 08/27/2016 19:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	106.17	1200		6.9	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-088-C-21 | Lab Sample ID: 140-5668-16

Matrix: Air | Lab File ID: GH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:21

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.094	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.0		0.40	0.075
67-66-3	Chloroform	119.38	0.28	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	4.3		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.056	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.31	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.77		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.84		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.26	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.23	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	14		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.30	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.36	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	3.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-088-C-21 | Lab Sample ID: 140-5668-16

Matrix: Air | Lab File ID: GH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:21

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.59	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.1		1.4	0.27
67-66-3	Chloroform	119.38	1.4	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	17		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.23	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.3	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	76		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.5	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.8	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.69	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	16		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-102-C-21 | Lab Sample ID: 140-5668-5

Matrix: Air | Lab File ID: EH26P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 16:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.29	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	4.0		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.33	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.083	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	9.7		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	21		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.8		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.25	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.074	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.39	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	78		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-102-C-21 | Lab Sample ID: 140-5668-5

Matrix: Air | Lab File ID: EH26P104.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 16:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.93	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	14		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.4	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.33	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	42		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	110		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	11		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.4	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.40	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	5.6		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.1		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.9	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	340		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-113-C-21 | Lab Sample ID: 140-5668-14

Matrix: Air | Lab File ID: EH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:16

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.081	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.7		0.40	0.075
67-66-3	Chloroform	119.38	0.50		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	9.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	5.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.60		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.62		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.19	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	59		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.22	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.92		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-113-C-21 | Lab Sample ID: 140-5668-14

Matrix: Air | Lab File ID: EH26P112.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:16

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.51	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.9		1.4	0.27
67-66-3	Chloroform	119.38	2.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	36		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.65	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	19		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	3.1		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.0	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	320		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.89	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.0		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 Lab Sample ID: 140-5668-13

Matrix: Air Lab File ID: EH26P102.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 14:30

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	91		8.0	2.3
56-23-5	Carbon tetrachloride	153.81	ND		8.0	1.5
75-45-6	Chlorodifluoromethane	86.47	ND		8.0	1.5
67-66-3	Chloroform	119.38	ND		8.0	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	130		8.0	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		8.0	2.7
75-34-3	1,1-Dichloroethane	98.96	ND		8.0	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.0	1.9
75-35-4	1,1-Dichloroethene	96.94	270		8.0	1.4
100-41-4	Ethylbenzene	106.17	ND		8.0	2.7
75-09-2	Methylene Chloride	84.93	ND		20	13
1634-04-4	Methyl tert-butyl ether	88.15	ND		40	6.8
91-20-3	Naphthalene	128.17	5.3		4.0	4.0
127-18-4	Tetrachloroethene	165.83	ND		8.0	1.6
108-88-3	Toluene	92.14	ND		12	12
156-60-5	trans-1,2-Dichloroethene	96.94	11		8.0	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		8.0	3.9
71-55-6	1,1,1-Trichloroethane	133.41	ND		8.0	1.2
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.0	2.1
79-01-6	Trichloroethene	131.39	170		4.0	1.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		8.0	3.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		8.0	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		8.0	2.6
75-01-4	*Vinyl chloride*	*62.50*	*2000*	*E*	*4.0*	*2.9*
1330-20-7	Xylenes, Total	106.17	ND		16	2.4

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 Lab Sample ID: 140-5668-13

Matrix: Air Lab File ID: EH26P102.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 14:30

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	290		26	7.3
56-23-5	Carbon tetrachloride	153.81	ND		50	9.4
75-45-6	Chlorodifluoromethane	86.47	ND		28	5.3
67-66-3	Chloroform	119.38	ND		39	7.3
156-59-2	cis-1,2-Dichloroethene	96.94	530		32	9.5
75-71-8	Dichlorodifluoromethane	120.91	ND		40	13
75-34-3	1,1-Dichloroethane	98.96	ND		32	4.0
107-06-2	1,2-Dichloroethane	98.96	ND		32	7.7
75-35-4	1,1-Dichloroethene	96.94	1100		32	5.6
100-41-4	Ethylbenzene	106.17	ND		35	12
75-09-2	Methylene Chloride	84.93	ND		69	45
1634-04-4	Methyl tert-butyl ether	88.15	ND		140	25
91-20-3	Naphthalene	128.17	28		21	21
127-18-4	Tetrachloroethene	165.83	ND		54	11
108-88-3	Toluene	92.14	ND		45	45
156-60-5	trans-1,2-Dichloroethene	96.94	43		32	7.9
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		59	29
71-55-6	1,1,1-Trichloroethane	133.41	ND		44	6.5
79-00-5	1,1,2-Trichloroethane	133.41	ND		44	11
79-01-6	Trichloroethene	131.39	890		21	7.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		39	17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		39	12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		39	13
75-01-4	*Vinyl chloride*	*62.50*	*5000*	*E*	*10*	*7.4*
1330-20-7	Xylenes, Total	106.17	ND		69	10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 DL Lab Sample ID: 140-5668-13 DL

Matrix: Air Lab File ID: EH26P102DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 11(mL) Date Analyzed: 08/27/2016 02:58

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	1900		7.3	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-126-C-21 DL Lab Sample ID: 140-5668-13 DL

Matrix: Air Lab File ID: EH26P102DL.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:12

Sample wt/vol: 11(mL) Date Analyzed: 08/27/2016 02:58

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
75-01-4	Vinyl chloride	62.50	5000		19	13

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-142-C-21 | Lab Sample ID: 140-5668-15

Matrix: Air | Lab File ID: GH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.2		0.40	0.075
67-66-3	Chloroform	119.38	2.1		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.054	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.37		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.19	J	0.40	0.080
108-88-3	Toluene	92.14	0.62		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.7		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-142-C-21 | Lab Sample ID: 140-5668-15

Matrix: Air | Lab File ID: GH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:20

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 23:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6396 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.2		1.4	0.27
67-66-3	Chloroform	119.38	10		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.22	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.93	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	9.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.3	J	2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.86	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	10		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-149-C-21 | Lab Sample ID: 140-5668-12

Matrix: Air | Lab File ID: EH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:11

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.19	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.086	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.42		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.085	J	0.40	0.080
108-88-3	Toluene	92.14	2.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.16	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.99		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-149-C-21 | Lab Sample ID: 140-5668-12

Matrix: Air | Lab File ID: EH26P111.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:11

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 21:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.60	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.54	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	0.84	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	7.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.86	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	5.3		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-150-C-21 | Lab Sample ID: 140-5668-11

Matrix: Air | Lab File ID: EH26P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.23	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.098	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	14		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.7		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.41		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	10		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.10	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-150-C-21 | Lab Sample ID: 140-5668-11

Matrix: Air | Lab File ID: EH26P110.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 10:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 20:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.73	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.62	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	49		1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	6.9		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	56		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.55	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	10		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-152-C-21 Lab Sample ID: 140-5668-10

Matrix: Air Lab File ID: EH26P109.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:04

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 19:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	11		0.40	0.075
67-66-3	Chloroform	119.38	0.082	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.42		0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.96		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.15	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.089	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-152-C-21 Lab Sample ID: 140-5668-10

Matrix: Air Lab File ID: EH26P109.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 10:04

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 19:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	38		1.4	0.27
67-66-3	Chloroform	119.38	0.40	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.8		1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	5.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.84	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.48	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.79	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-153-C-21 | Lab Sample ID: 140-5668-7

Matrix: Air | Lab File ID: EH26P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:57

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 17:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.38	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	4.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.43		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.17	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-153-C-21 | Lab Sample ID: 140-5668-7

Matrix: Air | Lab File ID: EH26P106.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:57

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 17:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.38	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.7		1.4	0.27
67-66-3	Chloroform	119.38	0.57	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	15		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.9		2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.57	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	12		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.83	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	11		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-155-C-21 | Lab Sample ID: 140-5668-6

Matrix: Air | Lab File ID: EH26P105.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:54

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 16:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.22	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.35	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.27	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.94	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.38		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.84		0.40	0.080
108-88-3	Toluene	92.14	0.64		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.18	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.25		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-155-C-21 Lab Sample ID: 140-5668-6

Matrix: Air Lab File ID: EH26P105.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 09:54

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 16:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.4	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.7		1.4	0.27
67-66-3	Chloroform	119.38	1.7	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.2	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.7		2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.96	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-DUP02-C-21 | Lab Sample ID: 140-5668-8

Matrix: Air | Lab File ID: EH26P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.0		0.40	0.075
67-66-3	Chloroform	119.38	0.096	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.21	J	0.40	0.080
108-88-3	Toluene	92.14	0.98		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.12	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-DUP02-C-21 | Lab Sample ID: 140-5668-8

Matrix: Air | Lab File ID: EH26P107.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 18:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	7.1		1.4	0.27
67-66-3	Chloroform	119.38	0.47	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	8.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.4	J	2.7	0.54
108-88-3	Toluene	92.14	3.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.68	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	13		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

Appendix C

Support Documentation

Job Narrative
140-5668-1

Receipt
The samples were received on 8/22/2016 at 9:00 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions
Samples SV-131-C-21 (140-5668-1) and SV-DUP01-C-21 (140-5668-2) were received with a pressure of - 26 or lower inches of mercury. Flow controllers are set to take approximately 4 to 5 liters of sample. This would result in an ending pressure of approximately - 5 inches of Hg. In order to proceed with analysis, the canister was pressurized due to insufficient sample. This pressurization (dilution) may result in higher reporting limits than desired. All flow controllers are cleaned and verified to be in good working condition prior to being sent to the field. The flow controllers were also checked upon receipt and were confirmed to be working properly. Moisture was noted in the filters. The client was contacted and instructed the lab to cancel analysis.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-6407 exhibited % difference of > 30% for naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SV/IA - Round 21 - Block I

TestAmerica Job ID: 140-5668-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SV/IA - Round 21 - Block I

TestAmerica Job ID: 140-5668-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5668-3	SV-001-C-21	Air	08/16/16 09:47	08/22/16 09:00
140-5668-4	SV-004-C-21	Air	08/16/16 09:50	08/22/16 09:00
140-5668-5	SV-102-C-21	Air	08/16/16 09:52	08/22/16 09:00
140-5668-6	SV-155-C-21	Air	08/16/16 09:54	08/22/16 09:00
140-5668-7	SV-153-C-21	Air	08/16/16 09:57	08/22/16 09:00
140-5668-8	SV-DUP02-C-21	Air	08/16/16 00:00	08/22/16 09:00
140-5668-9	SV-060-C-21	Air	08/16/16 10:02	08/22/16 09:00
140-5668-10	SV-152-C-21	Air	08/16/16 10:04	08/22/16 09:00
140-5668-11	SV-150-C-21	Air	08/16/16 10:00	08/22/16 09:00
140-5668-12	SV-149-C-21	Air	08/16/16 10:11	08/22/16 09:00
140-5668-13	SV-126-C-21	Air	08/16/16 10:12	08/22/16 09:00
140-5668-14	SV-113-C-21	Air	08/16/16 10:16	08/22/16 09:00
140-5668-15	SV-142-C-21	Air	08/16/16 10:20	08/22/16 09:00
140-5668-16	SV-088-C-21	Air	08/16/16 10:21	08/22/16 09:00
140-5668-17	IA-093-A-21	Air	08/17/16 15:20	08/22/16 09:00
140-5668-18	IA-138-A-21	Air	08/17/16 15:22	08/22/16 09:00
140-5668-19	IA-018-A-21	Air	08/17/16 15:23	08/22/16 09:00
140-5668-20	IA-DUP03-A-21	Air	08/17/16 00:00	08/22/16 09:00
140-5668-21	IA-015-A-21	Air	08/17/16 15:27	08/22/16 09:00
140-5668-22	IA-118-A-21	Air	08/17/16 15:30	08/22/16 09:00
140-5668-23	IA-117-A-21	Air	08/17/16 15:34	08/22/16 09:00
140-5668-24	IA-079-A-21	Air	08/17/16 15:38	08/22/16 09:00
140-5668-25	IA-097-A-21	Air	08/17/16 15:40	08/22/16 09:00
140-5668-26	IA-139-A-21	Air	08/17/16 15:43	08/22/16 09:00
140-5668-27	IA-DUP04-A-21	Air	08/17/16 00:00	08/22/16 09:00
140-5668-28	IA-081-A-21	Air	08/17/16 15:45	08/22/16 09:00

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: TETRA TECH
Address:
City/State/Zip: SEE PAGE 1
Phone:
FAX:
Project Name: MRC SU/IA Rnd. 21
Site/location: Block I
PO #: 112IC07677

Project Manager: APANAVAGE
Phone: 301-838-3021
Site Contact: MULLIS
TAL Contact: WALKER

Sampled By: JM/WP

5 of 15 COCs

140-5668 Chain of Custody

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-131-C-21	8/16/16	0845	0945	-30	-30	10289	10523	X									X		
SU-DUP01-C-21		0000	0000	-30	-30	11272	11287	X									X		
SU-001-C-21		0847	0947	-30	-4	09915	09662	X									X		
SU-004-C-21		0850	0950	-28	-2.5	09844	11123	X									X		
SU-102-C-21		0852	0952	-30	-5	11250	10502	X									X		
SU-155-C-21		0854	0954	-30	-5	11310	10748	X									X		

Sampled by: JM/WP [signature]

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

SU-131-C and SU-DUP01-C did not drop in pressure over time on regulator faceplate

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Received @ ambient (20°C)
2 boxes, Fedex so
trk# 7770 3821 3889
" " 3834

Special Instructions/QC Requirements & Comments:

No custody seal, KW 8/23/16

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016/1540	Received by: [signature] 8/22/16 0900

28 Cans
4 Ts
28 Flows

08/31/2016

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** APANAVAGE	**Sampled By:** JM/WP
Company: TETRA TECH	**Phone:** 302-528-3021	6 of 15 COCs
Address:	**Site Contact:** MULLIS	
City/State/Zip SEE PAGE 1	**TAL Contact:** WALKER	
Phone:		
FAX:		
Project Name: MRC SU/EA Rnd-21	**Analysis Turnaround Time**	
Site/location: MRC Block I	(Standard) (Specify)	
PO # 112IC07671	Rush (Specify)	

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-153-C-21	8/16/16	0857	0957	-30	-5	10625	11136	X									X		
SU-AP02-C-21	"	0000	0000	-30	-5	09910	09788	X									X		
SU-060-C-21	"	0902	1002	-30	-5	10050	09665	X									X		
SU-152-C-21	"	0904	1004	-30	0	10466	10972	X									X		
SU-150-C-21	"	0906	1006	-30	0	10302	11135	X									X		
SU-149-C-21	"	0911	1011	-30	-1	09715	10336	X									X		

Sampled by :

JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016/1540	Received by: 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information		Project Manager: ARANAUAGE	Sampled By: JM/WP	7 of 15 COCs
Company:	TETRA TECH	Phone: 301-528-3021		
Address:	20251 Century Blvd.	Site Contact: MULLIS		
City/State/Zip	GBG 20866	TAL Contact: WALKER		
Phone:				
FAX:				
Project Name:	MRL SI/IA and 21	Analysis Turnaround Time		
Site/location:	Block I	Standard (Specify)		
PO #	112ILC0767)	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type: Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-126-C-21	8/16/16	0912	1012	-30	-5	09946	11285	X								X		
SV-113-C-21		0916	1016	-30	-3	09754	09803	X								X		
SV-142-C-21		0920	1020	-30	-3	10139	09744	X								X		
SV-088-C-21		0921	1021	-30	0	11053	10833	X								X		
	JM																	

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:	
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:	
Relinquished by:	Date/Time: 9-19-2016/1540	Received by:	8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: TETRA TECH INC
Address:
City/State/Zip: SEE PAGE 1
Phone:
FAX:
Project Name: MRC SU/IA Rnd. 21
Site/location: Block I
PO #: 112IC07671

Project Manager: APANAVAGE
Phone: 301-528-3021
Site Contact: MULLIS
TAL Contact: WALKER

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: JM/WP

8 of 15 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-093-A-21	8/17/16	0720	1520	-30	-5	10592	09834	X							X				
IA-138-A-21		0722	1522	-30	-3	10146	10919	X							X				
IA-018-A-21		0723	1523	-30	-5	10056	11109	X							X				
IA-DUP03-A-21		0000	0000	-30	-5	10164	10741	X							X				
IA-015-A-21		0727	1527	-29	-3	10645	09829	X							X				
IA-118-A-21		0730	1530	-29	0	10791	09799	X							X				

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 1540	Received by: [signature] 8/22/16 0900

180325

BALTIMORE

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: ABANAVALE	Sampled By: JM/MP	9 of 15 COCs
Company: TETRA TECH INC	Phone: 301-528-3021		
Address:	Site Contact: MORRIS		
City/State/Zip SEE PAGE 1	TAL Contact: WALKER		
Phone:			
FAX:			
Project Name: MRC SV/EA mod. 21	Analysis Turnaround Time		
Site/location: Block I	Standard (Specify)		
PO # 117IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-117-A-21	8/17/16	0739	1534	-30	-4	10469	11119	X							X				
IA-078-A-21		0738	1538	-30	-3	11240	10963	X							X				
IA-097-A-21		0740	1540	-27	-4	10440	09810	X							X				
IA-139-A-21		0743	1543	-30	-3	10162	10602	X							X				
IA-DUP04-A-21		0000	0000	-30	-3	09713	09792	X							X				
IA-081-A-21		0745	1545	-30	-5	10079	10974	X							X				

Sampled by : JM/MP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 1540	Received by: 8/22/16 0900

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 8/24/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-5668-a-1	10523	5446	B	1	-27.2	1635	5.0
AFB	140-5668-a-2	11287	5114	B	1	-27.3	1636	4.9
AFB	140-5668-a-3	09662	5280	B	1	-2.9	1637	
AFB	140-5668-a-4	11123	5178	B	1	-3.4	1638	
AFB	140-5668-a-5	10502	5269	B	1	-3.2	1639	
AFB	140-5668-a-6	10748	5392	B	1	-3.0	1640	
AFB	140-5668-a-7	11136	5392	B	1	-3.4	1641	
AFB	140-5668-a-8	09788	5392	B	1	-3.2	1642	
AFB	140-5668-a-9	09665	5446	B	1	-2.3	1643	
AFB	140-5668-a-10	10972	5178	B	1	-2.0	1644	
AFB	140-5668-a-11	11135	5446	B	1	0	1645	
AFB	140-5668-a-12	10336	5446	B	1	-2.6	1705	
AFB	140-5668-a-13	11285	5446	B	1	-2.9	1706	
AFB	140-5668-a-14	09803	5446	B	1	-3.7	1707	
AFB	140-5668-a-15	09744	5332	B	1	-4.1	1708	
AFB	140-5668-a-16	10833	5392	B	1	-2.5	1709	
AFB	140-5668-a-17	09834	5466	B	1	-2.9	1710	
AFB	140-5668-a-18	10919	5466	B	1	-3.0	1730	
AFB	140-5668-a-19	11109	5493	B	1	-3.2	1731	
AFB	140-5668-a-20	10741	5429	B	1	-2.1	1732	
AFB	140-5668-a-21	09829	5429	B	1	-2.7	1733	
AFB	140-5668-a-22	09799	5483	B	1	0	1734	
AFB	140-5668-a-23	11119	5483	B	1	-3.4	1735	
AFB	140-5668-a-24	10963	5466	B	1	-3.5	1830	
AFB	140-5668-a-25	09810	5493	B	1	-2.8	1831	
AFB	140-5668-a-26	10602	5429	B	1	-2.8	1832	
AFB	140-5668-a-27	09792	5483	B	1	-1.9	1833	
AFB	140-5668-a-28	10974	5483	B	1	-3.6	1834	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 140-5668-1

Login Number: 5668
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

FIELD DUPLICATE PRECISION - IA-018-A-21 / IA-DUP03-A-21							
ANALYTE	**IA-018-A-21**	**QUAL**	**IA-DUP03-A-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	0.56	J	0.43	J	26.26	0.13	2.2
1,1-DICHLOROETHENE	1.2	J	1.1	J	8.70	0.1	1.6
BENZENE	0.39	J	0.55	J	34.04	0.16	1.3
CARBON TETRACHLORIDE	0.54	J	0.47	U	13.86	0.07	2.5
CHLORODIFLUOROMETHANE	1.7		1.3	J	26.67	0.4	1.4
CHLOROFORM	0.87	J	0.61	J	35.14	0.26	2
DICHLORODIFLUOROMETHANE	2.5		2.2		12.77	0.3	2
ETHYLBENZENE	1.6	J	1.4	J	13.33	0.2	1.7
METHYLENE CHLORIDE	6.4		16		85.71	9.6	3.5
NAPHTHALENE	12		15		22	3	1
TOLUENE	3.9		2.6		40.00	1.3	2.3
TOTAL XYLENES	8.7		8.7		0.00	0	3.5
TRICHLOROETHENE	2.3		2.1		9.1	0.2	1.1

FIELD DUPLICATE PRECISION - IA-139-A-21 / IA-DUP04-A-21							
ANALYTE	**IA-139-A-21**	**QUAL**	**IA-DUP04-A-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,2,4-TRIMETHYLBENZENE	2.3		2.4		4.26	0.1	2
1,3,5-TRIMETHYLBENZENE	0.68	J	0.64	U	6.06	0.04	2
BENZENE	5.1		4.9		4.00	0.2	1.3
CARBON TETRACHLORIDE	0.57	J	0.52	J	9.17	0.05	2.5
CHLORODIFLUOROMETHANE	2.9		2.9		0.00	0	1.4
DICHLORODIFLUOROMETHANE	3.1		3.2		3.17	0.1	2
ETHYLBENZENE	6.6		5.8		12.90	0.8	1.7
METHYLENE CHLORIDE	14		14		0.00	0	3.5
TOLUENE	12		12		0.00	0	2.3
TOTAL XYLENES	36		33		8.70	3	3.5

FIELD DUPLICATE PRECISION - SV-153-C-21 / SV-DUP02-C-21							
ANALYTE	**SV-153-C-21**	**QUAL**	**SV-DUP02-C-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	0.57	J	0.68	J	~~17.60~~	0.11 ✓	2.2
1,2,4-TRIMETHYLBENZENE	0.83	J	0.61	U	~~30.56~~	0.22 ✓	2
BENZENE	0.38	J	0.37	U	~~2.67~~	0.01 ✓	1.3
CARBON TETRACHLORIDE	0.49	J	0.47	U	~~4.17~~	0.02 ✓	2.5
CHLORODIFLUOROMETHANE	6.7		7.1		5.80 ✓	~~0.4~~	1.4
CHLOROFORM	0.57	J	0.47	J	~~19.23~~	0.1 ✓	2
DICHLORODIFLUOROMETHANE	2.6		2.8		7.41 ✓	~~0.2~~	2
ETHYLBENZENE	1.6	J	1.4	J	~~13.33~~	0.2 ✓	1.7
METHYLENE CHLORIDE	15		8		60.87	~~7~~	3.5
TETRACHLOROETHENE	2.9		1.4	J	~~69.77~~	1.5 ✓	2.7
TOLUENE	4.9		3.7		27.91 ✓	~~1.2~~	2.3
TOTAL XYLENES	11		9.8		11.54 ✓	~~1.2~~	3.5
TRICHLOROETHENE	12		13		8.00 ✓	~~1~~	1.1

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: EBFBH23A.D BFB Injection Date: 08/23/2016

Instrument ID: ME BFB Injection Time: 15:48

Analysis Batch No.: 6379

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.0	
75	30.0 - 60.0 % of mass 95	54.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	83.7	
175	5.0 - 9.0 % of mass 174	5.9	(7.1) 1
176	95.0 - 101.0 % of mass 174	81.7	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.6	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-6379/3	EH23IC01A.D	08/23/2016	17:03
	IC 140-6379/4	EH23IC02A.D	08/23/2016	17:48
	IC 140-6379/5	EH23IC03A.D	08/23/2016	18:32
	IC 140-6379/6	EH23IC04.D	08/23/2016	19:17
	IC 140-6379/7	EH23IC05.D	08/23/2016	20:01
	ICIS 140-6379/8	EH23IC06.D	08/23/2016	20:46
	IC 140-6379/9	EH23IC07.D	08/23/2016	21:31
	IC 140-6379/10	EH23IC08.D	08/23/2016	22:17
	IC 140-6379/11	EH23IC09.D	08/23/2016	23:02
	ICV 140-6379/13	EH23ICV.D	08/24/2016	00:30

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6379/3	EH23IC01A.D
Level 2	IC 140-6379/4	EH23IC02A.D
Level 3	IC 140-6379/5	EH23IC03A.D
Level 4	IC 140-6379/6	EH23IC04.D
Level 5	IC 140-6379/7	EH23IC05.D
Level 6	ICIS 140-6379/8	EH23IC06.D
Level 7	IC 140-6379/9	EH23IC07.D
Level 8	IC 140-6379/10	EH23IC08.D
Level 9	IC 140-6379/11	EH23IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4591	0.5657 0.4612	0.4705 0.4677	0.4594 0.4369	0.4759	Ave		0.4745				8.1		30.0			
Propene	+++++ 0.6245	0.6890 0.6168	0.7232 0.6449	0.6694 0.6037	0.6479	Ave		0.6524				6.1		30.0			
Dichlorodifluoromethane	4.8118 4.2351	4.4782 4.0016	4.2723 3.9991	4.2868 3.4845	4.2878	Ave		4.2063				8.7		30.0			
Chloromethane	0.3136 0.2329	0.3661 0.2325	0.3162 0.2365	0.2575 0.2236	0.2518	Ave		0.2701				18.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.5118 2.2402	2.3828 2.0142	2.2476 2.1779	2.3122 1.9666	2.2719	Ave		2.2361				7.6		30.0			
Acetaldehyde	+++++ 0.2386	+++++ 0.2241	+++++ 0.2327	0.3118 0.2285	0.3079	Ave		0.2573				16.0		30.0			
Vinyl chloride	1.2287 1.0444	1.0759 1.0541	1.0747 1.1009	1.0314 1.0210	1.0718	Ave		1.0781				5.7		30.0			
Butane	1.4284 1.1074	1.2361 1.1179	1.1431 1.1642	1.1373 1.1112	1.1398	Ave		1.1762				8.7		30.0			
1,3-Butadiene	0.7630 0.6447	0.7460 0.6550	0.6478 0.6912	0.6570 0.6615	0.6738	Ave		0.6822				6.4		30.0			
Bromomethane	+++++ 1.1648	1.4162 1.1882	1.1868 1.2305	1.1895 1.1726	1.2143	Ave		1.2203				6.7		30.0			
Chloroethane	0.7026 0.5433	0.6001 0.5424	0.5513 0.5690	0.5520 0.5437	0.5617	Ave		0.5740				9.0		30.0			
Ethanol	+++++ 0.2659	0.3453 0.2586	0.3124 0.2634	0.2894 0.2512	0.2828	Ave		0.2836				11.2		30.0			
Vinyl bromide	1.3578 1.1241	1.1181 1.1425	1.1195 1.1893	1.1506 1.1376	1.1580	Ave		1.1664				6.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.1479 0.8122	1.1326 0.8202	0.8514 0.8489	0.8256 0.8192	0.8315	Ave		0.8988				15.3		30.0			
Trichlorofluoromethane	4.4382 3.9435	4.3772 3.9496	4.0733 3.9971	4.1226 3.5905	4.1540	Ave		4.0718				6.2		30.0			
Acrolein	+++++ 0.2643	+++++ 0.2468	0.3610 0.2538	0.2366 0.2716	0.2288	Ave		0.2661				16.7		30.0			
Acetonitrile	+++++ 0.2356	+++++ 0.2349	0.2762 0.2454	0.2685 0.2794	0.2723	Ave		0.2589				7.6		30.0			
Acetone	+++++ 0.3646	+++++ 0.3287	+++++ 0.3345	0.4727 0.3418	0.4469	Ave		0.3815				16.3		30.0			
Isopropyl alcohol	1.1610 0.9811	1.0954 0.9425	1.0467 0.9643	0.9990 0.9181	1.0150	Ave		1.0137				7.6		30.0			
Pentane	+++++ 0.2087	0.1947 0.2205	0.1966 0.2241	0.2268 0.2201	0.2240	Ave		0.2144				6.0		30.0			
Ethyl ether	0.7120 0.6470	0.7237 0.6150	0.6091 0.6466	0.6651 0.6652	0.6645	Ave		0.6609				5.8		30.0			
1,1-Dichloroethene	1.6061 1.1212	1.2769 1.1476	1.1494 1.1932	1.1788 1.1441	1.1601	Ave		1.2197				12.4		30.0			
tert-Butyl alcohol	+++++ 1.6444	1.7865 1.6019	1.6234 1.6901	1.6338 1.6296	1.6406	Ave		1.6563				3.5		30.0			
Acrylonitrile	+++++ 0.4731	0.6551 0.4435	0.5849 0.4756	0.5141 0.4865	0.4913	Ave		0.5155				13.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8362 2.5588	2.7583 2.5224	2.5712 2.6416	2.6400 2.4959	2.6421	Ave		2.6296				4.2		30.0			
Methylene Chloride	+++++ 1.1787	+++++ 1.1352	1.6026 1.1702	1.3596 1.1034	1.2331	Ave		1.2547				13.9		30.0			
3-Chloropropene	+++++ 0.9853	1.0738 0.9572	1.1596 0.9884	1.0242 0.9404	0.9989	Ave		1.0160				7.0		30.0			
Carbon disulfide	4.0949 3.7456	3.7914 3.7022	3.7035 3.7851	3.7242 3.5054	3.8383	Ave		3.7656				4.1		30.0			
trans-1,2-Dichloroethene	1.4029 1.3159	1.3275 1.2926	1.3062 1.3454	1.3208 1.2832	1.3423	Ave		1.3263				2.7		30.0			
2-Methylpentane	1.9831 1.5725	1.7392 1.5299	1.5822 1.5962	1.5781 1.5302	1.6459	Ave		1.6397				8.8		30.0			
Methyl tert-butyl ether	3.9575 3.8947	4.0383 3.5493	3.7738 3.6697	3.9043 3.7137	4.0120	Ave		3.8348				4.4		30.0			
1,1-Dichloroethane	2.4626 2.1811	2.3851 2.1242	2.1417 2.1824	2.1832 2.1017	2.2548	Ave		2.2241				5.5		30.0			
Vinyl acetate	2.0000 2.0555	2.0649 1.9392	1.8523 2.0741	1.8591 2.1479	2.0915	Ave		2.0094				5.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5655	+++++ 0.5049	0.7022 0.5266	0.6402 0.5452	0.5958	Ave		0.5829				11.9		30.0			
Hexane	0.8524 0.7487	0.8308 0.7406	0.7976 0.7626	0.7759 0.7362	0.7868	Ave		0.7813				5.1		30.0			
Isopropyl ether	2.3616 2.4628	2.5671 2.2243	2.3769 2.3238	2.4258 2.4064	2.4910	Ave		2.4044				4.1		30.0			
cis-1,2-Dichloroethene	1.4318 1.3372	1.3207 1.3087	1.2569 1.3782	1.3154 1.3411	1.3596	Ave		1.3388				3.7		30.0			
Ethyl acetate	1.4964 1.6289	1.5908 1.4485	1.5017 1.5390	1.5917 1.6321	1.6484	Ave		1.5642				4.5		30.0			
Chloroform	3.7153 3.2837	3.5111 3.1771	3.3054 3.2572	3.2932 3.1269	3.3412	Ave		3.3346				5.4		30.0			
Tert-butyl ethyl ether	3.0048 3.1040	3.0366 2.8288	2.9609 2.9640	3.0771 3.0370	3.1616	Ave		3.0194				3.2		30.0			
Tetrahydrofuran	0.9102 0.7561	0.8126 0.6985	0.8088 0.7360	0.7531 0.7763	0.7975	Ave		0.7832				7.7		30.0			
1,1,1-Trichloroethane	4.0243 3.7355	3.7611 3.6180	3.6874 3.7256	3.7126 3.5564	3.8164	Ave		3.7375				3.5		30.0			
1,2-Dichloroethane	0.4790 0.4483	0.4856 0.4339	0.4457 0.4601	0.4409 0.4358	0.4576	Ave		0.4541				4.0		30.0			
Cyclohexane	0.1515 0.1306	0.1453 0.1318	0.1287 0.1378	0.1325 0.1271	0.1346	Ave		0.1355				6.0		30.0			
Thiophene	0.5461 0.4864	0.5192 0.4819	0.4777 0.5096	0.4762 0.4678	0.4961	Ave		0.4957				5.1		30.0			
Benzene	0.8970 0.7911	0.9200 0.7676	0.8384 0.8048	0.8008 0.7455	0.8132	Ave		0.8198				7.0		30.0			
1-Butanol	+++++ 0.0466	+++++ 0.0516	0.0443 0.0581	0.0444 0.0548	0.0447	Ave		0.0492				11.4		30.0			
Carbon tetrachloride	0.8657 0.7919	0.7822 0.7866	0.7695 0.8222	0.7583 0.7416	0.8059	Ave		0.7915				4.7		30.0			
2,3-Dimethylpentane	0.2273 0.1833	0.1968 0.1838	0.1789 0.1962	0.1799 0.1845	0.1880	Ave		0.1910				7.9		30.0			
Tert-amyl methyl ether	+++++ 0.8337	0.8523 0.7732	0.7836 0.7890	0.8141 0.7903	0.8349	Ave		0.8089				3.6		30.0			
2,2,4-Trimethylpentane	1.0554 0.9279	1.0026 0.9273	0.9262 0.9709	0.9194 0.9004	0.9451	Ave		0.9528				5.1		30.0			
Heptane	0.3172 0.2819	0.3138 0.2831	0.2758 0.3010	0.2790 0.2847	0.2875	Ave		0.2915				5.3		30.0			
1,2-Dichloropropane	0.2486 0.2434	0.2426 0.2406	0.2354 0.2524	0.2465 0.2458	0.2497	Ave		0.2450				2.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3831 0.3496	0.3612 0.3524	0.3506 0.3716	0.3507 0.3526	0.3534	Ave		0.3584				3.2		30.0			
Dibromomethane	0.3895 0.3488	0.3548 0.3502	0.3437 0.3760	0.3493 0.3515	0.3537	Ave		0.3575				4.2		30.0			
Bromodichloromethane	0.6876 0.7092	0.6820 0.7181	0.6338 0.7599	0.6565 0.7102	0.7003	Ave		0.6953				5.2		30.0			
1,4-Dioxane	0.1134 0.1167	0.1165 0.1135	0.1068 0.1182	0.1121 0.1128	0.1124	Ave		0.1136				2.9		30.0			
Methyl methacrylate	0.2349 0.2258	0.2152 0.2091	0.1911 0.2310	0.2016 0.2387	0.2192	Ave		0.2185				7.3		30.0			
Methylcyclohexane	0.6839 0.6057	0.6462 0.6082	0.6222 0.6398	0.6089 0.5919	0.6149	Ave		0.6246				4.5		30.0			
4-Methyl-2-pentanone (MIBK)	0.3053 0.3355	0.3361 0.3148	0.3293 0.3281	0.3077 0.3265	0.3094	Ave		0.3214				3.8		30.0			
cis-1,3-Dichloropropene	0.4998 0.5003	0.5023 0.4903	0.4561 0.5342	0.4739 0.5081	0.4988	Ave		0.4960				4.4		30.0			
trans-1,3-Dichloropropene	0.4914 0.5214	0.4748 0.5218	0.4611 0.5383	0.4890 0.5321	0.5226	Ave		0.5058				5.4		30.0			
Toluene	0.9766 0.9594	1.0176 0.9449	0.9476 0.9460	0.9583 0.9034	0.9806	Ave		0.9594				3.3		30.0			
Toluene Range	+++++ 2.1610	+++++ 2.1067	+++++ 2.2258	2.1476 2.1474	2.1929	Ave		2.1636				1.9		30.0			
1,1,2-Trichloroethane	0.3300 0.2929	0.2767 0.2924	0.2838 0.2957	0.2910 0.2893	0.2994	Ave		0.2946				5.0		30.0			
2-Methylthiophene	0.7657 0.8226	0.8196 0.8088	0.7388 0.8146	0.8029 0.7812	0.8212	Ave		0.7973				3.7		30.0			
3-Methylthiophene	0.8030 0.8012	0.7780 0.7876	0.7275 0.7914	0.7862 0.7560	0.8049	Ave		0.7817				3.2		30.0			
2-Hexanone	0.1595 0.2019	0.1745 0.1941	0.1753 0.2038	0.1822 0.2005	0.1889	Ave		0.1867				8.1		30.0			
C8 Range	+++++ 2.1384	+++++ 2.1481	+++++ 2.3006	2.1075 2.1399	2.1652	Ave		2.1666				3.2		30.0			
Octane	0.3310 0.3331	0.3114 0.3369	0.3283 0.3417	0.3189 0.3245	0.3362	Ave		0.3291				2.9		30.0			
Dibromochloromethane	0.5712 0.6639	0.5458 0.6857	0.5338 0.6997	0.5697 0.6658	0.6418	Ave		0.6197				10.4		30.0			
1,2-Dibromoethane (EDB)	0.4965 0.5469	0.5070 0.5479	0.4793 0.5615	0.5003 0.5495	0.5463	Ave		0.5261				5.7		30.0			
Tetrachloroethene	0.4066 0.3677	0.3888 0.3723	0.3618 0.3736	0.3587 0.3543	0.3750	Ave		0.3732				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7425 0.7407	0.7927 0.7373	0.7231 0.7391	0.7336 0.7067	0.7596	Ave		0.7417				3.2		30.0			
2,3-Dimethylheptane	0.5774 0.5018	0.5129 0.5040	0.4885 0.5084	0.4991 0.4810	0.5194	Ave		0.5103				5.4		30.0			
Ethylbenzene	1.3116 1.3250	1.3170 1.2797	1.2522 1.2689	1.3026 1.1715	1.3582	Ave		1.2874				4.2		30.0			
2-Ethylthiophene	0.9508 1.0642	0.9800 1.0263	0.9670 1.0320	1.0183 0.9646	1.0585	Ave		1.0069				4.2		30.0			
m-Xylene & p-Xylene	1.0091 1.0449	1.0514 0.9898	1.0051 0.9652	1.0380 0.8619	1.0698	Ave		1.0039				6.2		30.0			
Bromoform	0.4665 0.6788	0.4714 0.7141	0.4848 0.7355	0.5142 0.7301	0.6370	Ave		0.6036				19.5		30.0			
Nonane	0.4068 0.4453	0.4304 0.4404	0.4208 0.4413	0.4243 0.4148	0.4520	Ave		0.4307				3.5		30.0			
Styrene	0.4854 0.7309	0.5335 0.7249	0.5540 0.7396	0.6151 0.7240	0.7148	Ave		0.6469				15.5		30.0			
o-Xylene	1.0306 1.0916	1.0733 1.0454	1.0439 1.0464	1.0590 0.9731	1.1194	Ave		1.0536				3.9		30.0			
1,1,2,2-Tetrachloroethane	0.6519 0.7180	0.6386 0.6827	0.6053 0.6939	0.6589 0.6749	0.7077	Ave		0.6702				5.3		30.0			
1,2,3-Trichloropropane	0.2218 0.2486	0.2596 0.2363	0.2181 0.2415	0.2397 0.2413	0.2537	Ave		0.2401				5.7		30.0			
Isopropylbenzene	1.4950 1.4420	1.4520 1.3678	1.3821 1.3616	1.4265 1.2520	1.4743	Ave		1.4059				5.3		30.0			
Propylbenzene	0.3065 0.3848	0.3515 0.3661	0.3446 0.3759	0.3623 0.3736	0.3887	Ave		0.3616				7.0		30.0			
2-Chlorotoluene	0.3072 0.3377	0.3097 0.3299	0.3272 0.3344	0.3303 0.3276	0.3444	Ave		0.3276				3.7		30.0			
4-Ethyltoluene	1.1452 1.4354	1.2792 1.3460	1.2293 1.3430	1.3293 1.2537	1.4459	Ave		1.3119				7.4		30.0			
1,3,5-Trimethylbenzene	0.5768 0.6460	0.5753 0.6150	0.5787 0.6238	0.6121 0.6151	0.6540	Ave		0.6108				4.8		30.0			
Alpha Methyl Styrene	+++++ 0.5448	0.3553 0.5477	0.3574 0.5690	0.4266 0.5700	0.5167	Ave		0.4859				18.9		30.0			
Decane	0.4300 0.5407	0.4763 0.5184	0.4677 0.5202	0.5089 0.4981	0.5574	Ave		0.5020				7.8		30.0			
tert-Butylbenzene	1.1600 1.2851	1.1830 1.1915	1.1778 1.1803	1.2476 1.1142	1.3025	Ave		1.2047				5.1		30.0			
1,2,4-Trimethylbenzene	0.9850 1.2251	1.1579 1.1445	1.0835 1.1296	1.1416 1.0623	1.2477	Ave		1.1308				7.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.4708 1.6845	1.5862 1.5600	1.5420 1.5232	1.6267 1.3697	1.7222	Ave		1.5650				6.9		30.0			
1,3-Dichlorobenzene	0.5770 0.7433	0.6505 0.7187	0.6301 0.7363	0.6674 0.7185	0.7372	Ave		0.6866				8.5		30.0			
Benzyl chloride	0.6683 1.0445	0.7827 1.0301	0.7315 1.0696	0.8636 1.0280	1.0045	Ave		0.9136				16.8		30.0			
1,4-Dichlorobenzene	0.5250 0.7290	0.6241 0.7118	0.6114 0.7308	0.6428 0.7191	0.7114	Ave		0.6673				10.6		30.0			
4-Isopropyltoluene	1.0670 1.4358	1.2691 1.3250	1.2331 1.2955	1.3495 1.2050	1.4510	Ave		1.2923				9.2		30.0			
1,2,3-Trimethylbenzene	0.7475 0.9204	0.8258 0.8631	0.8282 0.8563	0.8773 0.8263	0.9400	Ave		0.8539				6.7		30.0			
Butylcyclohexane	0.8296 0.8902	0.8670 0.8538	0.8446 0.8366	0.8763 0.7831	0.9198	Ave		0.8557				4.6		30.0			
1,2-Dichlorobenzene	0.5702 0.7217	0.6701 0.6913	0.6138 0.6966	0.6636 0.6824	0.7165	Ave		0.6696				7.3		30.0			
Indane	0.8612 1.0321	0.9219 0.9803	0.9010 0.9727	0.9535 0.9178	1.0432	Ave		0.9538				6.3		30.0			
Indene	+++++ 0.7757	+++++ 0.7471	0.5856 0.7641	0.6381 0.7513	0.7518	Ave		0.7162				10.3		30.0			
Butylbenzene	0.9198 1.3753	1.1072 1.2509	1.0880 1.2201	1.2074 1.1300	1.3864	Ave		1.1872				12.3		30.0			
Undecane	+++++ 0.5664	+++++ 0.5328	0.3653 0.5287	0.4303 0.5173	0.5506	Ave		0.4988				14.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0200	0.7967 0.9342	0.8237 0.9271	0.8688 0.8894	1.0244	Ave		0.9105				9.1		30.0			
1,2-Dibromo-3-Chloropropane	0.1841 0.3242	0.2059 0.3179	0.1915 0.3279	0.2272 0.3525	0.2887	Ave		0.2689				24.7		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.1981	0.8890 1.1084	0.8822 1.0701	0.9402 1.0184	1.1658	Ave		1.0340				11.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.7335	0.5072 0.6849	0.5426 0.6639	0.5773 0.6590	0.7030	Ave		0.6339				12.8		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.9474	0.6115 0.9034	0.6526 0.8692	0.6782 0.8355	0.8860	Ave		0.7980				16.3		30.0			
Dodecane	+++++ 0.2974	+++++ 0.3690	0.2437 0.3623	0.1858 0.3793	0.2608	Ave		0.2998				24.6		30.0			
1,2,4-Trichlorobenzene	0.3611 0.5045	0.3568 0.5742	0.3453 0.5814	0.3051 0.5964	0.4153	Ave		0.4489				25.7		30.0			
Naphthalene	0.6056 0.9630	0.6781 1.1134	0.5939 1.1208	0.5435 1.0727	0.7703	Ave		0.8290				28.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	0.3999 0.4398	0.4206 0.5731	0.3275 0.5950	0.2908 0.5982	0.3678	Ave		0.4459				26.1		30.0			
Hexachlorobutadiene	0.5442 0.7246	0.5863 0.6982	0.6210 0.6596	0.5728 0.6511	0.7133	Ave		0.6412				10.1		30.0			
1,2,3-Trichlorobenzene	0.3237 0.3674	0.3270 0.4807	0.3039 0.4929	0.2348 0.4849	0.3122	Ave		0.3697				25.4		30.0			
2-Methylnaphthalene	0.1687 0.1736	0.1906 0.2142	0.1910 0.2092	0.0971 0.1277	0.1610	Ave		0.1703				22.3		50.0			
1-Methylnaphthalene	0.1531 0.1471	0.1587 0.1786	0.1700 0.1721	0.0735 0.0995	0.1416	Ave		0.1438				24.5		50.0			
4-Bromofluorobenzene (Surr)	0.8114 0.8239	0.8130 0.8129	0.8120 0.8309	0.8304 0.8100	0.8219	Ave		0.8185				1.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6379/3	EH23IC01A.D
Level 2	IC 140-6379/4	EH23IC02A.D
Level 3	IC 140-6379/5	EH23IC03A.D
Level 4	IC 140-6379/6	EH23IC04.D
Level 5	IC 140-6379/7	EH23IC05.D
Level 6	ICIS 140-6379/8	EH23IC06.D
Level 7	IC 140-6379/9	EH23IC07.D
Level 8	IC 140-6379/10	EH23IC08.D
Level 9	IC 140-6379/11	EH23IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 61822	2928 122753	4908 242433	12124 469686	31671	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 84095	3566 164168	7544 334314	17666 649043	43114	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	12814 570285	23179 1065086	44567 2073013	113130 3746080	285347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	835 31364	1895 61884	3298 122595	6795 240332	16758	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	6689 301658	12333 536115	23446 1128953	61020 2114275	151194	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 160626	+++++ 298221	+++++ 603191	41149 1228060	102442	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	3272 140638	5569 280576	11211 570655	27219 1097667	71324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	3804 149120	6398 297557	11924 603481	30014 1194649	75855	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	2032 86814	3861 174350	6758 358281	17338 711110	44842	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 156847	7330 316269	12380 637838	31392 1260571	80807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	1871 73166	3106 144362	5751 294933	14567 584496	37379	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 179028	8936 344174	16292 682822	38188 1350335	94084	+++++ 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	3616 151363	5787 304097	11678 616492	30365 1222946	77061	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	3057 109370	5862 218301	8881 440024	21789 880719	55332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	11819 531022	22656 1051244	42491 2071990	108799 3859984	276442	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 35585	+++++ 65676	3766 131570	6243 291990	15226	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 31720	+++++ 62514	2881 127213	7085 300347	18124	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 147307	+++++ 262456	+++++ 520254	37431 1102505	89220	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	9276 396373	17011 752605	32758 1499717	79096 2961253	202651	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 28100	1008 58677	2051 116174	5985 236638	14910	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	1896 87130	3746 163685	6354 335199	17552 715101	44219	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4277 150972	6609 305462	11990 618548	31108 1230023	77206	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 221435	9247 426365	16935 876118	43118 1751968	109176	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 63707	3391 118033	6101 246559	13567 523026	32693	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	7553 344561	14277 671371	26822 1369350	69670 2683210	175826	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 158716	+++++ 302156	16718 606626	35881 1186247	82064	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 132672	5558 254777	12096 512353	27029 1010942	66473	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	10905 504376	19624 985401	38633 1962117	98285 3768546	255435	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	3736 177199	6871 344048	13626 697415	34857 1379488	89328	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	5281 211749	9002 407193	16505 827410	41648 1645031	109529	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10539 524448	20902 944686	39367 1902290	103036 3992522	266995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	6558 293707	12345 565390	22341 1131279	57616 2259461	150055	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	5326 276789	10688 516154	19323 1075172	49063 2309147	139184	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 76143	+++++ 134374	7325 272986	16894 586143	39647	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	2270 100815	4300 197120	8320 395291	20477 791459	52363	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	6289 331632	13287 592024	24795 1204622	64018 2587020	165774	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	3813 180059	6836 348332	13111 714434	34713 1441790	90478	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	3985 219344	8234 385530	15665 797761	42005 1754653	109695	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	9894 442178	18173 845620	34481 1688433	86910 3361601	222354	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	8002 417978	15717 752929	30887 1536459	81207 3265007	210400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	2424 101819	4206 185923	8437 381534	19875 834578	53071	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10717 503011	19467 962972	38466 1931274	97977 3823404	253978	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	5982 288122	11809 537769	21847 1083476	55807 2199272	145593	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	1892 83943	3534 163307	6309 324420	16775 641188	42831	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	6819 312594	12627 597290	23414 1200122	60273 2360523	157834	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	11202 508450	22374 951416	41095 1895126	101363 3761648	258726	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 29976	+++++ 63903	2173 136710	5619 276402	14208	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10810 508933	19024 974957	37717 1936171	95982 3741835	256403	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	2838 117785	4787 227817	8770 461939	22772 931179	59803	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 504302	19478 895818	36281 1820156	96249 3872410	248836	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	13180 596371	24385 1149309	45400 2286361	116372 4543372	300690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	3961 181150	7633 350840	13516 708768	35307 1436461	91476	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	3104 156418	5901 298142	11537 594381	31204 1240155	79431	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	4784 224706	8785 436756	17186 875136	44392 1779192	112424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	4864 224186	8628 434049	16846 885348	44214 1773527	112531	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	8587 455767	16586 890002	31068 1789431	83097 3583453	222787	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1416 75001	2833 140622	5236 278394	14190 569065	35770	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	2933 145099	5235 259190	9366 543935	25512 1204588	69730	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	8540 389263	15716 753857	30495 1506790	77063 2986759	195638	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	3813 215605	8173 390128	16142 772677	38946 1647426	98443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6241 321547	12216 607644	22355 1257896	59979 2563611	158688	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	5692 315429	10851 604586	21349 1241706	57807 2606992	155761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	11312 580354	23255 1094823	43873 2182437	113294 4426217	292256	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 1388876	+++++ 2611091	+++++ 5241600	271821 10835824	697680	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3822 177178	6323 338754	13139 682266	34398 1417572	89240	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	8869 497602	18731 937085	34204 1879129	94924 3827830	244758	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	9301 484667	17780 912530	33682 1825649	92948 3704338	239879	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	1847 122120	3989 224945	8116 470040	21539 982468	56286	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 1374344	+++++ 2662409	+++++ 5417670	266745 10797608	688848	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3834 201515	7117 390371	15198 788319	37708 1590022	100195	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	6616 401579	12474 794467	24716 1614046	67349 3262185	191276	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5751 330814	11586 634861	22191 1295383	59149 2692354	162823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	4710 222437	8885 431359	16751 861861	42406 1736176	111764	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8601 448078	18115 854251	33481 1705133	86732 3462502	226397	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	6688 303525	11722 583942	22617 1172837	59008 2356966	154795	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	15193 801501	30099 1482682	57978 2927336	154002 5740123	404807	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	11013 643748	22396 1189105	44774 2380715	120392 4726350	315480	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	23377 1264106	48055 2293730	93076 4453513	245430 8445950	637658	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	5404 410628	10774 827421	22445 1696654	60792 3577134	189843	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	4712 269364	9836 510303	19483 1018016	50166 2032588	134711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5622 442128	12193 839948	25652 1706172	72725 3547238	213035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	11938 660323	24528 1211234	48334 2413900	125205 4767807	333631	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7551 434322	14594 791030	28026 1600723	77899 3306686	210910	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	2569 150393	5933 273751	10099 557217	28342 1182507	75599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	17317 872303	33182 1584733	63990 3141082	168653 6134373	439412	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3550 232788	8033 424172	15956 867100	42831 1830699	115851	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3558 204257	7078 382213	15148 771336	39045 1605221	102641	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	13265 868312	29234 1559536	56915 3098109	157161 6142846	430948	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	6681 390767	13148 712511	26795 1439108	72362 3013892	194923	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 329584	8119 634614	16546 1312588	50440 2792870	153984	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	4981 327049	10886 600636	21656 1200057	60168 2440593	166121	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	13437 777364	27036 1380562	54531 2722919	147503 5459193	388192	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	11410 741071	26463 1326106	50168 2605971	134962 5205042	371867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	17037 1018995	36249 1807431	71394 3513808	192323 6710905	513295	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	6684 449629	14866 832738	29174 1698531	78900 3520402	219701	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	7741 631803	17888 1193451	33870 2467506	102099 5037033	299387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	6081 440987	14262 824733	28310 1686002	76000 3523407	212012	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	12359 868508	29003 1535240	57090 2988630	159549 5904118	432443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	8659 556747	18872 999985	38345 1975362	103719 4048474	280160	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	9610 538465	19815 989255	39107 1929931	103599 3837052	274151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	6605 436557	15315 800951	28420 1607098	78457 3343640	213558	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	9976 624298	21069 1135862	41715 2244014	112724 4497011	310919	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 469235	+++++ 865612	27114 1762740	75444 3680888	224053	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	10654 831941	25304 1449313	50373 2814718	142744 5536359	413197	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 342623	+++++ 617284	16912 1219733	50871 2534545	164093	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 616989	18208 1082391	38137 2138720	102719 4357916	305314	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2132 196098	4706 368272	8867 756511	26856 1727184	86056	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 724740	20317 1284194	40848 2468612	111155 4989637	347469	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 443730	11592 793534	25123 1531519	68246 3228944	209526	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 573073	13974 1046682	30214 2005252	80186 4093587	264067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 179885	+++++ 427564	11284 835790	21967 1858569	77719	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	4183 305159	8155 665315	15989 1341362	36073 2922266	123778	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	7015 582551	15496 1290008	27498 2585522	64256 5255646	229592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	4632 266068	9611 663992	15165 1372667	34379 2930895	109620	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	6304 438302	13399 808993	28753 1521596	67724 3190142	212592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	3749 222221	7473 556933	14072 1137089	27762 2375998	93044	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	6105 328115	13609 775394	27638 1508159	35887 1955688	149931	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	5543 277982	11330 646523	24598 1240578	27147 1523739	131902	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	959094 998139	947995 941828	947828 958423	981774 992236	978264	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5046		2.13	2.00	6.3	35.0
Propene	Ave	0.6524	0.6817		2.09	2.00	4.5	35.0
Dichlorodifluoromethane	Ave	4.206	4.489		2.13	2.00	6.7	35.0
Chloromethane	Ave	0.2701	0.2490		1.84	2.00	-7.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.359		2.11	2.00	5.5	35.0
Acetaldehyde	Ave	0.2573	0.2265		8.80	10.0	-12.0	35.0
Vinyl chloride	Ave	1.078	1.157		2.15	2.00	7.3	35.0
1,3-Butadiene	Ave	0.6822	0.6973		2.04	2.00	2.2	35.0
Butane	Ave	1.176	1.230		2.09	2.00	4.6	35.0
Bromomethane	Ave	1.220	1.246		2.04	2.00	2.1	35.0
Chloroethane	Ave	0.5740	0.5737		2.00	2.00	-0.0	35.0
Ethanol	Ave	0.2836	0.2613		9.21	10.0	-7.9	35.0
Vinyl bromide	Ave	1.166	1.291		2.21	2.00	10.7	35.0
2-Methylbutane	Ave	0.8988	0.8896		1.98	2.00	-1.0	35.0
Trichlorofluoromethane	Ave	4.072	4.243		2.08	2.00	4.2	35.0
Acrolein	Ave	0.2661	0.2482		1.87	2.00	-6.7	35.0
Acetonitrile	Ave	0.2589	0.2415		1.87	2.00	-6.7	35.0
Acetone	Ave	0.3815	0.3226		5.07	6.00	-15.5	35.0
Isopropyl alcohol	Ave	1.014	0.9494		5.62	6.00	-6.3	35.0
Pentane	Ave	0.2144	0.2340		2.18	2.00	9.1	35.0
Ethyl ether	Ave	0.6609	0.6532		1.98	2.00	-1.2	35.0
1,1-Dichloroethene	Ave	1.220	1.204		1.97	2.00	-1.3	35.0
tert-Butyl alcohol	Ave	1.656	1.652		2.00	2.00	-0.2	35.0
Acrylonitrile	Ave	0.5155	0.4859		1.89	2.00	-5.7	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.596		1.97	2.00	-1.3	35.0
Methylene Chloride	Ave	1.255	1.205		1.92	2.00	-4.0	35.0
3-Chloropropene	Ave	1.016	0.9020		1.78	2.00	-11.2	35.0
Carbon disulfide	Ave	3.766	3.967		2.11	2.00	5.4	35.0
trans-1,2-Dichloroethene	Ave	1.326	1.345		2.03	2.00	1.4	35.0
2-Methylpentane	Ave	1.640	1.754		2.14	2.00	7.0	35.0
Methyl tert-butyl ether	Ave	3.835	3.629		1.89	2.00	-5.4	35.0
1,1-Dichloroethane	Ave	2.224	2.276		2.05	2.00	2.3	35.0
Vinyl acetate	Ave	2.009	1.795		1.79	2.00	-10.7	35.0
2-Butanone (MEK)	Ave	0.5829	0.4994		1.71	2.00	-14.3	35.0
Hexane	Ave	0.7813	0.7819		2.00	2.00	0.0	35.0
Isopropyl ether	Ave	2.404	2.149		1.79	2.00	-10.6	35.0
cis-1,2-Dichloroethene	Ave	1.339	1.403		2.10	2.00	4.8	35.0
Ethyl acetate	Ave	1.564	1.348		1.72	2.00	-13.8	35.0
Chloroform	Ave	3.335	3.413		2.05	2.00	2.4	35.0
Tert-butyl ethyl ether	Ave	3.019	3.074		2.04	2.00	1.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.7092		1.81	2.00	-9.5	35.0
1,1,1-Trichloroethane	Ave	3.737	3.887		2.08	2.00	4.0	35.0
1,2-Dichloroethane	Ave	0.4541	0.4612		2.03	2.00	1.6	35.0
Cyclohexane	Ave	0.1355	0.1371		2.02	2.00	1.1	35.0
1-Butanol	Ave	0.0492	0.0554		2.25	2.00	12.7	35.0
Benzene	Ave	0.8198	0.8478		2.07	2.00	3.4	35.0
Thiophene	Ave	0.4957	0.5108		2.06	2.00	3.1	35.0
Carbon tetrachloride	Ave	0.7915	0.8269		2.09	2.00	4.5	35.0
2,3-Dimethylpentane	Ave	0.1910	0.1774		1.86	2.00	-7.1	35.0
Tert-amyl methyl ether	Ave	0.8089	0.7689		1.90	2.00	-4.9	35.0
2,2,4-Trimethylpentane	Ave	0.9528	0.9934		2.09	2.00	4.3	35.0
Heptane	Ave	0.2915	0.2971		2.04	2.00	1.9	35.0
1,2-Dichloropropane	Ave	0.2450	0.2556		2.09	2.00	4.3	35.0
Trichloroethene	Ave	0.3584	0.4116		2.30	2.00	14.9	35.0
Dibromomethane	Ave	0.3575	0.3730		2.09	2.00	4.3	35.0
Bromodichloromethane	Ave	0.6953	0.7520		2.16	2.00	8.2	35.0
1,4-Dioxane	Ave	0.1136	0.1060		1.87	2.00	-6.7	35.0
Methyl methacrylate	Ave	0.2185	0.1885		1.73	2.00	-13.7	35.0
Methylcyclohexane	Ave	0.6246	0.5214		1.67	2.00	-16.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.2988		1.86	2.00	-7.0	35.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5210		2.10	2.00	5.1	35.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5322		2.10	2.00	5.2	35.0
Toluene	Ave	0.9594	1.032		2.15	2.00	7.5	35.0
1,1,2-Trichloroethane	Ave	0.2946	0.3064		2.08	2.00	4.0	35.0
2-Methylthiophene	Ave	0.7973	0.8950		2.25	2.00	12.3	35.0
3-Methylthiophene	Ave	0.7817	0.9074		2.32	2.00	16.1	35.0
2-Hexanone	Ave	0.1867	0.1880		2.01	2.00	0.6	35.0
Octane	Ave	0.3291	0.3599		2.19	2.00	9.3	35.0
Dibromochloromethane	Ave	0.6197	0.6932		2.24	2.00	11.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.5606		2.13	2.00	6.5	35.0
Tetrachloroethene	Ave	0.3732	0.3991		2.14	2.00	6.9	35.0
Chlorobenzene	Ave	0.7417	0.7955		2.14	2.00	7.2	35.0
2,3-Dimethylheptane	Ave	0.5103	0.5575		2.18	2.00	9.2	35.0
Ethylbenzene	Ave	1.287	1.367		2.12	2.00	6.2	35.0
2-Ethylthiophene	Ave	1.007	1.070		2.13	2.00	6.3	35.0
m-Xylene & p-Xylene	Ave	1.004	1.071		4.27	4.00	6.7	35.0
Bromoform	Ave	0.6036	0.6731		2.23	2.00	11.5	35.0
Nonane	Ave	0.4307	0.4703		2.18	2.00	9.2	35.0
Styrene	Ave	0.6469	0.7439		2.30	2.00	15.0	35.0
o-Xylene	Ave	1.054	1.086		2.06	2.00	3.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.6159		1.84	2.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2388		1.99	2.00	-0.5	35.0
Isopropylbenzene	Ave	1.406	1.469		2.09	2.00	4.5	35.0
Propylbenzene	Ave	0.3616	0.3822		2.11	2.00	5.7	35.0
2-Chlorotoluene	Ave	0.3276	0.3492		2.13	2.00	6.6	35.0
4-Ethyltoluene	Ave	1.312	1.324		2.02	2.00	0.9	35.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.6390		2.09	2.00	4.6	35.0
Alpha Methyl Styrene	Ave	0.4859	0.5360		2.21	2.00	10.3	35.0
Decane	Ave	0.5020	0.5428		2.16	2.00	8.1	35.0
tert-Butylbenzene	Ave	1.205	1.239		2.06	2.00	2.8	35.0
1,2,4-Trimethylbenzene	Ave	1.131	1.178		2.08	2.00	4.2	35.0
sec-Butylbenzene	Ave	1.565	1.625		2.08	2.00	3.8	35.0
1,3-Dichlorobenzene	Ave	0.6866	0.7347		2.14	2.00	7.0	35.0
Benzyl chloride	Ave	0.9136	0.9711		2.13	2.00	6.3	35.0
1,4-Dichlorobenzene	Ave	0.6673	0.7139		2.14	2.00	7.0	35.0
4-Isopropyltoluene	Ave	1.292	1.323		2.05	2.00	2.4	35.0
1,2,3-Trimethylbenzene	Ave	0.8539	0.9481		2.22	2.00	11.0	35.0
Butylcyclohexane	Ave	0.8557	0.8876		2.07	2.00	3.7	35.0
1,2-Dichlorobenzene	Ave	0.6696	0.7022		2.10	2.00	4.9	35.0
Indane	Ave	0.9538	0.9486		1.99	2.00	-0.5	35.0
Indene	Ave	0.7162	0.9197		2.57	2.00	28.4	35.0
Butylbenzene	Ave	1.187	1.254		2.11	2.00	5.6	35.0
Undecane	Ave	0.4988	0.4581		1.84	2.00	-8.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.132		2.49	2.00	24.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.1772		1.32	2.00	-34.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.152		2.23	2.00	11.4	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7358		2.32	2.00	16.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.9101		2.28	2.00	14.0	35.0
Dodecane	Ave	0.2998	0.3737		2.49	2.00	24.7	35.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5310		2.37	2.00	18.3	35.0
Naphthalene	Ave	0.8290	1.027		2.48	2.00	23.9	35.0
Benzo(b)thiophene	Ave	0.4459	0.5779		2.59	2.00	29.6	35.0
Hexachlorobutadiene	Ave	0.6412	0.6964		2.17	2.00	8.6	35.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.4754		2.57	2.00	28.6	35.0
2-Methylnaphthalene	Ave	0.1703	0.1317		4.83	6.25	-22.7	50.0
1-Methylnaphthalene	Ave	0.1438	0.0985		4.28	6.25	-31.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8034		3.93	4.00	-1.8	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: EBFBH26A.D BFB Injection Date: 08/26/2016

Instrument ID: ME BFB Injection Time: 10:11

Analysis Batch No.: 6407

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.2	
75	30.0 - 60.0 % of mass 95	55.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	82.5	
175	5.0 - 9.0 % of mass 174	5.7	(7.0) 1
176	95.0 - 101.0 % of mass 174	80.0	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6407/6	ECCVH26A.D	08/26/2016	10:40
	LCS 140-6407/1006	ECCVH26A-LCS .d	08/26/2016	10:40
	MB 140-6407/8	EMB500H26.D	08/26/2016	12:59
SV-001-C-21	140-5668-3	EH26P101.D	08/26/2016	13:46
SV-126-C-21	140-5668-13	EH26P102.D	08/26/2016	14:30
SV-004-C-21	140-5668-4	EH26P103.D	08/26/2016	15:18
SV-102-C-21	140-5668-5	EH26P104.D	08/26/2016	16:02
SV-155-C-21	140-5668-6	EH26P105.D	08/26/2016	16:46
SV-153-C-21	140-5668-7	EH26P106.D	08/26/2016	17:29
SV-DUP02-C-21	140-5668-8	EH26P107.D	08/26/2016	18:13
SV-060-C-21	140-5668-9	EH26P108.D	08/26/2016	18:57
SV-152-C-21	140-5668-10	EH26P109.D	08/26/2016	19:41
SV-150-C-21	140-5668-11	EH26P110.D	08/26/2016	20:24
SV-149-C-21	140-5668-12	EH26P111.D	08/26/2016	21:08
SV-113-C-21	140-5668-14	EH26P112.D	08/26/2016	21:51
SV-126-C-21 DL	140-5668-13 DL	EH26P102DL.D	08/27/2016	02:58

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6407/6 Calibration Date: 08/26/2016 10:40

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5515		2.33	2.00	16.2	30.0
Propene	Ave	0.6524	0.7679		2.36	2.00	17.7	30.0
Dichlorodifluoromethane	Ave	4.206	5.093		2.42	2.00	21.1	30.0
Chloromethane	Ave	0.2701	0.2973		2.20	2.00	10.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.711		2.43	2.00	21.2	30.0
Acetaldehyde	Ave	0.2573	0.2856		11.1	10.0	11.0	30.0
Vinyl chloride	Ave	1.078	1.303		2.42	2.00	20.9	30.0
1,3-Butadiene	Ave	0.6822	0.8086		2.37	2.00	18.5	30.0
Butane	Ave	1.176	1.377		2.34	2.00	17.1	30.0
Bromomethane	Ave	1.220	1.445		2.37	2.00	18.4	30.0
Chloroethane	Ave	0.5740	0.6668		2.32	2.00	16.2	30.0
Ethanol	Ave	0.2836	0.3037		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.166	1.357		2.33	2.00	16.3	30.0
2-Methylbutane	Ave	0.8988	0.9664		2.15	2.00	7.5	30.0
Trichlorofluoromethane	Ave	4.072	4.730		2.32	2.00	16.2	30.0
Acrolein	Ave	0.2661	0.3218		2.42	2.00	20.9	30.0
Acetonitrile	Ave	0.2589	0.3118		2.41	2.00	20.4	30.0
Acetone	Ave	0.3815	0.3938		6.20	6.00	3.2	30.0
Isopropyl alcohol	Ave	1.014	1.107		6.56	6.00	9.2	30.0
Pentane	Ave	0.2144	0.2541		2.37	2.00	18.5	30.0
Ethyl ether	Ave	0.6609	0.7467		2.26	2.00	13.0	30.0
1,1-Dichloroethene	Ave	1.220	1.317		2.16	2.00	8.0	30.0
tert-Butyl alcohol	Ave	1.656	1.909		2.31	2.00	15.3	30.0
Acrylonitrile	Ave	0.5155	0.5392		2.09	2.00	4.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.973		2.26	2.00	13.0	30.0
Methylene Chloride	Ave	1.255	1.359		2.17	2.00	8.3	30.0
3-Chloropropene	Ave	1.016	1.060		2.09	2.00	4.3	30.0
Carbon disulfide	Ave	3.766	4.394		2.33	2.00	16.7	30.0
trans-1,2-Dichloroethene	Ave	1.326	1.513		2.28	2.00	14.0	30.0
2-Methylpentane	Ave	1.640	1.840		2.24	2.00	12.2	30.0
Methyl tert-butyl ether	Ave	3.835	4.358		2.27	2.00	13.6	30.0
1,1-Dichloroethane	Ave	2.224	2.547		2.29	2.00	14.5	30.0
Vinyl acetate	Ave	2.009	2.328		2.32	2.00	15.9	30.0
2-Butanone (MEK)	Ave	0.5829	0.5966		2.05	2.00	2.4	30.0
Hexane	Ave	0.7813	0.8861		2.27	2.00	13.4	30.0
Isopropyl ether	Ave	2.404	2.727		2.27	2.00	13.4	30.0
cis-1,2-Dichloroethene	Ave	1.339	1.507		2.25	2.00	12.5	30.0
Ethyl acetate	Ave	1.564	1.764		2.26	2.00	12.8	30.0
Chloroform	Ave	3.335	3.787		2.27	2.00	13.6	30.0
Tert-butyl ethyl ether	Ave	3.019	3.467		2.30	2.00	14.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6407/6 Calibration Date: 08/26/2016 10:40

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.8471		2.16	2.00	8.2	30.0
1,1,1-Trichloroethane	Ave	3.737	4.201		2.25	2.00	12.4	30.0
1,2-Dichloroethane	Ave	0.4541	0.5261		2.32	2.00	15.8	30.0
Cyclohexane	Ave	0.1355	0.1542		2.28	2.00	13.8	30.0
Thiophene	Ave	0.4957	0.5736		2.32	2.00	15.7	30.0
Benzene	Ave	0.8198	0.9298		2.27	2.00	13.4	30.0
1-Butanol	Ave	0.0492	0.0537		2.18	2.00	9.1	30.0
Carbon tetrachloride	Ave	0.7915	0.9008		2.28	2.00	13.8	30.0
2,3-Dimethylpentane	Ave	0.1910	0.2175		2.28	2.00	13.9	30.0
Tert-amyl methyl ether	Ave	0.8089	0.9160		2.27	2.00	13.2	30.0
2,2,4-Trimethylpentane	Ave	0.9528	1.098		2.31	2.00	15.2	30.0
Heptane	Ave	0.2915	0.3360		2.31	2.00	15.2	30.0
1,2-Dichloropropane	Ave	0.2450	0.2858		2.33	2.00	16.6	30.0
Trichloroethene	Ave	0.3584	0.4084		2.28	2.00	14.0	30.0
Dibromomethane	Ave	0.3575	0.4028		2.25	2.00	12.7	30.0
Bromodichloromethane	Ave	0.6953	0.8191		2.36	2.00	17.8	30.0
1,4-Dioxane	Ave	0.1136	0.1231		2.17	2.00	8.3	30.0
Methyl methacrylate	Ave	0.2185	0.2396		2.19	2.00	9.6	30.0
Methylcyclohexane	Ave	0.6246	0.7178		2.30	2.00	14.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.3414		2.13	2.00	6.2	30.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5929		2.39	2.00	19.6	30.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5848		2.31	2.00	15.6	30.0
Toluene	Ave	0.9594	1.094		2.28	2.00	14.0	30.0
1,1,2-Trichloroethane	Ave	0.2946	0.3379		2.30	2.00	14.7	30.0
2-Methylthiophene	Ave	0.7973	0.9483		2.38	2.00	18.9	30.0
3-Methylthiophene	Ave	0.7817	0.9228		2.36	2.00	18.0	30.0
2-Hexanone	Ave	0.1867	0.2112		2.26	2.00	13.1	30.0
Octane	Ave	0.3291	0.3828		2.33	2.00	16.3	30.0
Dibromochloromethane	Ave	0.6197	0.7344		2.37	2.00	18.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.6071		2.31	2.00	15.4	30.0
Tetrachloroethene	Ave	0.3732	0.4262		2.29	2.00	14.2	30.0
Chlorobenzene	Ave	0.7417	0.8523		2.30	2.00	14.9	30.0
2,3-Dimethylheptane	Ave	0.5103	0.5891		2.31	2.00	15.4	30.0
Ethylbenzene	Ave	1.287	1.505		2.34	2.00	16.9	30.0
2-Ethylthiophene	Ave	1.007	1.202		2.39	2.00	19.4	30.0
m-Xylene & p-Xylene	Ave	1.004	1.183		4.72	4.00	17.8	30.0
Bromoform	Ave	0.6036	0.7378		2.45	2.00	22.2	30.0
Nonane	Ave	0.4307	0.5191		2.41	2.00	20.5	30.0
Styrene	Ave	0.6469	0.8211		2.54	2.00	26.9	30.0
o-Xylene	Ave	1.054	1.232		2.34	2.00	16.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.8007		2.39	2.00	19.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6407/6 Calibration Date: 08/26/2016 10:40

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2785		2.32	2.00	16.0	30.0
Isopropylbenzene	Ave	1.406	1.635		2.33	2.00	16.3	30.0
Propylbenzene	Ave	0.3616	0.4316		2.39	2.00	19.4	30.0
2-Chlorotoluene	Ave	0.3276	0.3791		2.32	2.00	15.7	30.0
4-Ethyltoluene	Ave	1.312	1.567		2.39	2.00	19.5	30.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.7178		2.35	2.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.4859	0.5873		2.42	2.00	20.9	30.0
Decane	Ave	0.5020	0.6309		2.51	2.00	25.7	30.0
tert-Butylbenzene	Ave	1.205	1.411		2.34	2.00	17.2	30.0
1,2,4-Trimethylbenzene	Ave	1.131	1.351		2.39	2.00	19.4	30.0
1,3-Dichlorobenzene	Ave	0.6866	0.8147		2.37	2.00	18.7	30.0
sec-Butylbenzene	Ave	1.565	1.873		2.40	2.00	19.7	30.0
Benzyl chloride	Ave	0.9136	1.152		2.52	2.00	26.1	30.0
1,4-Dichlorobenzene	Ave	0.6673	0.8015		2.40	2.00	20.1	30.0
4-Isopropyltoluene	Ave	1.292	1.559		2.41	2.00	20.6	30.0
1,2,3-Trimethylbenzene	Ave	0.8539	1.019		2.39	2.00	19.3	30.0
Butylcyclohexane	Ave	0.8557	1.023		2.39	2.00	19.6	30.0
1,2-Dichlorobenzene	Ave	0.6696	0.7867		2.35	2.00	17.5	30.0
Indane	Ave	0.9538	1.149		2.41	2.00	20.5	30.0
Indene	Ave	0.7162	0.8384		2.34	2.00	17.1	30.0
Butylbenzene	Ave	1.187	1.479		2.49	2.00	24.6	30.0
Undecane	Ave	0.4988	0.6048		2.43	2.00	21.3	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.088		2.39	2.00	19.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.3353		2.50	2.00	24.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.257		2.43	2.00	21.5	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7638		2.41	2.00	20.5	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.997		2.50	2.00	24.9	30.0
Dodecane	Ave	0.2998	0.3811		2.54	2.00	27.1	30.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5821		2.59	2.00	29.7	30.0
Naphthalene	Ave	0.8290	1.140		2.75	2.00	37.5*	30.0
Benzo(b)thiophene	Ave	0.4459	0.5784		2.60	2.00	29.7	30.0
Hexachlorobutadiene	Ave	0.6412	0.7587		2.37	2.00	18.3	30.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.5098		2.76	2.00	37.9*	30.0
2-Methylnaphthalene	Ave	0.1703	0.2032		7.46	6.25	19.3	50.0
1-Methylnaphthalene	Ave	0.1438	0.1717		7.47	6.25	19.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8374		4.09	4.00	2.3	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: EBFBH27.D BFB Injection Date: 08/27/2016

Instrument ID: ME BFB Injection Time: 14:06

Analysis Batch No.: 6424

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.1	
75	30.0 - 60.0 % of mass 95	56.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.3	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	82.4	
175	5.0 - 9.0 % of mass 174	5.9	(7.1) 1
176	95.0 - 101.0 % of mass 174	80.0	(97.1) 1
177	5.0 - 9.0 % of mass 176	5.5	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6424/2	ECCVH27.D	08/27/2016	14:35
	LCS 140-6424/1002	ECCVH27-LCS.d	08/27/2016	14:35
	MB 140-6424/19	EMB500H27R.D	08/27/2016	18:38
SV-060-C-21 DL	140-5668-9 DL	EH27p101DL.D	08/27/2016	19:21
IA-DUP03-A-21	140-5668-20	EH27p102.D	08/27/2016	20:06
IA-015-A-21	140-5668-21	EH27p103.D	08/27/2016	20:50
IA-118-A-21	140-5668-22	EH27p104.D	08/27/2016	21:33
IA-117-A-21	140-5668-23	EH27p105.D	08/27/2016	22:18
IA-079-A-21	140-5668-24	EH27p106.D	08/27/2016	23:01
IA-097-A-21	140-5668-25	EH27p107.D	08/27/2016	23:45
IA-139-A-21	140-5668-26	EH27p108.D	08/28/2016	00:29
IA-DUP04-A-21	140-5668-27	EH27p109.D	08/28/2016	01:57
IA-081-A-21	140-5668-28	EH27p110.D	08/28/2016	02:41

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6424/2 Calibration Date: 08/27/2016 14:35

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5802		2.45	2.00	22.3	30.0
Propene	Ave	0.6524	0.8356		2.56	2.00	28.1	30.0
Dichlorodifluoromethane	Ave	4.206	5.419		2.58	2.00	28.8	30.0
Chloromethane	Ave	0.2701	0.3116		2.31	2.00	15.4	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.724		2.44	2.00	21.8	30.0
Acetaldehyde	Ave	0.2573	0.2776		10.8	10.0	7.9	30.0
Vinyl chloride	Ave	1.078	1.308		2.43	2.00	21.4	30.0
1,3-Butadiene	Ave	0.6822	0.8064		2.37	2.00	18.2	30.0
Butane	Ave	1.176	1.365		2.32	2.00	16.1	30.0
Bromomethane	Ave	1.220	1.445		2.37	2.00	18.4	30.0
Chloroethane	Ave	0.5740	0.6354		2.22	2.00	10.7	30.0
Ethanol	Ave	0.2836	0.2907		10.3	10.0	2.5	30.0
Vinyl bromide	Ave	1.166	1.304		2.24	2.00	11.8	30.0
2-Methylbutane	Ave	0.8988	0.9424		2.10	2.00	4.8	30.0
Trichlorofluoromethane	Ave	4.072	4.721		2.32	2.00	15.9	30.0
Acrolein	Ave	0.2661	0.3065		2.30	2.00	15.2	30.0
Acetonitrile	Ave	0.2589	0.2737		2.12	2.00	5.7	30.0
Acetone	Ave	0.3815	0.3713		5.84	6.00	-2.7	30.0
Isopropyl alcohol	Ave	1.014	1.042		6.17	6.00	2.8	30.0
Pentane	Ave	0.2144	0.2461		2.30	2.00	14.7	30.0
Ethyl ether	Ave	0.6609	0.6988		2.12	2.00	5.7	30.0
1,1-Dichloroethene	Ave	1.220	1.267		2.08	2.00	3.9	30.0
tert-Butyl alcohol	Ave	1.656	1.767		2.13	2.00	6.7	30.0
Acrylonitrile	Ave	0.5155	0.5211		2.02	2.00	1.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.786		2.12	2.00	6.0	30.0
Methylene Chloride	Ave	1.255	1.322		2.11	2.00	5.3	30.0
3-Chloropropene	Ave	1.016	1.039		2.05	2.00	2.2	30.0
Carbon disulfide	Ave	3.766	4.373		2.32	2.00	16.1	30.0
trans-1,2-Dichloroethene	Ave	1.326	1.467		2.21	2.00	10.6	30.0
2-Methylpentane	Ave	1.640	1.787		2.18	2.00	9.0	30.0
Methyl tert-butyl ether	Ave	3.835	4.187		2.18	2.00	9.2	30.0
1,1-Dichloroethane	Ave	2.224	2.516		2.26	2.00	13.1	30.0
Vinyl acetate	Ave	2.009	2.231		2.22	2.00	11.0	30.0
2-Butanone (MEK)	Ave	0.5829	0.5746		1.97	2.00	-1.4	30.0
Hexane	Ave	0.7813	0.8620		2.21	2.00	10.3	30.0
Isopropyl ether	Ave	2.404	2.616		2.18	2.00	8.8	30.0
cis-1,2-Dichloroethene	Ave	1.339	1.475		2.20	2.00	10.2	30.0
Ethyl acetate	Ave	1.564	1.687		2.16	2.00	7.9	30.0
Chloroform	Ave	3.335	3.656		2.19	2.00	9.6	30.0
Tert-butyl ethyl ether	Ave	3.019	3.307		2.19	2.00	9.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6424/2 Calibration Date: 08/27/2016 14:35

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.8116		2.07	2.00	3.6	30.0
1,1,1-Trichloroethane	Ave	3.737	4.122		2.21	2.00	10.3	30.0
1,2-Dichloroethane	Ave	0.4541	0.5142		2.27	2.00	13.2	30.0
Cyclohexane	Ave	0.1355	0.1457		2.15	2.00	7.5	30.0
Thiophene	Ave	0.4957	0.5371		2.17	2.00	8.4	30.0
1-Butanol	Ave	0.0492	0.0518		2.11	2.00	5.2	30.0
Benzene	Ave	0.8198	0.8913		2.18	2.00	8.7	30.0
Carbon tetrachloride	Ave	0.7915	0.8710		2.20	2.00	10.0	30.0
2,3-Dimethylpentane	Ave	0.1910	0.2060		2.16	2.00	7.9	30.0
Tert-amyl methyl ether	Ave	0.8089	0.8725		2.16	2.00	7.9	30.0
2,2,4-Trimethylpentane	Ave	0.9528	1.052		2.21	2.00	10.4	30.0
Heptane	Ave	0.2915	0.3179		2.18	2.00	9.1	30.0
1,2-Dichloropropane	Ave	0.2450	0.2725		2.23	2.00	11.2	30.0
Trichloroethene	Ave	0.3584	0.3763		2.10	2.00	5.0	30.0
Dibromomethane	Ave	0.3575	0.3936		2.20	2.00	10.1	30.0
Bromodichloromethane	Ave	0.6953	0.7934		2.28	2.00	14.1	30.0
1,4-Dioxane	Ave	0.1136	0.1164		2.05	2.00	2.5	30.0
Methyl methacrylate	Ave	0.2185	0.2260		2.07	2.00	3.4	30.0
Methylcyclohexane	Ave	0.6246	0.6715		2.15	2.00	7.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.3253		2.03	2.00	1.2	30.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5533		2.23	2.00	11.6	30.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5679		2.25	2.00	12.3	30.0
Toluene	Ave	0.9594	1.042		2.17	2.00	8.6	30.0
1,1,2-Trichloroethane	Ave	0.2946	0.3236		2.20	2.00	9.9	30.0
2-Methylthiophene	Ave	0.7973	0.8746		2.20	2.00	9.7	30.0
3-Methylthiophene	Ave	0.7817	0.8629		2.21	2.00	10.4	30.0
2-Hexanone	Ave	0.1867	0.2023		2.17	2.00	8.4	30.0
Octane	Ave	0.3291	0.3698		2.25	2.00	12.4	30.0
Dibromochloromethane	Ave	0.6197	0.7126		2.30	2.00	15.0	30.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.5745		2.19	2.00	9.2	30.0
Tetrachloroethene	Ave	0.3732	0.4011		2.15	2.00	7.5	30.0
Chlorobenzene	Ave	0.7417	0.8034		2.17	2.00	8.3	30.0
2,3-Dimethylheptane	Ave	0.5103	0.5658		2.22	2.00	10.9	30.0
Ethylbenzene	Ave	1.287	1.418		2.20	2.00	10.1	30.0
2-Ethylthiophene	Ave	1.007	1.134		2.25	2.00	12.6	30.0
m-Xylene & p-Xylene	Ave	1.004	1.118		4.46	4.00	11.4	30.0
Bromoform	Ave	0.6036	0.7088		2.35	2.00	17.4	30.0
Nonane	Ave	0.4307	0.4918		2.28	2.00	14.2	30.0
Styrene	Ave	0.6469	0.7674		2.37	2.00	18.6	30.0
o-Xylene	Ave	1.054	1.195		2.27	2.00	13.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.7648		2.28	2.00	14.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6424/2 Calibration Date: 08/27/2016 14:35

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH27.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2616		2.18	2.00	9.0	30.0
Isopropylbenzene	Ave	1.406	1.523		2.17	2.00	8.3	30.0
Propylbenzene	Ave	0.3616	0.3920		2.17	2.00	8.4	30.0
2-Chlorotoluene	Ave	0.3276	0.3598		2.20	2.00	9.8	30.0
4-Ethyltoluene	Ave	1.312	1.489		2.27	2.00	13.5	30.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.6803		2.23	2.00	11.4	30.0
Alpha Methyl Styrene	Ave	0.4859	0.5670		2.33	2.00	16.7	30.0
Decane	Ave	0.5020	0.5961		2.38	2.00	18.7	30.0
tert-Butylbenzene	Ave	1.205	1.338		2.22	2.00	11.0	30.0
1,2,4-Trimethylbenzene	Ave	1.131	1.292		2.29	2.00	14.3	30.0
sec-Butylbenzene	Ave	1.565	1.769		2.26	2.00	13.1	30.0
1,3-Dichlorobenzene	Ave	0.6866	0.7674		2.24	2.00	11.8	30.0
Benzyl chloride	Ave	0.9136	1.084		2.37	2.00	18.6	30.0
1,4-Dichlorobenzene	Ave	0.6673	0.7514		2.25	2.00	12.6	30.0
4-Isopropyltoluene	Ave	1.292	1.478		2.29	2.00	14.4	30.0
1,2,3-Trimethylbenzene	Ave	0.8539	0.9683		2.27	2.00	13.4	30.0
Butylcyclohexane	Ave	0.8557	0.9891		2.31	2.00	15.6	30.0
1,2-Dichlorobenzene	Ave	0.6696	0.7469		2.23	2.00	11.5	30.0
Indane	Ave	0.9538	1.084		2.27	2.00	13.7	30.0
Indene	Ave	0.7162	0.7965		2.23	2.00	11.2	30.0
Butylbenzene	Ave	1.187	1.420		2.39	2.00	19.6	30.0
Undecane	Ave	0.4988	0.5797		2.33	2.00	16.2	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.012		2.22	2.00	11.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.3091		2.30	2.00	15.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.186		2.30	2.00	14.7	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7202		2.27	2.00	13.6	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.9458		2.37	2.00	18.5	30.0
Dodecane	Ave	0.2998	0.3598		2.40	2.00	20.0	30.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5270		2.35	2.00	17.4	30.0
Naphthalene	Ave	0.8290	0.9876		2.38	2.00	19.1	30.0
Benzo(b)thiophene	Ave	0.4459	0.4655		2.09	2.00	4.4	30.0
Hexachlorobutadiene	Ave	0.6412	0.7229		2.26	2.00	12.7	30.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.4460		2.41	2.00	20.6	30.0
2-Methylnaphthalene	Ave	0.1703	0.1580		5.80	6.25	-7.3	50.0
1-Methylnaphthalene	Ave	0.1438	0.1413		6.14	6.25	-1.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8675		4.24	4.00	6.0	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: GBFBG20.D BFB Injection Date: 07/20/2016

Instrument ID: MG BFB Injection Time: 14:02

Analysis Batch No.: 5925

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	23.8	
75	30.0 - 60.0 % of mass 95	53.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	92.0	
175	5.0 - 9.0 % of mass 174	6.3	(6.9) 1
176	95.0 - 101.0 % of mass 174	89.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.4) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5925/2	GG20ICL1.D	07/20/2016	14:35
	IC 140-5925/3	GG20ICL2.D	07/20/2016	15:19
	IC 140-5925/4	GG20ICL3.D	07/20/2016	16:03
	IC 140-5925/5	GG20ICL4.D	07/20/2016	16:46
	IC 140-5925/6	GG20ICL5.D	07/20/2016	17:27
	ICIS 140-5925/7	GG20ICL6.D	07/20/2016	18:08
	IC 140-5925/8	GG20ICL7.D	07/20/2016	18:53
	IC 140-5925/9	GG20ICL8.D	07/20/2016	19:37
	IC 140-5925/10	GG20ICL9.D	07/20/2016	20:22
	ICV 140-5925/12	GG20ICV.D	07/20/2016	21:45

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5925/2	GG20ICL1.D
Level 2	IC 140-5925/3	GG20ICL2.D
Level 3	IC 140-5925/4	GG20ICL3.D
Level 4	IC 140-5925/5	GG20ICL4.D
Level 5	IC 140-5925/6	GG20ICL5.D
Level 6	ICIS 140-5925/7	GG20ICL6.D
Level 7	IC 140-5925/8	GG20ICL7.D
Level 8	IC 140-5925/9	GG20ICL8.D
Level 9	IC 140-5925/10	GG20ICL9.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.4176 0.3715	0.3314 0.3158	0.2752 0.3389	0.2816 0.3059	0.3534	Ave		0.3324				13.5		30.0			
Propene	1.9018 1.3612	1.6567 1.2036	1.6806 1.2095	1.3925 1.1119	1.3024	Ave		1.4245				18.6		30.0			
Dichlorodifluoromethane	4.0679 3.5253	3.6296 3.1789	3.5575 3.2621	3.3450 3.0355	3.3547	Ave		3.4396				8.8		30.0			
Chloromethane	+++++ 0.4044	0.4314 0.3689	0.4505 0.3690	0.3908 0.3259	0.3753	Ave		0.3895				10.1		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.4258 2.1948	2.2175 2.0397	2.2075 2.1131	2.0987 2.0292	2.0970	Ave		2.1581				5.6		30.0			
Acetaldehyde	+++++ 0.5796	+++++ 0.4680	+++++ 0.4427	1.0795 +++++	0.6495	Ave		0.6438				40.0	*	30.0			
Vinyl chloride	1.5206 1.2776	1.2740 1.2203	1.3485 1.1967	1.2046 1.0598	1.2243	Ave		1.2585				10.0		30.0			
1,3-Butadiene	1.2974 1.0489	1.0617 1.0024	1.0853 0.9757	0.9723 0.8721	0.9924	Ave		1.0342				11.3		30.0			
Butane	2.6625 2.2597	2.2558 2.1541	2.4672 2.0816	2.2794 1.8242	2.1462	Ave		2.2368				10.6		30.0			
Bromomethane	1.3106 1.0597	1.1154 1.0397	1.0725 1.0420	0.9964 0.9496	1.0166	Ave		1.0670				9.6		30.0			
Chloroethane	0.7275 0.6086	0.6032 0.6136	0.6314 0.5986	0.5778 0.5436	0.5878	Ave		0.6102				8.3		30.0			
Ethanol	+++++ 0.5761	+++++ 0.5603	0.6964 0.5058	0.5994 0.4913	0.5869	Ave		0.5737				11.8		30.0			
Vinyl bromide	1.2086 1.0161	1.0451 1.0267	1.0333 1.0162	0.9776 0.9332	0.9847	Ave		1.0268				7.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.8562 1.4717	1.5492 1.5440	1.5973 1.4483	1.4121 1.2609	1.4527	Ave		1.5103				10.7		30.0			
Acrolein	+++++ 0.3099	+++++ 0.3033	0.4666 0.2763	0.3756 0.2502	0.3560	LinF		0.2587							0.9920		0.9900
Trichlorofluoromethane	3.7804 3.2737	3.2330 3.1786	3.3182 3.1339	3.0837 2.9455	3.1391	Ave		3.2318				7.2		30.0			
Acetonitrile	+++++ 0.4866	0.6128 0.5158	0.5802 0.4494	0.5092 0.4484	0.5064	Ave		0.5136				11.3		30.0			
Acetone	+++++ 0.5322	+++++ 0.4690	+++++ 0.4236	0.8796 0.4264	0.6092	Ave		0.5566				31.1	*	30.0			
Isopropyl alcohol	1.9972 1.7874	1.7803 1.8183	1.8708 1.5904	1.7726 1.5335	1.8433	Ave		1.7771				7.9		30.0			
Pentane	0.2192 0.1876	0.1849 0.1924	0.1863 0.1846	0.1876 0.1618	0.1866	Ave		0.1879				7.8		30.0			
Ethyl ether	1.3881 1.2487	1.2528 1.4318	1.1904 1.2184	1.2581 1.1807	1.3081	Ave		1.2752				6.7		30.0			
1,1-Dichloroethene	1.2070 0.9536	0.9879 0.9949	1.0087 0.9359	0.8875 0.8797	0.9263	Ave		0.9757				10.0		30.0			
Acrylonitrile	0.8198 0.6105	0.6678 0.6996	0.6558 0.5960	0.6070 0.6028	0.6284	Ave		0.6542				10.9		30.0			
tert-Butyl alcohol	1.9088 1.7837	1.7108 1.8163	1.8433 1.4381	1.7437 1.6532	1.8283	Ave		1.7474				7.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.3070 1.9812	1.9444 2.0228	1.9867 1.9189	1.8393 1.8662	1.9127	Ave		1.9755				7.0		30.0			
Methylene Chloride	+++++ 0.9231	+++++ 0.9538	1.2994 0.8944	0.9736 0.8450	0.9255	Ave		0.9736				15.4		30.0			
3-Chloropropene	1.8681 1.3955	1.8157 1.3215	1.3157 1.2967	1.3322 1.1171	1.3275	Ave		1.4211				17.6		30.0			
Carbon disulfide	3.4656 3.4017	3.1082 3.0673	3.0217 3.2077	2.9856 2.9316	3.2357	Ave		3.1584				5.8		30.0			
trans-1,2-Dichloroethene	1.2769 1.2358	1.1873 1.1271	1.2174 1.1341	1.1330 1.0853	1.1667	Ave		1.1737				5.2		30.0			
2-Methylpentane	3.6371 3.1924	2.9202 2.8568	3.0981 2.8539	2.9140 2.6417	3.0595	Ave		3.0193				9.3		30.0			
Methyl tert-butyl ether	3.0459 3.2543	3.0206 3.0849	2.8762 2.9711	3.2007 3.1976	3.2723	Ave		3.1026				4.4		30.0			
1,1-Dichloroethane	2.7908 2.4400	2.4190 2.2440	2.4363 2.2501	2.3103 2.2508	2.3616	Ave		2.3892				7.2		30.0			
Vinyl acetate	3.2076 3.8168	3.3105 3.5951	3.0796 3.5582	3.6186 3.5879	3.8022	Ave		3.5085				7.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5856	+++++ 0.5150	0.8579 0.5053	0.7586 0.5481	0.6034	Lin1	0.0636	0.5273							0.9970		0.9900
Hexane	1.3236 1.0709	1.1242 0.9679	1.0332 0.9843	1.0176 0.9484	1.0435	Ave		1.0571				10.7		30.0			
Isopropyl ether	4.4971 4.8101	4.5987 4.5038	4.3829 4.3067	4.9179 4.5444	4.8377	Ave		4.5999				4.6		30.0			
cis-1,2-Dichloroethene	1.4002 1.2766	1.2083 1.1882	1.2772 1.1904	1.1954 1.1896	1.2090	Ave		1.2372				5.7		30.0			
Ethyl acetate	2.7241 3.1329	2.5922 2.9287	2.5262 2.8410	3.0035 3.0992	3.1280	Ave		2.8862				8.0		30.0			
Chloroform	3.0248 2.7275	2.7773 2.5389	2.6719 2.5163	2.6051 2.5351	2.6486	Ave		2.6717				6.0		30.0			
Tert-butyl ethyl ether	3.2929 3.8929	3.5952 3.6795	3.3458 3.5484	3.8535 3.7899	3.8823	Ave		3.6534				6.2		30.0			
Tetrahydrofuran	1.6108 1.6329	1.6045 1.5190	1.3847 1.4660	1.6202 1.5852	1.6201	Ave		1.5604				5.5		30.0			
1,1,1-Trichloroethane	3.2767 3.0505	2.9523 2.8050	2.9284 2.8299	2.8902 2.8586	2.9315	Ave		2.9470				4.9		30.0			
1,2-Dichloroethane	0.4504 0.4252	0.3890 0.3700	0.4369 0.3802	0.3751 0.3714	0.3760	Ave		0.3971				7.9		30.0			
1-Butanol	+++++ 0.1369	0.1155 0.1121	0.1400 0.0975	0.1200 0.1052	0.1188	Ave		0.1182				12.3		30.0			
Benzene	0.8697 0.7924	0.7384 0.6785	0.8106 0.6816	0.7129 0.6130	0.7132	Ave		0.7345				10.7		30.0			
Cyclohexane	+++++ 0.1381	0.1437 0.1147	0.1539 0.1141	0.1215 0.0997	0.1198	Ave		0.1257				14.3		30.0			
Carbon tetrachloride	0.6350 0.6757	0.5186 0.5861	0.5522 0.6117	0.5659 0.5838	0.4787	Ave		0.5786				10.3		30.0			
2,3-Dimethylpentane	+++++ 0.1919	0.1795 0.1598	0.2092 0.1648	0.1672 0.1533	0.1654	Ave		0.1739				10.7		30.0			
Thiophene	0.5028 0.4542	0.4257 0.3897	0.4773 0.4041	0.3987 0.3822	0.3962	Ave		0.4257				10.1		30.0			
Tert-amyl methyl ether	+++++ 0.7508	0.6078 0.6556	0.7163 0.6454	0.6946 0.6605	0.6737	Ave		0.6756				6.6		30.0			
2,2,4-Trimethylpentane	1.7666 1.4893	1.3656 1.2311	1.6012 1.2595	1.3040 1.1554	1.2845	Ave		1.3841				14.3		30.0			
Heptane	0.3572 0.2968	0.2733 0.2459	0.3167 0.2561	0.2535 0.2358	0.2575	Ave		0.2770				14.2		30.0			
1,2-Dichloropropane	0.3755 0.3168	0.2798 0.2721	0.3290 0.2733	0.2836 0.2624	0.2851	Ave		0.2975				12.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4750 0.3874	0.3763 0.3326	0.4323 0.3434	0.3262 0.3305	0.3271	Ave		0.3701				14.4		30.0			
Dibromomethane	0.4034 0.3383	0.3155 0.2839	0.3568 0.2916	0.2910 0.2776	0.2901	Ave		0.3165				13.3		30.0			
Bromodichloromethane	0.6258 0.6381	0.5199 0.5551	0.6151 0.5684	0.5295 0.5395	0.5434	Ave		0.5705				7.8		30.0			
1,4-Dioxane	0.1071 0.1215	0.0957 0.1018	0.1108 0.0983	0.1039 0.0964	0.1038	Ave		0.1044				7.8		30.0			
Methyl methacrylate	0.3261 0.4401	0.3260 0.3867	0.3739 0.3856	0.6251 0.3969	0.3945	Ave		0.4061				22.0		30.0			
Methylcyclohexane	+++++ 0.6290	0.5956 0.5254	0.6820 0.5324	0.5427 0.4909	0.5477	Ave		0.5682				11.0		30.0			
4-Methyl-2-pentanone (MIBK)	0.8339 0.7201	0.7096 0.6048	1.3212 0.6271	0.7336 0.6278	0.7820	Lin1	0.0257	0.6334							0.9930		0.9900
cis-1,3-Dichloropropene	0.4556 0.4795	0.4206 0.4160	0.4602 0.4280	0.3995 0.4145	0.4217	Ave		0.4329				6.0		30.0			
trans-1,3-Dichloropropene	0.3919 0.4364	0.3907 0.4025	0.4072 0.4159	0.3880 0.4213	0.4136	Ave		0.4075				3.9		30.0			
Toluene Range	+++++ 2.3056	+++++ 1.9961	+++++ 2.0204	1.9927 1.9892	2.0422	Ave		2.0577				6.0		30.0			
Toluene	0.9278 0.9238	0.8626 0.8343	0.9087 0.8392	0.8548 0.8403	0.8772	Ave		0.8743				4.2		30.0			
1,1,2-Trichloroethane	0.2811 0.2682	0.2542 0.2443	0.2689 0.2438	0.2451 0.2426	0.2539	Ave		0.2558				5.4		30.0			
2-Methylthiophene	0.7431 0.7591	0.7199 0.7059	0.7476 0.7259	0.6901 0.7253	0.7391	Ave		0.7284				3.0		30.0			
3-Methylthiophene	0.7505 0.7723	0.6755 0.6891	0.7186 0.7171	0.6719 0.7166	0.7129	Ave		0.7138				4.6		30.0			
2-Hexanone	+++++ 0.3141	0.2521 0.2711	0.2760 0.2794	0.2870 0.2952	0.2949	Ave		0.2837				6.6		30.0			
C8 Range	+++++ 3.4189	+++++ 2.8452	+++++ 2.8230	3.4694 2.5862	3.0118	Ave		3.0258				11.6		30.0			
Octane	0.3733 0.3244	0.3086 0.2836	0.3568 0.2833	0.2916 0.2697	0.2937	Ave		0.3095				11.4		30.0			
Dibromochloromethane	0.4930 0.6097	0.4441 0.5869	0.5221 0.6014	0.5093 0.6091	0.5525	Ave		0.5476				10.8		30.0			
1,2-Dibromoethane (EDB)	0.4693 0.5263	0.4072 0.4777	0.4918 0.4940	0.4665 0.5021	0.4868	Ave		0.4802				6.8		30.0			
Tetrachloroethene	0.4071 0.3571	0.3499 0.3196	0.3921 0.3331	0.3230 0.3355	0.3275	Ave		0.3494				8.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7417 0.7232	0.6915 0.6703	0.7191 0.6813	0.6619 0.6896	0.6823	Ave		0.6957				3.8		30.0			
2,3-Dimethylheptane	1.2726 1.0846	1.0563 0.9485	1.1751 0.9199	1.0154 0.8291	1.0072	Ave		1.0343				12.9		30.0			
Ethylbenzene	1.2055 1.2320	1.0840 1.1239	1.1606 1.1299	1.1580 1.1504	1.1842	Ave		1.1587				3.8		30.0			
2-Ethylthiophene	0.9316 0.9684	0.8379 0.8851	0.9112 0.8962	0.8678 0.9275	0.9194	Ave		0.9050				4.3		30.0			
m-Xylene & p-Xylene	0.9207 0.9598	0.8465 0.8817	0.9090 0.8590	0.8842 0.8849	0.9204	Ave		0.8963				3.9		30.0			
Bromoform	+++++ 0.6523	0.3529 0.6710	0.4855 0.7217	0.4740 0.8409	0.5757	Ave		0.5968				26.2		30.0			
Nonane	0.7249 0.6759	0.6310 0.5854	0.7228 0.5482	0.6202 0.4829	0.6317	Ave		0.6248				12.6		30.0			
Styrene	0.5093 0.6620	0.5535 0.6159	0.5802 0.6128	0.5438 0.6422	0.6157	Ave		0.5928				8.4		30.0			
o-Xylene	1.0587 1.0217	0.9572 0.9179	0.9560 0.9069	0.9299 0.9281	0.9785	Ave		0.9617				5.3		30.0			
1,1,2,2-Tetrachloroethane	0.6523 0.7122	0.6377 0.6389	0.6673 0.6243	0.6559 0.6192	0.6850	Ave		0.6548				4.6		30.0			
1,2,3-Trichloropropane	0.1922 0.2191	0.1892 0.1991	0.2065 0.1977	0.2073 0.2103	0.2112	Ave		0.2036				4.8		30.0			
Isopropylbenzene	1.4614 1.4060	1.3224 1.2815	1.3560 1.2619	1.3243 1.3222	1.3497	Ave		1.3428				4.5		30.0			
Propylbenzene	0.3461 0.3747	0.3341 0.3439	0.3512 0.3401	0.3453 0.3628	0.3613	Ave		0.3511				3.7		30.0			
2-Chlorotoluene	0.3366 0.3437	0.3136 0.3182	0.3319 0.3191	0.3146 0.3341	0.3282	Ave		0.3267				3.3		30.0			
4-Ethyltoluene	1.2466 1.3806	1.2010 1.2828	1.2758 1.2664	1.2451 1.3490	1.3128	Ave		1.2845				4.3		30.0			
1,3,5-Trimethylbenzene	0.6124 0.6480	0.5917 0.5884	0.6318 0.5764	0.6087 0.6284	0.6228	Ave		0.6121				3.8		30.0			
Alpha Methyl Styrene	0.3662 0.5549	0.4035 0.5283	0.4070 0.5262	0.4441 0.5705	0.5163	Ave		0.4797				15.6		30.0			
Decane	0.8274 0.8333	0.7524 0.7290	0.8405 0.6869	0.7696 0.6662	0.7843	Ave		0.7655				8.3		30.0			
tert-Butylbenzene	1.1853 1.2571	1.1305 1.1511	1.1987 1.1243	1.1845 1.2497	1.2234	Ave		1.1894				4.1		30.0			
1,2,4-Trimethylbenzene	1.1108 1.2166	1.0560 1.0958	1.1344 1.0759	1.1141 1.1565	1.1606	Ave		1.1245				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.6429 1.7364	1.5639 1.5725	1.6822 1.5386	1.6145 +++++	1.6773	Ave		1.6285				4.2		30.0			
1,3-Dichlorobenzene	0.6765 0.7717	0.6327 0.7290	0.6862 0.7726	0.6299 0.9476	0.7142	Ave		0.7289				13.3		30.0			
Benzyl chloride	0.7603 0.9945	0.7638 0.9134	0.7063 0.9467	0.7379 1.0434	0.9119	Ave		0.8643				14.3		30.0			
1,4-Dichlorobenzene	0.6459 0.7505	0.6127 0.7087	0.6499 0.7428	0.6112 0.8548	0.6967	Ave		0.6970				11.3		30.0			
4-Isopropyltoluene	1.2649 1.4498	1.2683 1.3103	1.3698 1.2768	1.3241 1.4000	1.3875	Ave		1.3391				4.9		30.0			
1,2,3-Trimethylbenzene	0.8804 0.9359	0.8384 0.8449	0.8913 0.8269	0.8678 0.8847	0.9011	Ave		0.8746				3.9		30.0			
Butylcyclohexane	0.9563 0.9136	0.8657 0.7994	0.9551 0.7674	0.8442 0.7643	0.8682	Ave		0.8593				8.5		30.0			
1,2-Dichlorobenzene	0.6588 0.7505	0.6277 0.7027	0.6743 0.7291	0.6320 0.8988	0.7090	Ave		0.7092				11.6		30.0			
Indane	0.9680 1.0796	0.9192 0.9844	1.0010 0.9759	0.9476 1.1123	1.0305	Ave		1.0021				6.2		30.0			
Indene	0.5695 0.7969	0.6069 0.7457	0.6656 0.7418	0.6609 0.8331	0.7472	Ave		0.7075				12.4		30.0			
Butylbenzene	1.1243 1.3635	1.0927 1.1916	1.2116 1.1438	1.1787 1.2151	1.2901	Ave		1.2012				7.0		30.0			
Undecane	0.8031 0.9273	0.7883 0.7411	0.8546 0.7319	0.8125 0.7280	0.8786	Ave		0.8072				8.6		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.8739 1.0763	0.8610 0.9414	0.9433 0.9268	0.9342 1.0413	1.0185	Ave		0.9574				7.7		30.0			
1,2-Dibromo-3-Chloropropane	0.1783 0.3426	0.1906 0.3279	0.2449 0.3394	0.2412 +++++	0.3210	Ave		0.2733				24.8		30.0			
1,2,4,5-Tetramethylbenzene	1.0955 1.3016	1.0574 1.1032	1.1326 1.1193	1.1334 1.2562	1.2498	Ave		1.1610				7.4		30.0			
1,2,3,5-Tetramethylbenzene	0.6856 0.7923	0.6642 0.6718	0.7120 0.6771	0.6935 0.7564	0.7657	Ave		0.7132				6.5		30.0			
1,2,3,4-Tetramethylbenzene	0.9112 1.0789	0.8782 0.8751	0.9517 0.8984	0.9110 1.0300	1.0335	Ave		0.9520				8.0		30.0			
Dodecane	0.6773 0.8283	0.6538 0.4968	0.7791 0.4692	0.5943 0.6402	0.7685	Ave		0.6564				18.8		30.0			
1,2,4-Trichlorobenzene	0.2733 0.5215	0.3050 0.4401	0.3447 0.5438	0.2940 +++++	0.4490	Ave		0.3964				26.7		30.0			
Naphthalene	0.6518 1.1684	0.7006 0.9879	0.8244 1.0580	0.7401 1.2641	1.0340	Ave		0.9366				23.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.5837	0.3528 0.4916	0.3835 0.5651	0.3363 0.7172	0.4970	Ave		0.4909				26.7		30.0			
Hexachlorobutadiene	0.7109 0.7850	0.6191 0.5998	0.6932 0.7538	0.5881 1.0662	0.7201	Ave		0.7262				19.9		30.0			
1,2,3-Trichlorobenzene	0.3325 0.5481	0.3491 0.4290	0.4014 0.4822	0.3206 0.7020	0.4693	Ave		0.4483				27.1		30.0			
2-Methylnaphthalene	0.0751 0.1278	0.0728 0.0695	0.0974 0.0585	0.0494 0.1386	0.0927	Ave		0.0869				34.9		50.0			
1-Methylnaphthalene	0.0908 0.1245	0.0843 0.0603	0.1173 0.0464	0.0489 0.1088	0.0963	Ave		0.0864				33.5		50.0			
4-Bromofluorobenzene (Surr)	0.6829 0.7120	0.6883 0.7011	0.6876 0.7138	0.6850 0.7107	0.7027	Ave		0.6982				1.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5925/2	GG20ICL1.D
Level 2	IC 140-5925/3	GG20ICL2.D
Level 3	IC 140-5925/4	GG20ICL3.D
Level 4	IC 140-5925/5	GG20ICL4.D
Level 5	IC 140-5925/6	GG20ICL5.D
Level 6	ICIS 140-5925/7	GG20ICL6.D
Level 7	IC 140-5925/8	GG20ICL7.D
Level 8	IC 140-5925/9	GG20ICL8.D
Level 9	IC 140-5925/10	GG20ICL9.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	1547 75728	2694 140925	4318 294779	11690 572180	39289	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	7045 277489	13468 537146	26368 1052036	57800 2080056	144801	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	15069 718672	29507 1418649	55817 2837454	138848 5678698	372975	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 82440	3507 164623	7069 320957	16220 609751	41724	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	8986 447434	18027 910251	34635 1838047	87116 3796193	233143	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 590744	+++++ 1044207	+++++ 1925305	224034 +++++	361069	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 +++++	5.01
Vinyl chloride	CBM	Ave	5633 260455	10357 544569	21158 1040943	50003 1982700	136120	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	4806 213821	8631 447350	17029 848637	40358 1631451	110336	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	9863 460671	18339 961293	38711 1810606	94615 3412597	238615	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	4855 216035	9068 463986	16828 906390	41360 1776563	113027	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	2695 124069	4904 273844	9907 520661	23985 1017022	65347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 587204	+++++ 1250268	54635 2199820	124400 4595132	326275	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4477 207147	8496 458193	16212 883890	40581 1745819	109477	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	6876 300017	12594 689050	25061 1259754	58613 2358887	161516	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	LinF	+++++ 63175	+++++ 135357	7321 240321	15589 468106	39576	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	14004 667379	26283 1418491	52062 2725911	128002 5510367	349002	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 99206	4982 230175	9104 390880	21135 838856	56302	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 325482	+++++ 628006	+++++ 1105348	109538 2393008	203195	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	22197 1093196	43421 2434453	88063 4150358	220750 8606848	614867	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	812 38243	1503 85847	2923 160577	7785 302707	20748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	5142 254567	10185 638944	18677 1059778	52222 2208901	145434	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4471 194396	8031 443982	15826 814101	36839 1645708	102984	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3037 124462	5429 312198	10289 518387	25197 1127607	69861	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	7071 363626	13908 810529	28922 1250840	72380 3092811	203267	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	8546 403883	15807 902704	31171 1669094	76349 3491297	212654	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 188182	+++++ 425652	20388 777986	40414 1580832	102893	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	6920 284484	14761 589745	20643 1127926	55298 2089875	147592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	12838 693483	25268 1368836	47411 2790120	123930 5484341	359745	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4730 251928	9652 502964	19101 986464	47030 2030259	129717	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	13473 650811	23740 1274908	48610 2482383	120956 4941904	340158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	11283 663433	24556 1376698	45127 2584305	132856 5982006	363810	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	10338 497421	19665 1001436	38225 1957183	95899 4210745	262566	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	11882 778099	26913 1604346	48319 3094950	150204 6712117	422728	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Lin1	+++++ 119374	+++++ 229829	13460 439503	31487 1025422	67091	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	4903 218307	9139 431943	16211 856144	42238 1774228	116017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	16659 980591	37385 2009900	68768 3746031	204136 8501575	537857	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5187 260240	9823 530257	20039 1035396	49621 2225389	134412	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	10091 638678	21073 1306969	39636 2471172	124671 5797784	347773	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	11205 556042	22578 1133039	41922 2188702	108133 4742496	294470	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	12198 793620	29227 1642030	52496 3086444	159955 7089983	431629	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	5967 332891	13044 677897	21726 1275131	67253 2965552	180124	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	12138 621890	24001 1251755	45947 2461478	119970 5347673	325924	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6849 393288	14976 809613	28027 1583306	76599 3499068	210827	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 126607	4445 245344	8982 406109	24496 991421	66599	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	13226 732930	28428 1484756	52001 2838374	145581 5775788	399902	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 127761	5532 251038	9873 475270	24808 939796	67178	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9657 624993	19965 1282659	35421 2547091	115559 5501066	268449	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 177513	6909 349602	13420 686138	34150 1444072	92759	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7646 420121	16390 852768	30615 1682868	81409 3601663	222144	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 694426	23398 1434776	45948 2687722	141838 6223941	377757	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	26865 1377507	52574 2694094	102712 5244819	266288 10887075	720267	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	5432 274520	10522 538079	20319 1066635	51772 2221989	144372	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	5710 293000	10773 595427	21105 1138252	57902 2472759	159885	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	7224 358275	14488 727892	27731 1429915	66604 3113764	183406	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	6134 312941	12148 621397	22886 1214275	59418 2615273	162667	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9516 590155	20014 1214803	39458 2366858	108128 5083580	304736	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1628 112404	3686 222885	7108 409399	21217 908509	58194	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	4959 407019	12550 846160	23982 1605533	127638 3739985	221214	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 581742	22930 1149693	43751 2217029	110813 4625071	307120	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Lin1	12681 666019	27317 1323566	84756 2611294	149808 5915451	438520	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6929 443518	16193 910486	29520 1782292	81576 3905805	236450	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	5941 402450	14284 849574	25766 1677211	75230 3770631	218178	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 2132546	+++++ 4368368	+++++ 8413253	406910 18742881	1145129	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	14065 852047	31541 1761024	57498 3384555	165721 7519659	462787	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	4261 247379	9296 515736	17015 983320	47519 2170821	133925	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	11265 700124	26322 1490032	47302 2927517	133790 6490287	389913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	11377 712290	24697 1454544	45467 2892255	130260 6413165	376064	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 289691	9218 572249	17461 1126926	55647 2641649	155597	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 3162250	+++++ 6226546	+++++ 11755297	708459 24368798	1688858	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	5659 299170	11283 598665	22579 1142582	56540 2413902	154948	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7473 562305	16239 1238836	33035 2425380	98747 5451229	291449	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	7114 485372	14887 1008425	31118 1992293	90434 4493523	256814	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	6171 329333	12793 674647	24811 1343401	62615 3002504	172789	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	11244 666986	25284 1414763	45504 2747935	128321 6171401	359928	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	19292 1000338	38621 2001984	74353 3710240	196860 7419854	531352	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	18275 1136311	39636 2372349	73440 4557088	224500 10294945	624704	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	14123 893182	30635 1868171	57658 3614530	168245 8300460	485035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	27916 1770385	61905 3722315	115035 6929038	342866 15838618	971074	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 601639	12903 1416425	30723 2910893	91899 7524757	303734	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	10989 623372	23073 1235680	45737 2210826	120238 4321223	333247	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	7721 610607	20239 1300041	36710 2471335	105426 5746685	324812	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	16050 942362	34999 1937561	60491 3657474	180292 8305827	516225	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9889 656848	23315 1348615	42226 2517756	127160 5541318	361387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	2914 202045	6919 420291	13068 797241	40193 1881891	111415	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	22155 1296789	48351 2704962	85804 5089295	256740 11832651	712035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	5247 345580	12215 725883	22225 1371697	66953 3246664	190613	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	5103 317015	11465 671656	21002 1286773	60992 2989697	173151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	18898 1273340	43914 2707804	80730 5107728	241403 12071934	692578	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	9284 597652	21634 1241970	39980 2324615	118008 5623085	328580	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	5552 511817	14755 1115202	25754 2122184	86107 5105195	272377	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	12543 768564	27512 1538826	53182 2770165	149202 5961718	413745	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	17969 1159460	41335 2429755	75848 4534578	229646 11183849	645407	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	16840 1122054	38609 2312993	71780 4339254	216004 10349390	612274	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	24906 1601492	57180 3319123	106444 6205351	313009 +++++	884851	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	10256 711708	23134 1538740	43420 3115909	122127 8479970	376750	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	11526 917217	27926 1927976	44693 3818134	143068 9337492	481091	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	9791 692146	22401 1495925	41125 2995986	118493 7649318	367560	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	19176 1337200	46373 2765837	86672 5149340	256709 12528309	731974	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	13347 863187	30656 1783307	56396 3334853	168236 7917381	475356	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	14497 842624	31653 1687274	60434 3094954	163667 6839303	458033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	9987 692181	22949 1483244	42668 2940684	122531 8043047	374034	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	14675 995741	33608 2077957	63339 3935778	183718 9954063	543635	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	8633 734983	22189 1574119	42119 2991580	128140 7455713	394183	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	17044 1257550	39952 2515175	76663 4612993	228522 10873634	680564	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	12174 855225	28821 1564414	54075 2951690	157514 6514704	463504	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	13248 992689	31480 1987013	59691 3737734	181126 9318425	537320	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2703 315944	6970 692179	15497 1368982	46771 +++++	169349	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	16608 1200509	38662 2328684	71665 4514417	219745 11241452	659341	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	10394 730752	24284 1418105	45051 2730948	134443 6768797	403928	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	13813 995050	32110 1847176	60221 3623503	176627 9217215	545244	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	10268 763908	23904 1048634	49301 1892159	115217 5728932	405424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	4143 480973	11153 928916	21812 2193038	56997 +++++	236858	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	9881 1077641	25617 2085327	52166 4267074	143483 11312702	545497	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 538371	12900 1037580	24268 2279072	65199 6418518	262210	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	10777 724015	22637 1266018	43865 3039984	114011 9541683	379882	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	5041 505500	12765 905583	25402 1944963	62151 6282415	247563	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	3556 368362	8318 458682	19263 737024	29920 3876064	152873	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	4302 358836	9634 397822	23188 584180	29603 3041176	158788	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1056433 1315155	1284073 1479778	1096848 1439373	1328113 1590043	1480535	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
LinF = Linear ISTD forced zero

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: ICV 140-5925/12 Calibration Date: 07/20/2016 21:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GG20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3324	0.2827		1.70	2.00	-14.9	35.0
Propene	Ave	1.424	1.221		1.71	2.00	-14.3	35.0
Dichlorodifluoromethane	Ave	3.440	3.196		1.86	2.00	-7.1	35.0
Chloromethane	Ave	0.3895	0.3657		1.88	2.00	-6.1	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.158	2.036		1.89	2.00	-5.7	35.0
Acetaldehyde	Ave	0.6438	0.4198		6.52	10.0	-34.8	35.0
Vinyl chloride	Ave	1.259	1.203		1.91	2.00	-4.4	35.0
1,3-Butadiene	Ave	1.034	0.9423		1.82	2.00	-8.9	35.0
Butane	Ave	2.237	2.091		1.87	2.00	-6.5	35.0
Bromomethane	Ave	1.067	0.9493		1.78	2.00	-11.0	35.0
Chloroethane	Ave	0.6102	0.5530		1.81	2.00	-9.4	35.0
Ethanol	Ave	0.5737	0.4252		7.41	10.0	-25.9	35.0
Vinyl bromide	Ave	1.027	0.9865		1.92	2.00	-3.9	35.0
2-Methylbutane	Ave	1.510	1.383		1.83	2.00	-8.5	35.0
Acrolein	LinF		0.1944		1.50	2.00	-24.9	35.0
Trichlorofluoromethane	Ave	3.232	2.964		1.83	2.00	-8.3	35.0
Acetonitrile	Ave	0.5136	0.3905		1.52	2.00	-24.0	35.0
Acetone	Ave	0.5566	0.3882		4.18	6.00	-30.3	35.0
Isopropyl alcohol	Ave	1.777	1.268		4.28	6.00	-28.7	35.0
Pentane	Ave	0.1879	0.1796		1.91	2.00	-4.4	35.0
Ethyl ether	Ave	1.275	1.053		1.65	2.00	-17.4	35.0
1,1-Dichloroethene	Ave	0.9757	0.8675		1.78	2.00	-11.1	35.0
Acrylonitrile	Ave	0.6542	0.5027		1.54	2.00	-23.2	35.0
tert-Butyl alcohol	Ave	1.747	1.326		1.52	2.00	-24.1	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.975	1.723		1.74	2.00	-12.8	35.0
Methylene Chloride	Ave	0.9736	0.8200		1.68	2.00	-15.8	35.0
3-Chloropropene	Ave	1.421	1.256		1.77	2.00	-11.6	35.0
Carbon disulfide	Ave	3.158	2.953		1.87	2.00	-6.5	35.0
trans-1,2-Dichloroethene	Ave	1.174	1.073		1.83	2.00	-8.6	35.0
2-Methylpentane	Ave	3.019	2.959		1.96	2.00	-2.0	35.0
Methyl tert-butyl ether	Ave	3.103	2.600		1.68	2.00	-16.2	35.0
1,1-Dichloroethane	Ave	2.389	2.146		1.80	2.00	-10.2	35.0
Vinyl acetate	Ave	3.508	3.049		1.74	2.00	-13.1	35.0
2-Butanone (MEK)	Lin1		0.4381		1.54	2.00	-22.9	35.0
Hexane	Ave	1.057	0.9260		1.75	2.00	-12.4	35.0
Isopropyl ether	Ave	4.600	3.843		1.67	2.00	-16.5	35.0
cis-1,2-Dichloroethene	Ave	1.237	1.141		1.85	2.00	-7.7	35.0
Ethyl acetate	Ave	2.886	2.253		1.56	2.00	-22.0	35.0
Chloroform	Ave	2.672	2.377		1.78	2.00	-11.0	35.0
Tert-butyl ethyl ether	Ave	3.653	3.363		1.84	2.00	-8.0	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: ICV 140-5925/12 Calibration Date: 07/20/2016 21:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GG20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.560	1.294		1.66	2.00	-17.1	35.0
1,1,1-Trichloroethane	Ave	2.947	2.600		1.76	2.00	-11.8	35.0
1,2-Dichloroethane	Ave	0.3971	0.3436		1.73	2.00	-13.5	35.0
1-Butanol	Ave	0.1182	0.0946		1.60	2.00	-20.0	35.0
Benzene	Ave	0.7345	0.6552		1.78	2.00	-10.8	35.0
Cyclohexane	Ave	0.1257	0.1110		1.77	2.00	-11.7	35.0
Carbon tetrachloride	Ave	0.5786	0.5318		1.84	2.00	-8.1	35.0
2,3-Dimethylpentane	Ave	0.1739	0.1389		1.60	2.00	-20.1	35.0
Thiophene	Ave	0.4257	0.3772		1.77	2.00	-11.4	35.0
Tert-amyl methyl ether	Ave	0.6756	0.5898		1.75	2.00	-12.7	35.0
2,2,4-Trimethylpentane	Ave	1.384	1.181		1.71	2.00	-14.7	35.0
Heptane	Ave	0.2770	0.2324		1.68	2.00	-16.1	35.0
1,2-Dichloropropane	Ave	0.2975	0.2474		1.66	2.00	-16.9	35.0
Trichloroethene	Ave	0.3701	0.3429		1.85	2.00	-7.3	35.0
Dibromomethane	Ave	0.3165	0.2749		1.74	2.00	-13.1	35.0
Bromodichloromethane	Ave	0.5705	0.5035		1.76	2.00	-11.8	35.0
1,4-Dioxane	Ave	0.1044	0.0758		1.45	2.00	-27.4	35.0
Methyl methacrylate	Ave	0.4061	0.2999		1.48	2.00	-26.2	35.0
Methylcyclohexane	Ave	0.5682	0.3956		1.39	2.00	-30.4	35.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.4853		1.49	2.00	-25.4	35.0
cis-1,3-Dichloropropene	Ave	0.4329	0.3821		1.77	2.00	-11.7	35.0
trans-1,3-Dichloropropene	Ave	0.4075	0.3650		1.79	2.00	-10.4	35.0
Toluene	Ave	0.8743	0.7891		1.81	2.00	-9.7	35.0
1,1,2-Trichloroethane	Ave	0.2558	0.2205		1.72	2.00	-13.8	35.0
2-Methylthiophene	Ave	0.7284	0.6844		1.88	2.00	-6.0	35.0
3-Methylthiophene	Ave	0.7138	0.6911		1.94	2.00	-3.2	35.0
2-Hexanone	Ave	0.2837	0.2165		1.53	2.00	-23.7	35.0
Octane	Ave	0.3095	0.2805		1.81	2.00	-9.4	35.0
Dibromochloromethane	Ave	0.5476	0.5157		1.88	2.00	-5.8	35.0
1,2-Dibromoethane (EDB)	Ave	0.4802	0.4452		1.85	2.00	-7.3	35.0
Tetrachloroethene	Ave	0.3494	0.3057		1.75	2.00	-12.5	35.0
Chlorobenzene	Ave	0.6957	0.6312		1.81	2.00	-9.3	35.0
2,3-Dimethylheptane	Ave	1.034	0.9584		1.85	2.00	-7.3	35.0
Ethylbenzene	Ave	1.159	0.9946		1.72	2.00	-14.2	35.0
2-Ethylthiophene	Ave	0.9050	0.7687		1.70	2.00	-15.1	35.0
m-Xylene & p-Xylene	Ave	0.8963	0.7742		3.46	4.00	-13.6	35.0
Bromoform	Ave	0.5968	0.4907		1.64	2.00	-17.8	35.0
Nonane	Ave	0.6248	0.5951		1.90	2.00	-4.8	35.0
Styrene	Ave	0.5928	0.5256		1.77	2.00	-11.3	35.0
o-Xylene	Ave	0.9617	0.8025		1.67	2.00	-16.6	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6548	0.5341		1.63	2.00	-18.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: ICV 140-5925/12 Calibration Date: 07/20/2016 21:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GG20ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2036	0.1708		1.68	2.00	-16.1	35.0
Isopropylbenzene	Ave	1.343	1.138		1.69	2.00	-15.3	35.0
Propylbenzene	Ave	0.3511	0.3037		1.73	2.00	-13.5	35.0
2-Chlorotoluene	Ave	0.3267	0.2943		1.80	2.00	-9.9	35.0
4-Ethyltoluene	Ave	1.284	1.046		1.63	2.00	-18.6	35.0
1,3,5-Trimethylbenzene	Ave	0.6121	0.5130		1.68	2.00	-16.2	35.0
Alpha Methyl Styrene	Ave	0.4797	0.4107		1.71	2.00	-14.4	35.0
Decane	Ave	0.7655	0.7159		1.87	2.00	-6.5	35.0
tert-Butylbenzene	Ave	1.189	0.995		1.67	2.00	-16.3	35.0
1,2,4-Trimethylbenzene	Ave	1.125	0.9550		1.70	2.00	-15.1	35.0
sec-Butylbenzene	Ave	1.629	1.369		1.68	2.00	-15.9	35.0
1,3-Dichlorobenzene	Ave	0.7289	0.6390		1.75	2.00	-12.3	35.0
Benzyl chloride	Ave	0.8643	0.7160		1.66	2.00	-17.2	35.0
1,4-Dichlorobenzene	Ave	0.6970	0.6269		1.80	2.00	-10.1	35.0
4-Isopropyltoluene	Ave	1.339	1.101		1.64	2.00	-17.8	35.0
1,2,3-Trimethylbenzene	Ave	0.8746	0.7705		1.76	2.00	-11.9	35.0
Butylcyclohexane	Ave	0.8593	0.7469		1.74	2.00	-13.1	35.0
1,2-Dichlorobenzene	Ave	0.7092	0.6118		1.73	2.00	-13.7	35.0
Indane	Ave	1.002	0.7900		1.58	2.00	-21.2	35.0
Indene	Ave	0.7075	0.7388		2.09	2.00	4.4	35.0
Butylbenzene	Ave	1.201	1.051		1.75	2.00	-12.5	35.0
Undecane	Ave	0.8072	0.7426		1.84	2.00	-8.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9574	0.9793		2.05	2.00	2.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2733	0.1823		1.33	2.00	-33.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.161	1.030		1.77	2.00	-11.3	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7132	0.6474		1.82	2.00	-9.2	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.9520	0.8232		1.73	2.00	-13.5	35.0
Dodecane	Ave	0.6564	0.5719		1.74	2.00	-12.9	35.0
1,2,4-Trichlorobenzene	Ave	0.3964	0.4207		2.12	2.00	6.1	35.0
Naphthalene	Ave	0.9366	0.8955		1.91	2.00	-4.4	35.0
Benzo(b)thiophene	Ave	0.4909	0.4439		1.81	2.00	-9.6	35.0
Hexachlorobutadiene	Ave	0.7262	0.6190		1.70	2.00	-14.8	35.0
1,2,3-Trichlorobenzene	Ave	0.4483	0.4315		1.93	2.00	-3.7	35.0
2-Methylnaphthalene	Ave	0.0869	0.1128		8.11	6.25	29.8	50.0
1-Methylnaphthalene	Ave	0.0864	0.1182		8.55	6.25	36.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7125		4.08	4.00	2.0	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: GBFBH26A.D BFB Injection Date: 08/26/2016

Instrument ID: MG BFB Injection Time: 10:13

Analysis Batch No.: 6396

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.0	
75	30.0 - 60.0 % of mass 95	53.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	96.7	
175	5.0 - 9.0 % of mass 174	6.6	(6.8) 1
176	95.0 - 101.0 % of mass 174	91.9	(95.1) 1
177	5.0 - 9.0 % of mass 176	6.0	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6396/6	GCCVH26A.D	08/26/2016	10:45
	LCS 140-6396/1006	GCCVH26A-LCS .d	08/26/2016	10:45
	MB 140-6396/11	GH26BK500.D	08/26/2016	13:04
SV-142-C-21	140-5668-15	GH26P111.D	08/26/2016	23:17
SV-088-C-21	140-5668-16	GH26P112.D	08/26/2016	23:57
IA-093-A-21	140-5668-17	GH26P113.D	08/27/2016	00:38
IA-138-A-21	140-5668-18	GH26P114.D	08/27/2016	01:20
IA-018-A-21	140-5668-19	GH26P115.D	08/27/2016	02:02

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6396/6 Calibration Date: 08/26/2016 10:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3324	0.3721		2.24	2.00	11.9	30.0
Propene	Ave	1.424	1.125		1.58	2.00	-21.0	30.0
Dichlorodifluoromethane	Ave	3.440	3.562		2.07	2.00	3.6	30.0
Chloromethane	Ave	0.3895	0.3588		1.84	2.00	-7.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.158	2.180		2.02	2.00	1.0	30.0
Acetaldehyde	Ave	0.6438	0.4443		6.90	10.0	-31.0*	30.0
Vinyl chloride	Ave	1.259	1.157		1.84	2.00	-8.1	30.0
1,3-Butadiene	Ave	1.034	0.9292		1.80	2.00	-10.2	30.0
Butane	Ave	2.237	2.052		1.83	2.00	-8.3	30.0
Bromomethane	Ave	1.067	1.037		1.94	2.00	-2.8	30.0
Chloroethane	Ave	0.6102	0.5772		1.89	2.00	-5.4	30.0
Ethanol	Ave	0.5737	0.5235		9.12	10.0	-8.8	30.0
Vinyl bromide	Ave	1.027	1.036		2.02	2.00	0.9	30.0
2-Methylbutane	Ave	1.510	1.460		1.93	2.00	-3.3	30.0
Acrolein	LinF		0.3456		2.67	2.00	33.6*	30.0
Trichlorofluoromethane	Ave	3.232	3.727		2.31	2.00	15.3	30.0
Acetonitrile	Ave	0.5136	0.5033		1.96	2.00	-2.0	30.0
Acetone	Ave	0.5566	0.4612		4.97	6.00	-17.2	30.0
Isopropyl alcohol	Ave	1.777	1.582		5.34	6.00	-11.0	30.0
Pentane	Ave	0.1879	0.1921		2.05	2.00	2.3	30.0
Ethyl ether	Ave	1.275	1.342		2.10	2.00	5.2	30.0
1,1-Dichloroethene	Ave	0.9757	0.9868		2.02	2.00	1.1	30.0
Acrylonitrile	Ave	0.6542	0.6700		2.05	2.00	2.4	30.0
tert-Butyl alcohol	Ave	1.747	1.973		2.26	2.00	12.9	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.975	2.183		2.21	2.00	10.5	30.0
Methylene Chloride	Ave	0.9736	0.8684		1.78	2.00	-10.8	30.0
3-Chloropropene	Ave	1.421	1.347		1.90	2.00	-5.2	30.0
Carbon disulfide	Ave	3.158	3.014		1.91	2.00	-4.6	30.0
trans-1,2-Dichloroethene	Ave	1.174	1.115		1.90	2.00	-5.0	30.0
2-Methylpentane	Ave	3.019	2.836		1.88	2.00	-6.1	30.0
Methyl tert-butyl ether	Ave	3.103	3.252		2.10	2.00	4.8	30.0
1,1-Dichloroethane	Ave	2.389	2.278		1.91	2.00	-4.7	30.0
Vinyl acetate	Ave	3.508	3.656		2.08	2.00	4.2	30.0
2-Butanone (MEK)	Lin1		0.4958		1.76	2.00	-12.0	30.0
Hexane	Ave	1.057	0.996		1.88	2.00	-5.8	30.0
Isopropyl ether	Ave	4.600	4.530		1.97	2.00	-1.5	30.0
cis-1,2-Dichloroethene	Ave	1.237	1.188		1.92	2.00	-4.0	30.0
Ethyl acetate	Ave	2.886	2.987		2.07	2.00	3.5	30.0
Chloroform	Ave	2.672	2.771		2.07	2.00	3.7	30.0
Tert-butyl ethyl ether	Ave	3.653	3.833		2.10	2.00	4.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6396/6 Calibration Date: 08/26/2016 10:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.560	1.511		1.94	2.00	-3.2	30.0
1,1,1-Trichloroethane	Ave	2.947	3.218		2.18	2.00	9.2	30.0
1,2-Dichloroethane	Ave	0.3971	0.4164		2.10	2.00	4.8	30.0
1-Butanol	Ave	0.1182	0.1072		1.81	2.00	-9.3	30.0
Benzene	Ave	0.7345	0.6880		1.87	2.00	-6.3	30.0
Cyclohexane	Ave	0.1257	0.1144		1.82	2.00	-9.0	30.0
Carbon tetrachloride	Ave	0.5786	0.6680		2.31	2.00	15.4	30.0
2,3-Dimethylpentane	Ave	0.1739	0.1605		1.85	2.00	-7.7	30.0
Thiophene	Ave	0.4257	0.3835		1.80	2.00	-9.9	30.0
Tert-amyl methyl ether	Ave	0.6756	0.6873		2.03	2.00	1.7	30.0
2,2,4-Trimethylpentane	Ave	1.384	1.267		1.83	2.00	-8.5	30.0
Heptane	Ave	0.2770	0.2525		1.82	2.00	-8.8	30.0
1,2-Dichloropropane	Ave	0.2975	0.2720		1.83	2.00	-8.6	30.0
Trichloroethene	Ave	0.3701	0.3404		1.84	2.00	-8.0	30.0
Dibromomethane	Ave	0.3165	0.3069		1.94	2.00	-3.0	30.0
Bromodichloromethane	Ave	0.5705	0.5958		2.09	2.00	4.4	30.0
1,4-Dioxane	Ave	0.1044	0.0889		1.70	2.00	-14.8	30.0
Methyl methacrylate	Ave	0.4061	0.3983		1.96	2.00	-1.9	30.0
Methylcyclohexane	Ave	0.5682	0.5375		1.89	2.00	-5.4	30.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.6014		1.86	2.00	-7.1	30.0
cis-1,3-Dichloropropene	Ave	0.4329	0.4280		1.98	2.00	-1.1	30.0
trans-1,3-Dichloropropene	Ave	0.4075	0.4306		2.11	2.00	5.7	30.0
Toluene	Ave	0.8743	0.8593		1.97	2.00	-1.7	30.0
1,1,2-Trichloroethane	Ave	0.2558	0.2520		1.97	2.00	-1.5	30.0
2-Methylthiophene	Ave	0.7284	0.7289		2.00	2.00	0.0	30.0
3-Methylthiophene	Ave	0.7138	0.6971		1.95	2.00	-2.3	30.0
2-Hexanone	Ave	0.2837	0.2530		1.78	2.00	-10.8	30.0
Octane	Ave	0.3095	0.2921		1.89	2.00	-5.6	30.0
Dibromochloromethane	Ave	0.5476	0.6036		2.20	2.00	10.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.4802	0.4981		2.07	2.00	3.7	30.0
Tetrachloroethene	Ave	0.3494	0.3510		2.01	2.00	0.4	30.0
Chlorobenzene	Ave	0.6957	0.6821		1.96	2.00	-2.0	30.0
2,3-Dimethylheptane	Ave	1.034	0.9839		1.90	2.00	-4.9	30.0
Ethylbenzene	Ave	1.159	1.198		2.07	2.00	3.4	30.0
2-Ethylthiophene	Ave	0.9050	0.9391		2.08	2.00	3.8	30.0
m-Xylene & p-Xylene	Ave	0.8963	0.9480		4.23	4.00	5.8	30.0
Bromoform	Ave	0.5968	0.6211		2.08	2.00	4.1	30.0
Nonane	Ave	0.6248	0.6154		1.97	2.00	-1.5	30.0
Styrene	Ave	0.5928	0.6313		2.13	2.00	6.5	30.0
o-Xylene	Ave	0.9617	0.9907		2.06	2.00	3.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6548	0.6605		2.02	2.00	0.9	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab Sample ID: CCVIS 140-6396/6 Calibration Date: 08/26/2016 10:45

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2036	0.2192		2.15	2.00	7.6	30.0
Isopropylbenzene	Ave	1.343	1.366		2.03	2.00	1.7	30.0
Propylbenzene	Ave	0.3511	0.3531		2.01	2.00	0.6	30.0
2-Chlorotoluene	Ave	0.3267	0.3268		2.00	2.00	0.0	30.0
4-Ethyltoluene	Ave	1.284	1.302		2.03	2.00	1.3	30.0
1,3,5-Trimethylbenzene	Ave	0.6121	0.5914		1.93	2.00	-3.4	30.0
Alpha Methyl Styrene	Ave	0.4797	0.4885		2.04	2.00	1.8	30.0
Decane	Ave	0.7655	0.7001		1.83	2.00	-8.5	30.0
tert-Butylbenzene	Ave	1.189	1.175		1.98	2.00	-1.2	30.0
1,2,4-Trimethylbenzene	Ave	1.125	1.119		1.99	2.00	-0.5	30.0
sec-Butylbenzene	Ave	1.629	1.560		1.92	2.00	-4.2	30.0
1,3-Dichlorobenzene	Ave	0.7289	0.7061		1.94	2.00	-3.1	30.0
Benzyl chloride	Ave	0.8643	0.9297		2.15	2.00	7.6	30.0
1,4-Dichlorobenzene	Ave	0.6970	0.6879		1.97	2.00	-1.3	30.0
4-Isopropyltoluene	Ave	1.339	1.282		1.91	2.00	-4.3	30.0
1,2,3-Trimethylbenzene	Ave	0.8746	0.8242		1.88	2.00	-5.8	30.0
Butylcyclohexane	Ave	0.8593	0.7483		1.74	2.00	-12.9	30.0
1,2-Dichlorobenzene	Ave	0.7092	0.6646		1.87	2.00	-6.3	30.0
Indane	Ave	1.002	0.9245		1.85	2.00	-7.7	30.0
Indene	Ave	0.7075	0.6634		1.88	2.00	-6.2	30.0
Butylbenzene	Ave	1.201	1.149		1.91	2.00	-4.4	30.0
Undecane	Ave	0.8072	0.7009		1.74	2.00	-13.2	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9574	0.8604		1.80	2.00	-10.1	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2733	0.2685		1.97	2.00	-1.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.161	1.008		1.74	2.00	-13.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7132	0.6109		1.71	2.00	-14.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9520	0.7869		1.65	2.00	-17.3	30.0
Dodecane	Ave	0.6564	0.5486		1.67	2.00	-16.4	30.0
1,2,4-Trichlorobenzene	Ave	0.3964	0.3989		2.01	2.00	0.6	30.0
Naphthalene	Ave	0.9366	0.8663		1.85	2.00	-7.5	30.0
Benzo(b)thiophene	Ave	0.4909	0.3934		1.60	2.00	-19.9	30.0
Hexachlorobutadiene	Ave	0.7262	0.6068		1.67	2.00	-16.4	30.0
1,2,3-Trichlorobenzene	Ave	0.4483	0.3960		1.77	2.00	-11.7	30.0
2-Methylnaphthalene	Ave	0.0869	0.1391		10.0	6.25	60.2*	50.0
1-Methylnaphthalene	Ave	0.0864	0.1393		10.1	6.25	61.2*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7336		4.20	4.00	5.1	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: EMB500H26.D Lab Sample ID: MB 140-6407/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 08/26/2016 12:59

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6407/1006	ECCVH26A-LCS.d	08/26/2016 10:40
SV-001-C-21	140-5668-3	EH26P101.D	08/26/2016 13:46
SV-126-C-21	140-5668-13	EH26P102.D	08/26/2016 14:30
SV-004-C-21	140-5668-4	EH26P103.D	08/26/2016 15:18
SV-102-C-21	140-5668-5	EH26P104.D	08/26/2016 16:02
SV-155-C-21	140-5668-6	EH26P105.D	08/26/2016 16:46
SV-153-C-21	140-5668-7	EH26P106.D	08/26/2016 17:29
SV-DUP02-C-21	140-5668-8	EH26P107.D	08/26/2016 18:13
SV-060-C-21	140-5668-9	EH26P108.D	08/26/2016 18:57
SV-152-C-21	140-5668-10	EH26P109.D	08/26/2016 19:41
SV-150-C-21	140-5668-11	EH26P110.D	08/26/2016 20:24
SV-149-C-21	140-5668-12	EH26P111.D	08/26/2016 21:08
SV-113-C-21	140-5668-14	EH26P112.D	08/26/2016 21:51
SV-126-C-21 DL	140-5668-13 DL	EH26P102DL.D	08/27/2016 02:58

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6407/8

Matrix: Air Lab File ID: EMB500H26.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/26/2016 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6407/8

Matrix: Air Lab File ID: EMB500H26.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/26/2016 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVH26A-LCS.d

Lab ID: LCS 140-6407/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.27	113	70-130	
Carbon tetrachloride	2.00	2.28	114	70-130	
Chlorodifluoromethane	2.00	2.33	116	60-140	
Chloroform	2.00	2.27	114	70-130	
cis-1,2-Dichloroethene	2.00	2.25	113	70-130	
Dichlorodifluoromethane	2.00	2.42	121	60-140	
1,1-Dichloroethane	2.00	2.29	115	70-130	
1,2-Dichloroethane	2.00	2.32	116	70-130	
1,1-Dichloroethene	2.00	2.16	108	70-130	
Ethylbenzene	2.00	2.34	117	70-130	
Methylene Chloride	2.00	2.17	108	70-130	
Methyl tert-butyl ether	2.00	2.27	114	60-140	
Naphthalene	2.00	2.75	138	60-140	
Tetrachloroethene	2.00	2.29	114	70-130	
Toluene	2.00	2.28	114	70-130	
trans-1,2-Dichloroethene	2.00	2.28	114	70-130	
1,2,4-Trichlorobenzene	2.00	2.59	130	60-140	
1,1,1-Trichloroethane	2.00	2.25	112	70-130	
1,1,2-Trichloroethane	2.00	2.30	115	70-130	
Trichloroethene	2.00	2.28	114	70-130	
1,2,3-Trimethylbenzene	2.00	2.39	119	70-130	
1,2,4-Trimethylbenzene	2.00	2.39	119	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	2.42	121	70-130	
Xylenes, Total	6.00	7.06	118	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: EMB500H27R.D Lab Sample ID: MB 140-6424/19

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 08/27/2016 18:38

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
SV-060-C-21 DL	140-5668-9 DL	EH27p101DL.D	08/27/2016 19:21
IA-DUP03-A-21	140-5668-20	EH27p102.D	08/27/2016 20:06
IA-015-A-21	140-5668-21	EH27p103.D	08/27/2016 20:50
IA-118-A-21	140-5668-22	EH27p104.D	08/27/2016 21:33
IA-117-A-21	140-5668-23	EH27p105.D	08/27/2016 22:18
IA-079-A-21	140-5668-24	EH27p106.D	08/27/2016 23:01
IA-097-A-21	140-5668-25	EH27p107.D	08/27/2016 23:45
IA-139-A-21	140-5668-26	EH27p108.D	08/28/2016 00:29
IA-DUP04-A-21	140-5668-27	EH27p109.D	08/28/2016 01:57
IA-081-A-21	140-5668-28	EH27p110.D	08/28/2016 02:41

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6424/19

Matrix: Air Lab File ID: EMB500H27R.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/27/2016 18:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6424 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6424/19

Matrix: Air | Lab File ID: EMB500H27R.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 08/27/2016 18:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6424 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVH27-LCS.d

Lab ID: LCS 140-6424/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.18	109	70-130	
Carbon tetrachloride	2.00	2.20	110	70-130	
Chlorodifluoromethane	2.00	2.45	122	60-140	
Chloroform	2.00	2.19	110	70-130	
cis-1,2-Dichloroethene	2.00	2.20	110	70-130	
Dichlorodifluoromethane	2.00	2.58	129	60-140	
1,1-Dichloroethane	2.00	2.26	113	70-130	
1,2-Dichloroethane	2.00	2.27	113	70-130	
1,1-Dichloroethene	2.00	2.08	104	70-130	
Ethylbenzene	2.00	2.20	110	70-130	
Methylene Chloride	2.00	2.11	105	70-130	
Methyl tert-butyl ether	2.00	2.18	109	60-140	
Naphthalene	2.00	2.38	119	60-140	
Tetrachloroethene	2.00	2.15	107	70-130	
Toluene	2.00	2.17	109	70-130	
trans-1,2-Dichloroethene	2.00	2.21	111	70-130	
1,2,4-Trichlorobenzene	2.00	2.35	117	60-140	
1,1,1-Trichloroethane	2.00	2.21	110	70-130	
1,1,2-Trichloroethane	2.00	2.20	110	70-130	
Trichloroethene	2.00	2.10	105	70-130	
1,2,3-Trimethylbenzene	2.00	2.27	113	70-130	
1,2,4-Trimethylbenzene	2.00	2.29	114	70-130	
1,3,5-Trimethylbenzene	2.00	2.23	111	70-130	
Vinyl chloride	2.00	2.43	121	70-130	
Xylenes, Total	6.00	6.73	112	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Lab File ID: GH26BK500.D Lab Sample ID: MB 140-6396/11

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 08/26/2016 13:04

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6396/1006	GCCVH26A-LCS.d	08/26/2016 10:45
SV-142-C-21	140-5668-15	GH26P111.D	08/26/2016 23:17
SV-088-C-21	140-5668-16	GH26P112.D	08/26/2016 23:57
IA-093-A-21	140-5668-17	GH26P113.D	08/27/2016 00:38
IA-138-A-21	140-5668-18	GH26P114.D	08/27/2016 01:20
IA-018-A-21	140-5668-19	GH26P115.D	08/27/2016 02:02

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6396/11

Matrix: Air Lab File ID: GH26BK500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/26/2016 13:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6396 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6396/11

Matrix: Air Lab File ID: GH26BK500.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/26/2016 13:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6396 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVH26A-LCS.d

Lab ID: LCS 140-6396/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.87	94	70-130	
Carbon tetrachloride	2.00	2.31	115	70-130	
Chlorodifluoromethane	2.00	2.24	112	60-140	
Chloroform	2.00	2.07	104	70-130	
cis-1,2-Dichloroethene	2.00	1.92	96	70-130	
Dichlorodifluoromethane	2.00	2.07	104	60-140	
1,1-Dichloroethane	2.00	1.91	95	70-130	
1,2-Dichloroethane	2.00	2.10	105	70-130	
1,1-Dichloroethene	2.00	2.02	101	70-130	
Ethylbenzene	2.00	2.07	103	70-130	
Methylene Chloride	2.00	1.78	89	70-130	
Methyl tert-butyl ether	2.00	2.10	105	60-140	
Naphthalene	2.00	1.85	92	60-140	
Tetrachloroethene	2.00	2.01	100	70-130	
Toluene	2.00	1.97	98	70-130	
trans-1,2-Dichloroethene	2.00	1.90	95	70-130	
1,2,4-Trichlorobenzene	2.00	2.01	101	60-140	
1,1,1-Trichloroethane	2.00	2.18	109	70-130	
1,1,2-Trichloroethane	2.00	1.97	98	70-130	
Trichloroethene	2.00	1.84	92	70-130	
1,2,3-Trimethylbenzene	2.00	1.88	94	70-130	
1,2,4-Trimethylbenzene	2.00	1.99	99	70-130	
1,3,5-Trimethylbenzene	2.00	1.93	97	70-130	
Vinyl chloride	2.00	1.84	92	70-130	
Xylenes, Total	6.00	6.29	105	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
SV-001-C-21	140-5668-3	106
SV-004-C-21	140-5668-4	105
SV-102-C-21	140-5668-5	105
SV-155-C-21	140-5668-6	101
SV-153-C-21	140-5668-7	103
SV-DUP02-C-21	140-5668-8	102
SV-060-C-21	140-5668-9	105
SV-060-C-21 DL	140-5668-9 DL	102
SV-152-C-21	140-5668-10	105
SV-150-C-21	140-5668-11	108
SV-149-C-21	140-5668-12	102
SV-126-C-21	140-5668-13	102
SV-126-C-21 DL	140-5668-13 DL	101
SV-113-C-21	140-5668-14	107
SV-142-C-21	140-5668-15	97
SV-088-C-21	140-5668-16	98
IA-093-A-21	140-5668-17	97
IA-138-A-21	140-5668-18	100
IA-018-A-21	140-5668-19	98
IA-DUP03-A-21	140-5668-20	99
IA-015-A-21	140-5668-21	102
IA-118-A-21	140-5668-22	104
IA-117-A-21	140-5668-23	106
IA-079-A-21	140-5668-24	105
IA-097-A-21	140-5668-25	103
IA-139-A-21	140-5668-26	106
IA-DUP04-A-21	140-5668-27	102
IA-081-A-21	140-5668-28	102
	MB 140-6396/11	98
	MB 140-6407/8	102
	MB 140-6424/19	98
	LCS 140-6396/1006	105
	LCS 140-6407/1006	102

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
	LCS 140-6424/1002	106

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Sample No.: ICIS 140-6379/8 Date Analyzed: 08/23/2016 20:46

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): EH23IC06.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		269675	7.57	1287098	9.82	1211436	14.82
UPPER LIMIT		377545	7.90	1801937	10.15	1696010	15.15
LOWER LIMIT		161805	7.24	772259	9.49	726862	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-6379/13		255853	7.57	1211654	9.82	1126201	14.82

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Sample No.: CCVIS 140-6407/6 Date Analyzed: 08/26/2016 10:40

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVH26A.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		249766	7.57	1157324	9.82	1098063	14.82
UPPER LIMIT		349672	7.90	1620254	10.15	1537288	15.15
LOWER LIMIT		149860	7.24	694394	9.49	658838	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6407/1006		249766	7.57	1157324	9.82	1098063	14.82
MB 140-6407/8		223568	7.57	1063467	9.81	982500	14.82
140-5668-3	SV-001-C-21	212935	7.57	983878	9.81	940443	14.81
140-5668-13	SV-126-C-21	209879	7.57	987854	9.81	895141	14.81
140-5668-4	SV-004-C-21	221666	7.58	1052243	9.82	962006	14.82
140-5668-5	SV-102-C-21	231189	7.57	1114144	9.81	1038571	14.82
140-5668-6	SV-155-C-21	250279	7.57	1190677	9.81	1098435	14.82
140-5668-7	SV-153-C-21	230036	7.57	1083815	9.81	1006144	14.81
140-5668-8	SV-DUP02-C-21	213816	7.57	1004855	9.81	948661	14.81
140-5668-9	SV-060-C-21	228736	7.57	1106131	9.82	1086040	14.82
140-5668-10	SV-152-C-21	223546	7.58	985486	9.82	966296	14.82
140-5668-11	SV-150-C-21	206789	7.57	919366	9.81	928536	14.82
140-5668-12	SV-149-C-21	234975	7.57	1051663	9.81	982505	14.82
140-5668-14	SV-113-C-21	212595	7.56	906270	9.81	915386	14.81
140-5668-13 DL	SV-126-C-21 DL	243462	7.56	1181404	9.81	1079182	14.81

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Sample No.: CCVIS 140-6424/2 Date Analyzed: 08/27/2016 14:35

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVH27.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		230859	7.57	1096666	9.82	1033049	14.82
UPPER LIMIT		323203	7.90	1535332	10.15	1446269	15.15
LOWER LIMIT		138515	7.24	658000	9.49	619829	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6424/1002		230859	7.57	1096666	9.82	1033049	14.82
MB 140-6424/19		282876	7.57	1290585	9.81	1163313	14.81
140-5668-9 DL	SV-060-C-21 DL	238826	7.57	1085349	9.81	1001634	14.82
140-5668-20	IA-DUP03-A-21	274345	7.57	1287624	9.82	1178208	14.82
140-5668-21	IA-015-A-21	261160	7.58	1237998	9.82	1123631	14.82
140-5668-22	IA-118-A-21	227441	7.57	1030304	9.82	1016936	14.81
140-5668-23	IA-117-A-21	211605	7.57	927724	9.81	932538	14.82
140-5668-24	IA-079-A-21	216170	7.57	1017950	9.81	1009479	14.81
140-5668-25	IA-097-A-21	222694	7.57	1044649	9.81	1038943	14.81
140-5668-26	IA-139-A-21	197912	7.58	916326	9.82	970669	14.82
140-5668-27	IA-DUP04-A-21	182448	7.57	819080	9.81	832675	14.81
140-5668-28	IA-081-A-21	261120	7.57	1220155	9.81	1118463	14.81

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Sample No.: ICIS 140-5925/7 Date Analyzed: 07/20/2016 18:08

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GG20ICL6.D Heated Purge: (Y/N) N

Calibration ID: 721

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		408268	8.50	1852333	10.67	1847073	15.44
UPPER LIMIT		571575	8.83	2593266	11.00	2585902	15.77
LOWER LIMIT		244961	8.17	1111400	10.34	1108244	15.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5925/12		450842	8.49	2234236	10.67	2094327	15.44

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1

SDG No.:

Sample No.: CCVIS 140-6396/6 Date Analyzed: 08/26/2016 10:45

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVH26A.D Heated Purge: (Y/N) N

Calibration ID: 721

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		321727	8.47	1589814	10.63	1536253	15.41
UPPER LIMIT		450418	8.80	2225740	10.96	2150754	15.74
LOWER LIMIT		193036	8.14	953888	10.30	921752	15.08
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6396/1006		321727	8.47	1589814	10.63	1536253	15.41
MB 140-6396/11		326523	8.48	1632193	10.64	1517274	15.41
140-5668-15	SV-142-C-21	283167	8.47	1376105	10.63	1288305	15.41
140-5668-16	SV-088-C-21	307194	8.47	1513091	10.63	1418878	15.41
140-5668-17	IA-093-A-21	289392	8.47	1374460	10.63	1312908	15.41
140-5668-18	IA-138-A-21	291955	8.46	1405164	10.63	1334816	15.41
140-5668-19	IA-018-A-21	291783	8.47	1423599	10.63	1333920	15.41

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5668-1

SDG No.:

Client Sample ID: SV-001-C-21 | Lab Sample ID: 140-5668-3

Matrix: Air | Lab File ID: EH26P101.D

Analysis Method: TO 15 LL | Date Collected: 08/16/2016 09:47

Sample wt/vol: 25(mL) | Date Analyzed: 08/26/2016 13:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.6	0.46
56-23-5	Carbon tetrachloride	153.81	ND		1.6	0.30
75-45-6	Chlorodifluoromethane	86.47	0.78	J	1.6	0.30
67-66-3	Chloroform	119.38	4.9		1.6	0.30
156-59-2	cis-1,2-Dichloroethene	96.94	57		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	0.59	J	1.6	0.54
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.56	J	1.6	0.54
75-09-2	Methylene Chloride	84.93	ND		4.0	2.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		8.0	1.4
91-20-3	Naphthalene	128.17	ND		0.80	0.80
127-18-4	Tetrachloroethene	165.83	1.3	J	1.6	0.32
108-88-3	Toluene	92.14	ND		2.4	2.4
156-60-5	trans-1,2-Dichloroethene	96.94	15		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.6	0.78
71-55-6	1,1,1-Trichloroethane	133.41	0.40	J	1.6	0.24
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.6	0.42
79-01-6	Trichloroethene	131.39	170		0.80	0.28
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.6	0.68
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.6	0.50
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.6	0.52
75-01-4	Vinyl chloride	62.50	ND		0.80	0.58
1330-20-7	Xylenes, Total	106.17	ND		3.2	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1
SDG No.:
Client Sample ID: SV-001-C-21 Lab Sample ID: 140-5668-3
Matrix: Air Lab File ID: EH26P101.D
Analysis Method: TO 15 LL Date Collected: 08/16/2016 09:47
Sample wt/vol: 25(mL) Date Analyzed: 08/26/2016 13:46
Soil Aliquot Vol: Dilution Factor: 1
Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)
% Moisture: Level: (low/med) Low
Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		5.1	1.5
56-23-5	Carbon tetrachloride	153.81	ND		10	1.9
75-45-6	Chlorodifluoromethane	86.47	2.8	J	5.7	1.1
67-66-3	Chloroform	119.38	24		7.8	1.5
156-59-2	cis-1,2-Dichloroethene	96.94	230		6.3	1.9
75-71-8	Dichlorodifluoromethane	120.91	2.9	J	7.9	2.7
75-34-3	1,1-Dichloroethane	98.96	ND		6.5	0.81
107-06-2	1,2-Dichloroethane	98.96	ND		6.5	1.5
75-35-4	1,1-Dichloroethene	96.94	ND		6.3	1.1
100-41-4	Ethylbenzene	106.17	2.4	J	6.9	2.3
75-09-2	Methylene Chloride	84.93	ND		14	9.0
1634-04-4	Methyl tert-butyl ether	88.15	ND		29	4.9
91-20-3	Naphthalene	128.17	ND		4.2	4.2
127-18-4	Tetrachloroethene	165.83	8.8	J	11	2.2
108-88-3	Toluene	92.14	ND		9.0	9.0
156-60-5	trans-1,2-Dichloroethene	96.94	60		6.3	1.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.8
71-55-6	1,1,1-Trichloroethane	133.41	2.2	J	8.7	1.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		8.7	2.3
79-01-6	Trichloroethene	131.39	900		4.3	1.5
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		7.9	3.3
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		7.9	2.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		7.9	2.6
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		14	2.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

Sample Calculation - Page 3

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160824-3353.b\EH26P101.D
Lims ID: 140-5668-A-3
Client ID: SV-001-C-21
Sample Type: Client
Inject. Date: 26-Aug-2016 13:46:30 ALS Bottle#: 1 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003353-009
Misc. Info.: 140-5668-a-3
Operator ID: 007126 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160824-3353.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-Aug-2016 14:26:41 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 26-Aug-2016 14:25:15

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	7.568	7.573	-0.005	72	212935	4.00	
*	2 1,4-Difluorobenzene	114	9.811	9.822	-0.011	95	983878	4.00	
*	3 Chlorobenzene-d5 (IS)	117	14.810	14.815	-0.005	91	940443	4.00	
$	4 4-Bromofluorobenzene (Surr	95	16.487	16.487	0.000	86	812784	4.22	
	6 Chlorodifluoromethane	67	2.898	2.898	0.000	96	990	0.0392	
	8 Dichlorodifluoromethane	85	2.947	2.952	-0.005	99	6610	0.0295	
	31 Methylene Chloride	84	5.104	5.114	-0.010	78	6208	0.0929	
	34 trans-1,2-Dichloroethene	96	5.869	5.874	-0.005	97	53564	0.7586	
	42 cis-1,2-Dichloroethene	96	7.239	7.250	-0.011	93	203617	2.86	
	44 Chloroform	83	7.579	7.589	-0.010	93	43786	0.2467	
	47 1,1,1-Trichloroethane	97	8.593	8.603	-0.010	90	3955	0.0199	
	59 Trichloroethene	130	10.582	10.593	-0.011	92	737061	8.36	
	76 Tetrachloroethene	129	13.963	13.968	-0.005	79	5709	0.0651	
	79 Ethylbenzene	91	15.166	15.166	0.000	98	8472	0.0280	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Concentration = (737061 / 983878) x (4.00 ppbv / 0.3584) = 8.36 ppbv

(8.36 ppbv x 500 mL x 131.39) / (24.45 (gas constant) x 25 mL) = 898.5 ug/m3

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5668-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3831 0.3496	0.3612 0.3524	0.3506 0.3716	0.3507 0.3526	0.3534	Ave		0.3584				3.2		30.0			
Dibromomethane	0.3895 0.3488	0.3548 0.3502	0.3437 0.3760	0.3493 0.3515	0.3537	Ave		0.3575				4.2		30.0			
Bromodichloromethane	0.6876 0.7092	0.6820 0.7181	0.6338 0.7599	0.6565 0.7102	0.7003	Ave		0.6953				5.2		30.0			
1,4-Dioxane	0.1134 0.1167	0.1165 0.1135	0.1068 0.1182	0.1121 0.1128	0.1124	Ave		0.1136				2.9		30.0			
Methyl methacrylate	0.2349 0.2258	0.2152 0.2091	0.1911 0.2310	0.2016 0.2387	0.2192	Ave		0.2185				7.3		30.0			
Methylcyclohexane	0.6839 0.6057	0.6462 0.6082	0.6222 0.6398	0.6089 0.5919	0.6149	Ave		0.6246				4.5		30.0			
4-Methyl-2-pentanone (MIBK)	0.3053 0.3355	0.3361 0.3148	0.3293 0.3281	0.3077 0.3265	0.3094	Ave		0.3214				3.8		30.0			
cis-1,3-Dichloropropene	0.4998 0.5003	0.5023 0.4903	0.4561 0.5342	0.4739 0.5081	0.4988	Ave		0.4960				4.4		30.0			
trans-1,3-Dichloropropene	0.4914 0.5214	0.4748 0.5218	0.4611 0.5383	0.4890 0.5321	0.5226	Ave		0.5058				5.4		30.0			
Toluene	0.9766 0.9594	1.0176 0.9449	0.9476 0.9460	0.9583 0.9034	0.9806	Ave		0.9594				3.3		30.0			
Toluene Range	+++++ 2.1610	+++++ 2.1067	+++++ 2.2258	2.1476 2.1474	2.1929	Ave		2.1636				1.9		30.0			
1,1,2-Trichloroethane	0.3300 0.2929	0.2767 0.2924	0.2838 0.2957	0.2910 0.2893	0.2994	Ave		0.2946				5.0		30.0			
2-Methylthiophene	0.7657 0.8226	0.8196 0.8088	0.7388 0.8146	0.8029 0.7812	0.8212	Ave		0.7973				3.7		30.0			
3-Methylthiophene	0.8030 0.8012	0.7780 0.7876	0.7275 0.7914	0.7862 0.7560	0.8049	Ave		0.7817				3.2		30.0			
2-Hexanone	0.1595 0.2019	0.1745 0.1941	0.1753 0.2038	0.1822 0.2005	0.1889	Ave		0.1867				8.1		30.0			
C8 Range	+++++ 2.1384	+++++ 2.1481	+++++ 2.3006	2.1075 2.1399	2.1652	Ave		2.1666				3.2		30.0			
Octane	0.3310 0.3331	0.3114 0.3369	0.3283 0.3417	0.3189 0.3245	0.3362	Ave		0.3291				2.9		30.0			
Dibromochloromethane	0.5712 0.6639	0.5458 0.6857	0.5338 0.6997	0.5697 0.6658	0.6418	Ave		0.6197				10.4		30.0			
1,2-Dibromoethane (EDB)	0.4965 0.5469	0.5070 0.5479	0.4793 0.5615	0.5003 0.5495	0.5463	Ave		0.5261				5.7		30.0			
Tetrachloroethene	0.4066 0.3677	0.3888 0.3723	0.3618 0.3736	0.3587 0.3543	0.3750	Ave		0.3732				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

TETRA TECH

INTERNAL CORRESPONDENCE

TO: **S. BRENNER** **DATE:** **OCTOBER 06, 2016**

FROM: **LEIGH A. CIOFANI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC**
LOCKHEED MARTIN CORPORATION (LMC) – MIDDLE RIVER COMPLEX (MRC)
SAMPLE DELIVERY GROUP (SDG) 140-5670-1

SAMPLES: 30 / Air / VOC

BCK-1-21	BCK-2-21	BCK-3-21
BCK-4-21	IA-021-A-21	IA-033-B-21
IA-075-A-21	IA-076-A-21	IA-078-A-21
IA-095-A-21	IA-100-B-21	IA-101-B-21
IA-136-A-21	SV-015-A-21	SV-075-A-21
SV-076-A-21	SV-078-A-21	SV-079-A-21
SV-081-A-21	SV-093-A-21	SV-095-A-21
SV-100-B-21	SV-101-B-21	SV-116-A-21
SV-118-A-21	SV-136-A-21	SV-138-A-21
SV-139-A-21	SV-DUP03-A-21	SV-DUP04-A-21

OVERVIEW

The sample set for LMC - MRC, SDG 140-5670-1, consists of thirty (30) indoor air/soil vapor/ambient air environmental samples. All samples were analyzed for select volatile organic compounds (VOC). Two (2) field duplicate sample pairs were included in this SDG: SV-116-A-21 (original) / SV-DUP03-A-21 (duplicate) and SV-139-A-21 (original) / SV-DUP04-A-21 (duplicate).

The samples were collected by Tetra Tech, Inc. on August 16 and 17, 2016 and analyzed by TestAmerica, Inc. All analyses were conducted in accordance with EPA Method TO-15 analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, laboratory control sample results, internal standard areas, field duplicate precision, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

MAJOR PROBLEMS

- None.

MINOR PROBLEMS

- The continuing calibration performed on 08/26/16 at 10:40 on instrument ME had a percent difference (%D) for naphthalene that was greater than the 30% quality control limit. Samples SV-095-A-21 and SV-100-B-21 were affected. Detected and non-detected results for naphthalene were qualified as estimated (J and UJ, respectively) in the affected samples.

- The initial calibration performed on 06/22/2016 on instrument MJ had a percent relative standard deviation (%RSD) for naphthalene that was greater than the 30% quality control limit. Samples SV-139-A-21, SV-DUP04-A-21, SV-079-A-21, SV-078-A-21, SV-136-A-21, SV-076-A-21, SV-075-A-21, SV-101-B-21, BCK-1-21, BCK-2-21, BCK-3-21, BCK-4-21, and SV-081-A-21 were affected. Detected and non-detected results for naphthalene were qualified as estimated (J and

UJ, respectively) in the affected samples.

- The continuing calibration performed on 08/25/16 at 12:56 on instrument MJ had %Ds for 1,2,4-trichlorobenzene and naphthalene that were greater than the 30% quality control limit. Samples SV-139-A-21, SV-DUP04-A-21, SV-079-A-21, SV-078-A-21, SV-136-A-21, SV-076-A-21, SV-075-A-21, SV-101-B-21, BCK-1-21, BCK-2-21, BCK-3-21, BCK-4-21, and SV-081-A-21 were affected. Detected and non-detected results for 1,2,4-trichlorobenzene and naphthalene were qualified as estimated (J and UJ, respectively) in the affected samples.

- The relative percent difference (RPD) for naphthalene exceeded the 50% quality control limit in the field duplicate pair SV-139-A-21 / SV-DUP04-A-21. The detected results for naphthalene were qualified as estimated (J) in samples SV-139-A-21 and SV-DUP04-A-21 due to field duplicate imprecision.

- Detected results reported below the reporting limit (RL) limit but above the method detection limit (MDL) were qualified as estimated (J).

NOTES

Twenty-five VOC target compounds were reported for the TO-15 analysis of the samples.

Non-detected results were reported to the MDL.

Sample IA-076-A-21 was analyzed at a dilution factor of 2.66.

Sample SV-100-B-21 was analyzed at a dilution factor of 1.76.

Trichloroethene in sample SV-136-A-21 exceeded the instrument calibration range in the original analysis. The result from the dilution was within the calibration range and was selected for validation purposes.

EXECUTIVE SUMMARY

Laboratory Performance: Some detected and non-detected naphthalene results were qualified due to calibration noncompliance.

Other Factors Affecting Data Quality: Field duplicate imprecision was noted for one analyte in one field duplicate pair. Results above the MDL but below the RL were estimated.

The data for these analyses were reviewed with reference to the USEPA “National Functional Guidelines for Superfund Organic Methods Data Review” (August 2014) and EPA Method TO-15 analytical and reporting protocols. The text of this report has been formulated to address only those areas affecting data quality.

Leigh A. Ciofani

Tetra Tech, Inc.
Leigh A. Ciofani
Environmental Scientist/Data Validator

Joseph A. Samchuck

Tetra Tech, Inc.
Joseph A. Samchuck
Data Validation Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Data Qualifier Definitions

The following definitions provide brief explanations of the validation qualifiers assigned to results in the data review process.

U	The analyte was analyzed for, but was not detected at a level greater than or equal to the level of the adjusted method detection limit for sample and method.
J	The analyte was positively identified and the associated numerical value is the approximate concentration of the analyte in the sample (due either to the quality of the data generated because certain quality control criteria were not met, or the concentration of the analyte was below the reporting limit).
J+	The result is an estimated quantity, but the result may be biased high.
J-	The result is an estimated quantity, but the result may be biased low.
UJ	The analyte was analyzed for, but was not detected. The reported detection limit is approximate and may be inaccurate or imprecise.
R	The sample result (detected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.
UR	The sample result (nondetected) is unusable due to the quality of the data generated because certain criteria were not met. The analyte may or may not be present in the sample.

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 standard deviations is greater than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed
Z3 = Tentatively Identified Compound aldol condensate
Z4 = Sample activity is less than the at uncertainty at 3 standard deviations and greater than the MDC
Z5 = Sample activity is less than the at uncertainty at 3 standard deviations and less than the MDC

PROJ_NO: 07671	NSAMPLE	BCK-1-21			BCK-2-21			BCK-3-21			BCK-4-21		
SDG: 140-5670-1	LAB_ID	140-5670-27			140-5670-28			140-5670-29			140-5670-30		
FRACTION: OV-M3	SAMP_DATE	8/16/2016			8/16/2016			8/16/2016			8/16/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.39	J	P	0.37	U		0.37	U		0.37	U	
CARBON TETRACHLORIDE		0.59	J	P	0.7	J	P	0.53	J	P	0.69	J	P
CHLORODIFLUOROMETHANE		1.7			1.6			1.4			1.4	J	P
CHLOROFORM		0.37	U		2			1.5	J	P	2.7		
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.9			2.9			2.7			2.7		
ETHYLBENZENE		0.59	U		0.59	U		0.71	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		9.4			7.8			7.8			5.6		
NAPHTHALENE		1	UJ	C	1	UJ	C	1	UJ	C	1	UJ	C
TETRACHLOROETHENE		0.54	U		0.54	U		0.54	U		0.54	U	
TOLUENE		2.8			2.7			5.9			2.3		
TOTAL XYLENES		1.8	J	P	1.7	J	P	3.8			0.52	U	
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-021-A-21			IA-033-B-21			IA-075-A-21			IA-076-A-21		
SDG: 140-5670-1	LAB_ID	140-5670-4			140-5670-7			140-5670-5			140-5670-3		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.62	J	P	0.61	U		0.62	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.4	J	P	0.4	J	P	0.37	U		0.42	J	P
CARBON TETRACHLORIDE		0.78	J	P	0.47	J	P	0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		2.6			57			3			1.5		
CHLOROFORM		0.37	U		0.62	J	P	0.37	U		0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.8			2.8			2.6			2.5		
ETHYLBENZENE		0.59	U		1.9			0.79	J	P	1.5	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		9.1			14			7.4			13		
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		1.6	J	P	0.54	U		0.54	U		0.57	J	P
TOLUENE		5.6			15			7.9			17		
TOTAL XYLENES		0.52	U		9.6			3.3	J	P	6.3		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-078-A-21			IA-095-A-21			IA-100-B-21			IA-101-B-21		
SDG: 140-5670-1	LAB_ID	140-5670-1			140-5670-6			140-5670-9			140-5670-8		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		0.33	U		0.33	U		0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		0.84	U		0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	U		1.4	U	
1,2,4-TRIMETHYLBENZENE		0.61	U		0.61	U		0.61	U		0.64	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		0.64	U		0.64	U	
BENZENE		0.37	U		0.37	U		0.37	J	P	0.37	U	
CARBON TETRACHLORIDE		0.49	J	P	0.47	U		0.47	U		0.47	U	
CHLORODIFLUOROMETHANE		1.5			1.3	J	P	9.4			8.6		
CHLOROFORM		0.37	U		0.77	J	P	0.37	U		0.37	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.7			2.5			2.5			2.5		
ETHYLBENZENE		0.59	U		0.59	U		0.71	J	P	2.3		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		5.9			9.7			12			6.7		
NAPHTHALENE		1	U		1	U		1	U		1	U	
TETRACHLOROETHENE		0.6	J	P	0.54	U		0.54	U		0.89	J	P
TOLUENE		4.1			2.3	U		16			5.7		
TOTAL XYLENES		1.2	J	P	0.52	U		3.3	J	P	12		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.67	J	P	0.38	U		0.38	U		0.38	U	
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	IA-136-A-21			SV-015-A-21			SV-075-A-21			SV-076-A-21		
SDG: 140-5670-1	LAB_ID	140-5670-2			140-5670-14			140-5670-23			140-5670-22		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.33	U		15			0.63	J	P	1.5	J	P
1,1,2-TRICHLOROETHANE		0.57	U		2.9	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		19			0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		50			0.28	U		0.28	U	
1,2,3-TRIMETHYLBENZENE		0.84	U		4.2	U		37			69		
1,2,4-TRICHLOROBENZENE		1.4	U		7.2	U		1.4	UJ	C	1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		0.61	U		3.1	U		73			37		
1,2-DICHLOROETHANE		0.38	U		1.9	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		3.2	U		29			47		
BENZENE		0.37	U		4	J	P	0.37	U		0.37	U	
CARBON TETRACHLORIDE		0.47	U		2.4	U		0.49	J	P	0.55	J	P
CHLORODIFLUOROMETHANE		1.9			3.2	J	P	5.1			3.7		
CHLOROFORM		0.37	U		1.8	U		0.54	J	P	0.83	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		7.2	J	P	0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.7			3.3	U		2.8			4.2		
ETHYLBENZENE		0.59	U		3.5	J	P	0.92	J	P	3.5		
METHYL TERT-BUTYL ETHER		1.2	U		6.1	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		7			11	U		7.9			8.1		
NAPHTHALENE		1	U		5.2	U		110	J	C	4.6	J	C
TETRACHLOROETHENE		1.6	J	P	2.7	U		0.54	U		0.54	U	
TOLUENE		2.4			11	U		2.5			3.5		
TOTAL XYLENES		1.7	J	P	6.1	J	P	8.4			26		
TRANS-1,2-DICHLOROETHENE		0.4	U		2	U		0.4	U		0.4	U	
TRICHLOROETHENE		0.38	U		35			2.9			6.4		
VINYL CHLORIDE		0.37	U		1.9	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-078-A-21			SV-079-A-21			SV-081-A-21			SV-093-A-21		
SDG: 140-5670-1	LAB_ID	140-5670-20			140-5670-19			140-5670-16			140-5670-10		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		1.4	J	P	2.2			9.2			0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		1.4	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.51	U		0.28	J	P
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.69	U		0.85	J	P
1,2,3-TRIMETHYLBENZENE		0.84	U		0.84	U		530			0.84	U	
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	UJ	C	3.6	UJ	C	1.4	U	
1,2,4-TRIMETHYLBENZENE		0.68	J	P	1	J	P	90			0.61	U	
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.96	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		0.64	U		0.64	U		21			0.64	U	
BENZENE		0.44	J	P	0.78	J	P	3.8			0.42	J	P
CARBON TETRACHLORIDE		0.47	U		0.47	U		1.2	U		0.47	J	P
CHLORODIFLUOROMETHANE		1.6			2.6			12			1.3	J	P
CHLOROFORM		0.56	J	P	0.8	J	P	4.9			0.37	U	
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		1.2	U		0.48	U	
DICHLORODIFLUOROMETHANE		3			2.7			3.7	J	P	2.6		
ETHYLBENZENE		1.1	J	P	10			4	J	P	0.59	U	
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		3.1	U		1.2	U	
METHYLENE CHLORIDE		4.2			3.5			12			5.6		
NAPHTHALENE		1	UJ	C	1	J	C	9.5	J	C	1	U	
TETRACHLOROETHENE		0.62	J	P	7.4			2.1	J	P	0.62	J	P
TOLUENE		2.3			8.3			11			2.3	U	
TOTAL XYLENES		8.4			44			20			1.2	J	P
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.99	U		0.4	U	
TRICHLOROETHENE		13			120			0.94	U		7.2		
VINYL CHLORIDE		0.37	U		0.37	U		0.93	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-095-A-21			SV-100-B-21			SV-101-B-21			SV-116-A-21		
SDG: 140-5670-1	LAB_ID	140-5670-24			140-5670-26			140-5670-25			140-5670-12		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.48	J	P	3.6			260			0.33	U	
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		0.28	U		0.28	U		1.7		
1,2,3-TRIMETHYLBENZENE		20			5.6			15			0.86	J	P
1,2,4-TRICHLOROBENZENE		1.4	U		1.4	U		1.4	UJ	C	1.4	U	
1,2,4-TRIMETHYLBENZENE		23			4			26			0.94	J	P
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		13			0.71	J	P	10			0.64	U	
BENZENE		0.55	J	P	0.37	U		0.37	U		0.48	J	P
CARBON TETRACHLORIDE		0.61	J	P	32			4.6			0.5	J	P
CHLORODIFLUOROMETHANE		3			2.3			5.8			1.3	J	P
CHLOROFORM		0.37	U		9.1			0.75	J	P	1.9	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.8			4.5			6			2.4		
ETHYLBENZENE		1.6	J	P	0.59	U		0.7	J	P	1.1	J	P
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		5			3.9			12			3.4	J	P
NAPHTHALENE		66	J	C	1	UJ	C	5.8	J	C	1.8		
TETRACHLOROETHENE		1.1	J	P	5.7			74			0.57	J	P
TOLUENE		9			4			4.4			2.5		
TOTAL XYLENES		9.9			3.7			5.9			4.6		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		10			38			120			21		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U		0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-118-A-21			SV-136-A-21			SV-136-A-21DL			SV-138-A-21		
SDG: 140-5670-1	LAB_ID	140-5670-15			140-5670-21			140-5670-21			140-5670-11		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/M3			UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS												
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		3.6	J	P	0.33	U					0.33	U	
1,1,2-TRICHLOROETHANE		2.9	U		0.57	U					0.57	U	
1,1-DICHLOROETHANE		17			0.2	U					3.7		
1,1-DICHLOROETHENE		150			0.48	J	P				18		
1,2,3-TRIMETHYLBENZENE		4.2	U		0.84	U					0.84	U	
1,2,4-TRICHLOROBENZENE		7.2	U		1.4	UJ	C				1.4	U	
1,2,4-TRIMETHYLBENZENE		3.8	J	P	0.95	J	P				0.61	U	
1,2-DICHLOROETHANE		1.9	U		0.38	U					0.38	U	
1,3,5-TRIMETHYLBENZENE		3.2	U		0.64	U					0.64	U	
BENZENE		1.8	U		1.8						0.69	J	P
CARBON TETRACHLORIDE		2.4	U		0.47	U					0.52	J	P
CHLORODIFLUOROMETHANE		2.8	J	P	2						1.4	J	P
CHLOROFORM		1.8	U		50						0.65	J	P
CIS-1,2-DICHLOROETHENE		70			4.5						11		
DICHLORODIFLUOROMETHANE		3.3	U		2.5						2.8		
ETHYLBENZENE		5.4	J	P	1.6	J	P				0.59	U	
METHYL TERT-BUTYL ETHER		6.1	U		1.2	U					1.2	U	
METHYLENE CHLORIDE		11	U		5.9						3.5		
NAPHTHALENE		5.2	U		1	UJ	C				2.6		
TETRACHLOROETHENE		2.7	U		0.54	U					2	J	P
TOLUENE		11	U		13						2.3	U	
TOTAL XYLENES		49			7.9						0.52	U	
TRANS-1,2-DICHLOROETHENE		5	J	P	0.56	J	P				0.57	J	P
TRICHLOROETHENE		890						850			150		
VINYL CHLORIDE		1.9	U		0.37	U					0.37	U	

PROJ_NO: 07671	NSAMPLE	SV-139-A-21			SV-DUP03-A-21			SV-DUP04-A-21		
SDG: 140-5670-1	LAB_ID	140-5670-17			140-5670-13			140-5670-18		
FRACTION: OV-M3	SAMP_DATE	8/17/2016			8/17/2016			8/17/2016		
MEDIA: AIR	QC_TYPE	NM			FD			FD		
	UNITS	UG/M3			UG/M3			UG/M3		
	PCT_SOLIDS									
	DUP_OF				SV-116-A-21			SV-139-A-21		
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1-TRICHLOROETHANE		0.59	J	P	0.33	U		0.57	J	P
1,1,2-TRICHLOROETHANE		0.57	U		0.57	U		0.57	U	
1,1-DICHLOROETHANE		0.2	U		0.2	U		0.2	U	
1,1-DICHLOROETHENE		0.28	U		1.6			0.28	U	
1,2,3-TRIMETHYLBENZENE		14			1.1	J	P	14		
1,2,4-TRICHLOROBENZENE		1.4	UJ	C	1.4	U		1.4	UJ	C
1,2,4-TRIMETHYLBENZENE		5.2			1	J	P	5.2		
1,2-DICHLOROETHANE		0.38	U		0.38	U		0.38	U	
1,3,5-TRIMETHYLBENZENE		6.4			0.64	U		6.5		
BENZENE		0.99	J	P	0.37	U		1	J	P
CARBON TETRACHLORIDE		0.56	J	P	0.48	J	P	0.57	J	P
CHLORODIFLUOROMETHANE		1.9			1.3	J	P	2.2		
CHLOROFORM		1.5	J	P	1.4	J	P	0.67	J	P
CIS-1,2-DICHLOROETHENE		0.48	U		0.48	U		0.48	U	
DICHLORODIFLUOROMETHANE		2.5			2.4			2.8		
ETHYLBENZENE		5.5			0.59	U		5.4		
METHYL TERT-BUTYL ETHER		1.2	U		1.2	U		1.2	U	
METHYLENE CHLORIDE		6.4			2.7	J	P	4		
NAPHTHALENE		4	J	CG	1.7			13	J	CG
TETRACHLOROETHENE		5.1			0.54	U		5.3		
TOLUENE		2.6			2.3	U		2.3	U	
TOTAL XYLENES		30			2.6	J	P	30		
TRANS-1,2-DICHLOROETHENE		0.4	U		0.4	U		0.4	U	
TRICHLOROETHENE		1.5			21			1.6		
VINYL CHLORIDE		0.37	U		0.37	U		0.37	U	

Appendix B

Results as Reported by the Laboratory

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-1-21 Lab Sample ID: 140-5670-27

Matrix: Air Lab File ID: JG25P112.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:02

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.093	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.48		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.58		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.75		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.41	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-1-21 Lab Sample ID: 140-5670-27

Matrix: Air Lab File ID: JG25P112.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:02

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.39	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.59	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.7		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-2-21 Lab Sample ID: 140-5670-28

Matrix: Air Lab File ID: JG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	0.41		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.70		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.40	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-2-21 Lab Sample ID: 140-5670-28

Matrix: Air Lab File ID: JG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 16:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.70	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	2.0		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-3-21 Lab Sample ID: 140-5670-29

Matrix: Air Lab File ID: JG25P114.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.085	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.88		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-3-21 Lab Sample ID: 140-5670-29

Matrix: Air Lab File ID: JG25P114.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:52

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 03:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.53	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.71	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.8		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-4-21 Lab Sample ID: 140-5670-30

Matrix: Air Lab File ID: JG25P115.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 04:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.11	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	0.55		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.61		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: BCK-4-21 Lab Sample ID: 140-5670-30

Matrix: Air Lab File ID: JG25P115.D

Analysis Method: TO 15 LL Date Collected: 08/16/2016 15:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 04:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.69	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	2.7		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-021-A-21 | Lab Sample ID: 140-5670-4

Matrix: Air | Lab File ID: EG25P106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:57

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 19:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.12	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.75		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.24	J	0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-021-A-21 Lab Sample ID: 140-5670-4

Matrix: Air Lab File ID: EG25P106.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:57

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.78	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.6	J	2.7	0.54
108-88-3	Toluene	92.14	5.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-033-B-21 Lab Sample ID: 140-5670-7

Matrix: Air Lab File ID: EG25P109.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:06

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 21:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	16		0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.44		0.40	0.14
75-09-2	Methylene Chloride	84.93	4.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-033-B-21 | Lab Sample ID: 140-5670-7

Matrix: Air | Lab File ID: EG25P109.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:06

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 21:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.40	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	57		1.4	0.27
67-66-3	Chloroform	119.38	0.62	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.9		1.7	0.59
75-09-2	Methylene Chloride	84.93	14		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	15		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-075-A-21 | Lab Sample ID: 140-5670-5

Matrix: Air | Lab File ID: EG25P107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 19:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.86		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.53		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.18	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.76	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-075-A-21 Lab Sample ID: 140-5670-5

Matrix: Air Lab File ID: EG25P107.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:00

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.79	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	7.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-076-A-21 | Lab Sample ID: 140-5670-3

Matrix: Air | Lab File ID: EG25P105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:54

Sample wt/vol: 266(mL) | Date Analyzed: 08/25/2016 18:16

Soil Aliquot Vol: | Dilution Factor: 2.66

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.43		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	4.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-076-A-21 Lab Sample ID: 140-5670-3

Matrix: Air Lab File ID: EG25P105.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:54

Sample wt/vol: 266(mL) Date Analyzed: 08/25/2016 18:16

Soil Aliquot Vol: Dilution Factor: 2.66

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.5	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	13		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	17		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.62	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.3		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-078-A-21 | Lab Sample ID: 140-5670-1

Matrix: Air | Lab File ID: EG25P103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 16:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.088	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-078-A-21 | Lab Sample ID: 140-5670-1

Matrix: Air | Lab File ID: EG25P103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:50

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 16:45

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.60	J	2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.67	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-095-A-21 | Lab Sample ID: 140-5670-6

Matrix: Air | Lab File ID: EG25P108.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:02

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 20:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.37	J	0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-095-A-21 Lab Sample ID: 140-5670-6

Matrix: Air Lab File ID: EG25P108.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:02

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 20:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	0.77	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	9.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-100-B-21 | Lab Sample ID: 140-5670-9

Matrix: Air | Lab File ID: EG25P111.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:12

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 22:44

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.12	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.6		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	4.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.75	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-100-B-21 Lab Sample ID: 140-5670-9

Matrix: Air Lab File ID: EG25P111.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:12

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 22:44

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.37	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.4		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.71	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	16		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-101-B-21 | Lab Sample ID: 140-5670-8

Matrix: Air | Lab File ID: EG25P110.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 16:09

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 21:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.4		0.40	0.075
67-66-3	Chloroform	119.38	0.077	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.54		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.9		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.13	J	0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.13	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-101-B-21 Lab Sample ID: 140-5670-8

Matrix: Air Lab File ID: EG25P110.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 16:09

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 21:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	8.6		1.4	0.27
67-66-3	Chloroform	119.38	0.37	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	2.3		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.89	J	2.7	0.54
108-88-3	Toluene	92.14	5.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.64	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	12		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	104		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-136-A-21 | Lab Sample ID: 140-5670-2

Matrix: Air | Lab File ID: EG25P104.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:52

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 17:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.54		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.23	J	0.40	0.080
108-88-3	Toluene	92.14	0.65		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.40	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-136-A-21 Lab Sample ID: 140-5670-2

Matrix: Air Lab File ID: EG25P104.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:52

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 17:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	7.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.6	J	2.7	0.54
108-88-3	Toluene	92.14	2.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.7	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-015-A-21 Lab Sample ID: 140-5670-14

Matrix: Air Lab File ID: EG25P101.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:57

Sample wt/vol: 20(mL) Date Analyzed: 08/25/2016 15:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.3	J	2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.91	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	1.8	J	2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.6		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	13		2.0	0.35
100-41-4	Ethylbenzene	106.17	0.80	J	2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	2.8		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	6.5		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	1.4	J	4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-015-A-21 Lab Sample ID: 140-5670-14

Matrix: Air Lab File ID: EG25P101.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:57

Sample wt/vol: 20(mL) Date Analyzed: 08/25/2016 15:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.0	J	6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	3.2	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	7.2	J	7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	19		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	50		7.9	1.4
100-41-4	Ethylbenzene	106.17	3.5	J	8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	15		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	35		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	6.1	J	17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-075-A-21 | Lab Sample ID: 140-5670-23

Matrix: Air | Lab File ID: JG25P108.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 22:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.4		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	20		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.66		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.55		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	7.6		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	15		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	5.9		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-075-A-21 | Lab Sample ID: 140-5670-23

Matrix: Air | Lab File ID: JG25P108.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:27

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 22:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.1		1.4	0.27
67-66-3	Chloroform	119.38	0.54	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.92	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	110		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.63	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	2.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	37		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	73		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	29		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-076-A-21 | Lab Sample ID: 140-5670-22

Matrix: Air | Lab File ID: JG25P107.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:24

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 21:41

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.17	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.84		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.81		0.40	0.14
75-09-2	Methylene Chloride	84.93	2.3		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.87		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.92		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.28	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.2		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	14		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	7.6		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	9.6		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-076-A-21 Lab Sample ID: 140-5670-22

Matrix: Air Lab File ID: JG25P107.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:24

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 21:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.7		1.4	0.27
67-66-3	Chloroform	119.38	0.83	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.2		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	3.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	8.1		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.5	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.4		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	69		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	37		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	47		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	26		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-078-A-21 Lab Sample ID: 140-5670-20

Matrix: Air Lab File ID: JG25P105.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:15

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.14	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	0.11	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.60		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.091	J	0.40	0.080
108-88-3	Toluene	92.14	0.60		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.26	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.4		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.14	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-078-A-21 | Lab Sample ID: 140-5670-20

Matrix: Air | Lab File ID: JG25P105.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:15

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 19:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.44	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	0.56	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	2.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	1.4	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	13		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.68	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	8.4		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-079-A-21 Lab Sample ID: 140-5670-19

Matrix: Air Lab File ID: JG25P104.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:11

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.72		0.40	0.075
67-66-3	Chloroform	119.38	0.16	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	2.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.20		0.20	0.20
127-18-4	Tetrachloroethene	165.83	1.1		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.40		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	23		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	10		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-079-A-21 Lab Sample ID: 140-5670-19

Matrix: Air Lab File ID: JG25P104.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:11

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 19:01

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.78	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.6		1.4	0.27
67-66-3	Chloroform	119.38	0.80	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	10		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	7.4		2.7	0.54
108-88-3	Toluene	92.14	8.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	2.2		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	120		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	44		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-081-A-21 Lab Sample ID: 140-5670-16

Matrix: Air Lab File ID: JG25P101DL.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:03

Sample wt/vol: 40(mL) Date Analyzed: 08/26/2016 06:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	3.3		1.0	0.19
67-66-3	Chloroform	119.38	1.0		1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.75	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	ND		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	ND		1.0	0.18
100-41-4	Ethylbenzene	106.17	0.93	J	1.0	0.34
75-09-2	Methylene Chloride	84.93	3.5		2.5	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	1.8		0.50	0.50
127-18-4	Tetrachloroethene	165.83	0.31	J	1.0	0.20
108-88-3	Toluene	92.14	3.0		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	1.7		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	ND		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	110		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	18		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	4.2		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	4.6		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-081-A-21 Lab Sample ID: 140-5670-16

Matrix: Air Lab File ID: JG25P101DL.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:03

Sample wt/vol: 40(mL) Date Analyzed: 08/26/2016 06:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.8		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	12		3.5	0.66
67-66-3	Chloroform	119.38	4.9		4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	ND		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	3.7	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	ND		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	ND		4.0	0.69
100-41-4	Ethylbenzene	106.17	4.0	J	4.3	1.5
75-09-2	Methylene Chloride	84.93	12		8.7	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	9.5		2.6	2.6
127-18-4	Tetrachloroethene	165.83	2.1	J	6.8	1.4
108-88-3	Toluene	92.14	11		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	9.2		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	ND		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	530		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	90		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	21		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	20		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-093-A-21 | Lab Sample ID: 140-5670-10

Matrix: Air | Lab File ID: EG25P112.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:44

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 23:27

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.13	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.075	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.36	J	0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.069	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.21	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.6		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.092	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-093-A-21 Lab Sample ID: 140-5670-10

Matrix: Air Lab File ID: EG25P112.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:44

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 23:27

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.42	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.47	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.28	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.85	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.62	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	7.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-095-A-21 Lab Sample ID: 140-5670-24

Matrix: Air Lab File ID: EH26P114.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:29

Sample wt/vol: 100(mL) Date Analyzed: 08/27/2016 00:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.17	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.097	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.85		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.37	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	12		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	2.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.088	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	4.0		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	4.7		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	2.7		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	2.3		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-095-A-21 | Lab Sample ID: 140-5670-24

Matrix: Air | Lab File ID: EH26P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:29

Sample wt/vol: 100(mL) | Date Analyzed: 08/27/2016 00:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6407 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.55	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.61	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.0		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	66		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	9.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.48	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	10		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	20		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	23		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	13		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	9.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-100-B-21 Lab Sample ID: 140-5670-26

Matrix: Air Lab File ID: EH26P115.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:35

Sample wt/vol: 176(mL) Date Analyzed: 08/27/2016 00:46

Soil Aliquot Vol: Dilution Factor: 1.76

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	5.0		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	1.9		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.92		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.84		0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.66		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	7.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.82		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.14	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.85		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-100-B-21 Lab Sample ID: 140-5670-26

Matrix: Air Lab File ID: EH26P115.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:35

Sample wt/vol: 176(mL) Date Analyzed: 08/27/2016 00:46

Soil Aliquot Vol: Dilution Factor: 1.76

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	32		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	9.1		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	4.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.7		2.7	0.54
108-88-3	Toluene	92.14	4.0		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.6		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	38		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	5.6		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.0		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	0.71	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.7		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-101-B-21 Lab Sample ID: 140-5670-25

Matrix: Air Lab File ID: JG25P110.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:33

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 00:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.73		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.6		0.40	0.075
67-66-3	Chloroform	119.38	0.15	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	1.2		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.16	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	3.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	1.1		0.20	0.20
127-18-4	Tetrachloroethene	165.83	11		0.40	0.080
108-88-3	Toluene	92.14	1.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	47		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	22		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	3.0		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	5.3		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	2.1		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-101-B-21 | Lab Sample ID: 140-5670-25

Matrix: Air | Lab File ID: JG25P110.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:33

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 00:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	4.6		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	5.8		1.4	0.27
67-66-3	Chloroform	119.38	0.75	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	6.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.70	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	12		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	5.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	74		2.7	0.54
108-88-3	Toluene	92.14	4.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	260		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	120		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	15		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	26		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	10		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-116-A-21 | Lab Sample ID: 140-5670-12

Matrix: Air | Lab File ID: EG25P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 00:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.080	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.38	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.43		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.25	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.99	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.35		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.084	J	0.40	0.080
108-88-3	Toluene	92.14	0.66		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.0		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.18	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.1		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-116-A-21 | Lab Sample ID: 140-5670-12

Matrix: Air | Lab File ID: EG25P114.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:48

Sample wt/vol: 100(mL) | Date Analyzed: 08/26/2016 00:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.48	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.9	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.4	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.8		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.57	J	2.7	0.54
108-88-3	Toluene	92.14	2.5		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	21		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.86	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.94	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	4.6		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-118-A-21 | Lab Sample ID: 140-5670-15

Matrix: Air | Lab File ID: EG25P102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:59

Sample wt/vol: 20(mL) | Date Analyzed: 08/25/2016 15:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	0.80	J	2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	18		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.3		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	38		2.0	0.35
100-41-4	Ethylbenzene	106.17	1.3	J	2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	1.3	J	2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	0.65	J	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	170		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	0.78	J	2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	11		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-118-A-21 | Lab Sample ID: 140-5670-15

Matrix: Air | Lab File ID: EG25P102.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 09:59

Sample wt/vol: 20(mL) | Date Analyzed: 08/25/2016 15:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	2.8	J	7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	70		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	17		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	150		7.9	1.4
100-41-4	Ethylbenzene	106.17	5.4	J	8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	5.0	J	7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	3.6	J	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	890		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	3.8	J	9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	49		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 | Lab Sample ID: 140-5670-21

Matrix: Air | Lab File ID: JG25P106.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 10:21

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 20:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.57		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.57		0.40	0.075
67-66-3	Chloroform	119.38	10		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	1.1		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.12	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.36	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	3.4		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.14	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	*Trichloroethene*	*131.39*	*190*	*E*	*0.20*	*0.070*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.19	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.8		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 Lab Sample ID: 140-5670-21

Matrix: Air Lab File ID: JG25P106.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:21

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 20:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.0		1.4	0.27
67-66-3	Chloroform	119.38	50		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	4.5		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.48	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.6	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	13		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.56	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	*Trichloroethene*	*131.39*	*1000*	*E*	*1.1*	*0.38*
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	7.9		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 DL Lab Sample ID: 140-5670-21 DL

Matrix: Air Lab File ID: EH26P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:21

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 23:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	160		1.0	0.35

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-136-A-21 DL Lab Sample ID: 140-5670-21 DL

Matrix: Air Lab File ID: EH26P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:21

Sample wt/vol: 20(mL) Date Analyzed: 08/26/2016 23:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
79-01-6	Trichloroethene	131.39	850		5.4	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-138-A-21 Lab Sample ID: 140-5670-11

Matrix: Air Lab File ID: EG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 00:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.22	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.39	J	0.40	0.075
67-66-3	Chloroform	119.38	0.13	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	2.7		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.92		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	4.4		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.50		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.30	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.14	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	27		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-138-A-21 Lab Sample ID: 140-5670-11

Matrix: Air Lab File ID: EG25P113.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 09:46

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 00:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.69	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.4	J	1.4	0.27
67-66-3	Chloroform	119.38	0.65	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	11		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.7		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	18		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.5		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	2.6		1.0	1.0
127-18-4	Tetrachloroethene	165.83	2.0	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.57	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	150		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-139-A-21 Lab Sample ID: 140-5670-17

Matrix: Air Lab File ID: JG25P102.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:07

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 17:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.31	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.088	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	0.31	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.51		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.3		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.76		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.75		0.40	0.080
108-88-3	Toluene	92.14	0.68		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.11	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.28		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.8		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	6.9		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-139-A-21 Lab Sample ID: 140-5670-17

Matrix: Air Lab File ID: JG25P102.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 10:07

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 17:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.99	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.56	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.5		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	4.0		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.1		2.7	0.54
108-88-3	Toluene	92.14	2.6		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.59	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.5		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	14		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	6.4		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	30		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP03-A-21 Lab Sample ID: 140-5670-13

Matrix: Air Lab File ID: EG25P115D.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.076	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.38	J	0.40	0.075
67-66-3	Chloroform	119.38	0.29	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.41		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.78	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	0.33		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.9		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.21	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.20	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.60	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP03-A-21 Lab Sample ID: 140-5670-13

Matrix: Air Lab File ID: EG25P115D.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/26/2016 02:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.48	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.3	J	1.4	0.27
67-66-3	Chloroform	119.38	1.4	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.6		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.7	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	1.7		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	21		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.1	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.0	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.6	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP04-A-21 Lab Sample ID: 140-5670-18

Matrix: Air Lab File ID: JG25P103.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 18:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.33	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.091	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.62		0.40	0.075
67-66-3	Chloroform	119.38	0.14	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	1.2		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	2.6		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.78		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.10	J	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.29		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	2.8		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	1.3		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	7.0		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: SV-DUP04-A-21 | Lab Sample ID: 140-5670-18

Matrix: Air | Lab File ID: JG25P103.D

Analysis Method: TO 15 LL | Date Collected: 08/17/2016 00:00

Sample wt/vol: 100(mL) | Date Analyzed: 08/25/2016 18:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.0	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.57	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.2		1.4	0.27
67-66-3	Chloroform	119.38	0.67	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	5.4		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	13		1.0	1.0
127-18-4	Tetrachloroethene	165.83	5.3		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	0.57	J	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	14		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	5.2		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	6.5		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	30		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

Appendix C

Support Documentation

Job Narrative
140-5670-1

Receipt
The samples were received on 8/22/2016 at 9:00 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: Can Certification Comments:
Due to the large number of analytes in the CCV, there is a high probability that one or more analytes will recover outside acceptance limits. The laboratory's SOP allows for several analytes to recover outside criteria for this method when analyzing for a full list. The CCV associated with the can cleaning batches had analytes outside control limits. These results have been reported and qualified.

Method(s) TO 15 LL, TO-14A, TO-15: This report includes canister certification data for the batch certified and/or individually certified canisters used to collect samples as well as for any canisters used for dilution of those samples. All of the canisters used for sample collection or sample dilution for this job were certified to be clean to the levels listed on the results page. Please note that results for individually certified canisters that were not used for sample collection or sample dilution may also be included in the report because these canisters were in the same cleaning batch as the canisters used for this project. Since these canisters were not used for this job, the results have no bearing on the sample results.

Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-6398 exhibited % difference of > 30% for naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-6407 exhibited % difference of > 30% for naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

Method(s) TO 15 LL: Sample SV-015-A-21 (140-5670-14) was diluted due to the abundance of non-target analytes. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Definitions/Glossary

Client: Tetra Tech, Inc. TestAmerica Job ID: 140-5670-1
Project/Site: MRC SVE/IA - Round 21 - Block I

Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Method Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SVE/IA - Round 21 - Block I

TestAmerica Job ID: 140-5670-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech, Inc.
Project/Site: MRC SVE/IA - Round 21 - Block I

TestAmerica Job ID: 140-5670-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5670-1	IA-078-A-21	Air	08/17/16 15:50	08/22/16 09:00
140-5670-2	IA-136-A-21	Air	08/17/16 15:52	08/22/16 09:00
140-5670-3	IA-076-A-21	Air	08/17/16 15:54	08/22/16 09:00
140-5670-4	IA-021-A-21	Air	08/17/16 15:57	08/22/16 09:00
140-5670-5	IA-075-A-21	Air	08/17/16 16:00	08/22/16 09:00
140-5670-6	IA-095-A-21	Air	08/17/16 16:02	08/22/16 09:00
140-5670-7	IA-033-B-21	Air	08/17/16 16:06	08/22/16 09:00
140-5670-8	IA-101-B-21	Air	08/17/16 16:09	08/22/16 09:00
140-5670-9	IA-100-B-21	Air	08/17/16 16:12	08/22/16 09:00
140-5670-10	SV-093-A-21	Air	08/17/16 09:44	08/22/16 09:00
140-5670-11	SV-138-A-21	Air	08/17/16 09:46	08/22/16 09:00
140-5670-12	SV-116-A-21	Air	08/17/16 09:48	08/22/16 09:00
140-5670-13	SV-DUP03-A-21	Air	08/17/16 00:00	08/22/16 09:00
140-5670-14	SV-015-A-21	Air	08/17/16 09:57	08/22/16 09:00
140-5670-15	SV-118-A-21	Air	08/17/16 09:59	08/22/16 09:00
140-5670-16	SV-081-A-21	Air	08/17/16 10:03	08/22/16 09:00
140-5670-17	SV-139-A-21	Air	08/17/16 10:07	08/22/16 09:00
140-5670-18	SV-DUP04-A-21	Air	08/17/16 00:00	08/22/16 09:00
140-5670-19	SV-079-A-21	Air	08/17/16 10:11	08/22/16 09:00
140-5670-20	SV-078-A-21	Air	08/17/16 10:15	08/22/16 09:00
140-5670-21	SV-136-A-21	Air	08/17/16 10:21	08/22/16 09:00
140-5670-22	SV-076-A-21	Air	08/17/16 10:24	08/22/16 09:00
140-5670-23	SV-075-A-21	Air	08/17/16 10:27	08/22/16 09:00
140-5670-24	SV-095-A-21	Air	08/17/16 10:29	08/22/16 09:00
140-5670-25	SV-101-B-21	Air	08/17/16 10:33	08/22/16 09:00
140-5670-26	SV-100-B-21	Air	08/17/16 10:35	08/22/16 09:00
140-5670-27	BCK-1-21	Air	08/16/16 16:02	08/22/16 09:00
140-5670-28	BCK-2-21	Air	08/16/16 16:00	08/22/16 09:00
140-5670-29	BCK-3-21	Air	08/16/16 15:52	08/22/16 09:00
140-5670-30	BCK-4-21	Air	08/16/16 15:46	08/22/16 09:00

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** APANAUAGE	**Sampled By:** TM/WP	10 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-328-3021		
Address:	**Site Contact:** MULLIS		
City/State/Zip: SEE PAGE 1	**TAL Contact:** WALKER		
Phone:			
FAX:			
Project Name: MRC SU/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block I	Standard (Specify)		
PO # 112IC07671	Rush (Specify)		

140-5670 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-078-A-21	8/17/16	0750	1550	-30	-1	10154	09583	X							X	X			
IA-036-A-21		0752	1552	-30	-1	09648	10841	X							X	X			
IA-076-A-21		0754	1554	-30	-15	10646	10493	X							X				
IA-021-A-21		0757	1557	-30	-4	11314	11138	X							X				
IA-075-A-21		0800	1600	-27	-2	10163	10753	X							X				
IA-095-A-21		0802	1602	-30	-4	09848	09636	X							X				

Sampled by : TM/WP [signature]

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient (20°C), 3 boxes
Fedex Sa, tr K# 7770 3842 8177
" " 8475
" " 8328
No custody seal, KW 8/23/16

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 / 1540	Received by: [signature] 8/22/16 0900

33 canv
3 Ts
40 flow

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: TETRA TECH INC
Address:
City/State/Zip: SEE PAGE 1
Phone:
FAX:
Project Name: MRL IA/SV Rnd. 21
Site/location: Block I
PO #: 112IC07671

Project Manager: APANAVAGE
Phone: 301-528-3021
Site Contact: MULLIS
TAL Contact: WALKER

Analysis Turnaround Time
Standard (Specify)
Rush (Specify)

Sampled By: JM/WP

11 of 15 COCs

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
IA-033-B-21	8/17/16	0806	1606	-30	-4	10240	09800	X							X				
IA-101-B-21	1	0809	1609	-30	-4	09861	09808	X							X				
IA-100-B-21	1	0812	1612	-30	-4	10429	09888	X							X				
		8/18/16																	

Sampled by: JM/WP

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 / 1540	Received by: 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** MANAVAGE	**Sampled By:** JM/WP	12 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-528-3021		
Address:	**Site Contact:** MULLIS		
City/State/Zip SEE PAGE 1	**TAL Contact:** WALKER		
Phone:			
FAX:			
Project Name: MRC SU/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block F	Standard (Specify)		
PO # 112IC07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-093-A-21	8/17/16	0844	0944	-30	0	10454	10782	X									X		
SU-138-A-21		0846	0946	-30	-2	09561	09591	X									X		
SU-116-A-21		0848	0948	-30	0	10052	11108	X									X		
SU-QUP03-A-21		0000	0000	-28	0	10304	10740	X									X		
SU-015-A-21		0857	0957	-28	-4	10870	09667	X									X		
SU-118-A-21		0859	0959	-30	-3	09714	09743	X									X		

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/15/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 / 1540	Received by: [signature] 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** APANAVAGE	**Sampled By:** JM/WP	13 of 15 COCs
Company: TETRA TECH INC	**Phone:** 301-528-3021		
Address: 20251 Century Blvd.	**Site Contact:** MULLIS		
City/State/Zip	**TAL Contact:** MCFADDEN		
Phone: SEE PAGE 1			
FAX:			
Project Name: MRC SU/IA Rnd. 21	**Analysis Turnaround Time**		
Site/location: Block I	~~Standard~~ (Specify)		
PO # 112IC07677	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SU-081-A-21	8/17/16	0903	1003	-30	-3	09654	10980	X									X		
SU-139-A-21		0907	1007	-30	-3	10437	09738	X									X		
SU-DUP04-A-21		0000	0000	-30	-5	09913	11111	X									X		
SU-079-A-21		0911	1011	-30	-3	10057	11257	X									X		
SU-078-A-21		0915	1015	-30	-4	10464	10518	X									X		
SU-136-A-21		0921	1021	-29	-3	10856	11110	X									X		

Sampled by : JM/WP [signature]

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: [signature]	Date/Time: 8/19/16 1020	Received by: [signature]
Relinquished by: [signature]	Date/Time: 8-19-2016 / 1540	Received by: [signature] 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** ARAVAVAGE	**Sampled By:** JM/WP
Company: TETRA TECH INC	Phone: 301-528-3021	14 of 15 COCs
Address:	Site Contact: MULLIS	
City/State/Zip SEE PAGE 1	TAL Contact: WALKER	
Phone:		
FAX:		
Project Name: MRL SVOA Rnd. 21	**Analysis Turnaround Time**	
Site/location: Block I	~~Standard~~ (Specify)	
PO # 112IC07677	Rush (Specify)	

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
SV-076-A-21	8/17/16	0924	1024	-30	-3	09659	11126	X									X		
SV-075-A-21		0927	1027	-30	-4	10355	10735	X									X		
SV-095-A-21		0929	1029	-29	-5	09703	09632	X									X		
SV-101-B-21		0933	1033	-30	-5	09912	10780	X									X		
SV-100-B-21		0935	1035	-30	-6	11051	10739	X									X		

Sampled by : JM/WP

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016 / 1540	Received by: 8/22/16 0900

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

Canister Samples Chain of Custody Record

BALTIMORE

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: AVANAUGH	Sampled By: JM/WP	15 of 15 COCs
Company: TETRA TECH EMI	Phone: 701-528-3021		
Address:	Site Contact: NURSES		
City/State/Zip SEE PAGE 1	TAL Contact: WALKER		
Phone:			
FAX:			
Project Name: MIKE SUTEA Amd. 21	Analysis Turnaround Time		
Site/location: Block I	(Standard) (Specify)		
PO # 112IC07671	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
BCK-1-21	8/16/16	0720	1602	-30	-2	10021	09801	X								X			
BCK-2-21	"	0718	1600	-30	-2	10242	11121	X								X			
BCK-3-21	"	0705	1552	-29	0	11248	11165	X								X			
BCK-4-21	"	0710	1546	-28	-2	10450	11279	X								X			

Sampled by : TA/WP JM

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 8/19/16 1020	Received by:
Relinquished by:	Date/Time: 8-19-2016/1540	Received by: 8/22/16 0900

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 8/24/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
seg	140-5670-A-1	09583	5495	B	1	-2.8	0906	
seg	140-5670-A-2	10841	5503	B	1	-3.5	0906	
seg	140-5670-A-3	10493	5493	B	1	-15.1	0907	4.7
seg	140-5670-A-4	11138	5493	B	1	-4.3	0914	
seg	140-5670-A-5	10753	5493	B	1	-2.3	0915	
seg	140-5670-A-6	09636	5466	B	1	-3.5	0915	
seg	140-5670-A-7	09800	5493	B	1	-3.8	0915	
seg	140-5670-A-8	09808	5483	B	1	-4.0	0915	
seg	140-5670-A-9	09888	5493	B	1	-4.7	0924	
seg	140-5670-A-10	10782	5164	B	1	-1.5	0924	
seg	140-5670-A-11	09591	5178	B	1	-1.8	0925	
seg	140-5670-A-12	11108	5446	B	1	0.0	0925	
seg	140-5670-A-13	10740	5446	B	1	-3.1	0925	
seg	140-5670-A-14	09667	5392	B	1	-5.1	0926	
seg	140-5670-A-15	09743	5392	B	1	-3.7	0926	
seg	140-5670-A-16	10980	5178	B	1	-3.7	0926	
seg	140-5670-A-17	09738	5214	B	1	-4.0	0936	
seg	140-5670-A-18	11111	5392	B	1	-3.8	0936	
seg	140-5670-A-19	11257	5114	B	1	-4.3	0937	
seg	140-5670-A-20	10518	5446	B	1	-5.7	0937	
seg	140-5670-A-21	11110	5178	B	1	-4.3	0938	
seg	140-5670-A-22	11126	5178	B	1	-4.7	0938	
seg	140-5670-A-23	10735	5332	B	1	-3.7	0938	
seg	140-5670-A-24	9632	5114	B	1	-5.4	0939	
seg	140-5670-A-25	10780	5392	B	1	-3.5	0946	
seg	140-5670-A-26	10739	5392	B	1	-7.5	0946	4.7
seg	140-5670-A-27	09801	5466	B	1	-3.2	0949	
seg	140-5670-A-28	11121	5429	B	1	-3.5	0949	
seg	140-5670-A-29	11165	5493	B	1	-2.1	0950	
seg	140-5670-A-30	11279	5429	B	1	-2.6	0950	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc.

Job Number: 140-5670-1

Login Number: 5670
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

FIELD DUPLICATE PRECISION - SV-116-A-21 / SV-DUP03-A-21							
ANALYTE	**SV-116-A-21**	**QUAL**	**SV-DUP03-A-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1-DICHLOROETHENE	1.7		1.6		6.06	0.1	1.6
1,2,3-TRIMETHYLBENZENE	0.86	J	1.1	J	24.49	0.24	2
1,2,4-TRIMETHYLBENZENE	0.94	J	1	J	6.19	0.06	2
BENZENE	0.48	J	0.37	U	25.88	0.11	1.3
CARBON TETRACHLORIDE	0.5	J	0.48	J	4.08	0.02	2.5
CHLORODIFLUOROMETHANE	1.3	J	1.3	J	0.00	0	1.4
CHLOROFORM	1.9	J	1.4	J	30.30	0.5	2
DICHLORODIFLUOROMETHANE	2.4		2.4		0.00	0	2
ETHYLBENZENE	1.1	J	0.59	U	60.36	0.51	1.7
METHYLENE CHLORIDE	3.4	J	2.7	J	22.95	0.7	3.5
NAPHTHALENE	1.8		1.7		5.71	0.1	1
TETRACHLOROETHENE	0.57	J	0.54	U	5.41	0.03	2.7
TOLUENE	2.5		2.3	U	8.33	0.2	2.3
TOTAL XYLENES	4.6		2.6	J	56	2	3.5
TRICHLOROETHENE	21		21		0.00	0	1.1

FIELD DUPLICATE PRECISION - SV-139-A-21 / SV-DUP04-A-21							
ANALYTE	**SV-139-A-21**	**QUAL**	**SV-DUP04-A-21**	**QUAL**	**RPD**	**DIFFERENCE**	**RL**
1,1,1-TRICHLOROETHANE	0.59	J	0.57	J	3.45	0.02	2.2
1,2,3-TRIMETHYLBENZENE	14		14		0.00	0	2
1,2,4-TRIMETHYLBENZENE	5.2		5.2		0.00	0	2
1,3,5-TRIMETHYLBENZENE	6.4		6.5		1.55	0.1	2
BENZENE	0.99	J	1	J	1.01	0.01	1.3
CARBON TETRACHLORIDE	0.56	J	0.57	J	1.77	0.01	2.5
CHLORODIFLUOROMETHANE	1.9		2.2		14.63	0.3	1.4
CHLOROFORM	1.5	J	0.67	J	76.50	0.83	2
DICHLORODIFLUOROMETHANE	2.5		2.8		11.32	0.3	2
ETHYLBENZENE	5.5		5.4		1.83	0.1	1.7
METHYLENE CHLORIDE	6.4		4		46.15	2.4	3.5
NAPHTHALENE	4	J	13	J	105.88	9	1
TETRACHLOROETHENE	5.1		5.3		3.85	0.2	2.7
TOLUENE	2.6		2.3	U	12.24	0.3	2.3
TOTAL XYLENES	30		30		0.00	0	3.5
TRICHLOROETHENE	1.5		1.6		6.45	0.1	1.1

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: EBFBH23A.D BFB Injection Date: 08/23/2016

Instrument ID: ME BFB Injection Time: 15:48

Analysis Batch No.: 6379

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.0	
75	30.0 - 60.0 % of mass 95	54.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	83.7	
175	5.0 - 9.0 % of mass 174	5.9	(7.1) 1
176	95.0 - 101.0 % of mass 174	81.7	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.6	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-6379/3	EH23IC01A.D	08/23/2016	17:03
	IC 140-6379/4	EH23IC02A.D	08/23/2016	17:48
	IC 140-6379/5	EH23IC03A.D	08/23/2016	18:32
	IC 140-6379/6	EH23IC04.D	08/23/2016	19:17
	IC 140-6379/7	EH23IC05.D	08/23/2016	20:01
	ICIS 140-6379/8	EH23IC06.D	08/23/2016	20:46
	IC 140-6379/9	EH23IC07.D	08/23/2016	21:31
	IC 140-6379/10	EH23IC08.D	08/23/2016	22:17
	IC 140-6379/11	EH23IC09.D	08/23/2016	23:02
	ICV 140-6379/13	EH23ICV.D	08/24/2016	00:30

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6379/3	EH23IC01A.D
Level 2	IC 140-6379/4	EH23IC02A.D
Level 3	IC 140-6379/5	EH23IC03A.D
Level 4	IC 140-6379/6	EH23IC04.D
Level 5	IC 140-6379/7	EH23IC05.D
Level 6	ICIS 140-6379/8	EH23IC06.D
Level 7	IC 140-6379/9	EH23IC07.D
Level 8	IC 140-6379/10	EH23IC08.D
Level 9	IC 140-6379/11	EH23IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4591	0.5657 0.4612	0.4705 0.4677	0.4594 0.4369	0.4759	Ave		0.4745				8.1		30.0			
Propene	+++++ 0.6245	0.6890 0.6168	0.7232 0.6449	0.6694 0.6037	0.6479	Ave		0.6524				6.1		30.0			
Dichlorodifluoromethane	4.8118 4.2351	4.4782 4.0016	4.2723 3.9991	4.2868 3.4845	4.2878	Ave		4.2063				8.7		30.0			
Chloromethane	0.3136 0.2329	0.3661 0.2325	0.3162 0.2365	0.2575 0.2236	0.2518	Ave		0.2701				18.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.5118 2.2402	2.3828 2.0142	2.2476 2.1779	2.3122 1.9666	2.2719	Ave		2.2361				7.6		30.0			
Acetaldehyde	+++++ 0.2386	+++++ 0.2241	+++++ 0.2327	0.3118 0.2285	0.3079	Ave		0.2573				16.0		30.0			
Vinyl chloride	1.2287 1.0444	1.0759 1.0541	1.0747 1.1009	1.0314 1.0210	1.0718	Ave		1.0781				5.7		30.0			
Butane	1.4284 1.1074	1.2361 1.1179	1.1431 1.1642	1.1373 1.1112	1.1398	Ave		1.1762				8.7		30.0			
1,3-Butadiene	0.7630 0.6447	0.7460 0.6550	0.6478 0.6912	0.6570 0.6615	0.6738	Ave		0.6822				6.4		30.0			
Bromomethane	+++++ 1.1648	1.4162 1.1882	1.1868 1.2305	1.1895 1.1726	1.2143	Ave		1.2203				6.7		30.0			
Chloroethane	0.7026 0.5433	0.6001 0.5424	0.5513 0.5690	0.5520 0.5437	0.5617	Ave		0.5740				9.0		30.0			
Ethanol	+++++ 0.2659	0.3453 0.2586	0.3124 0.2634	0.2894 0.2512	0.2828	Ave		0.2836				11.2		30.0			
Vinyl bromide	1.3578 1.1241	1.1181 1.1425	1.1195 1.1893	1.1506 1.1376	1.1580	Ave		1.1664				6.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.1479 0.8122	1.1326 0.8202	0.8514 0.8489	0.8256 0.8192	0.8315	Ave		0.8988				15.3		30.0			
Trichlorofluoromethane	4.4382 3.9435	4.3772 3.9496	4.0733 3.9971	4.1226 3.5905	4.1540	Ave		4.0718				6.2		30.0			
Acrolein	+++++ 0.2643	+++++ 0.2468	0.3610 0.2538	0.2366 0.2716	0.2288	Ave		0.2661				16.7		30.0			
Acetonitrile	+++++ 0.2356	+++++ 0.2349	0.2762 0.2454	0.2685 0.2794	0.2723	Ave		0.2589				7.6		30.0			
Acetone	+++++ 0.3646	+++++ 0.3287	+++++ 0.3345	0.4727 0.3418	0.4469	Ave		0.3815				16.3		30.0			
Isopropyl alcohol	1.1610 0.9811	1.0954 0.9425	1.0467 0.9643	0.9990 0.9181	1.0150	Ave		1.0137				7.6		30.0			
Pentane	+++++ 0.2087	0.1947 0.2205	0.1966 0.2241	0.2268 0.2201	0.2240	Ave		0.2144				6.0		30.0			
Ethyl ether	0.7120 0.6470	0.7237 0.6150	0.6091 0.6466	0.6651 0.6652	0.6645	Ave		0.6609				5.8		30.0			
1,1-Dichloroethene	1.6061 1.1212	1.2769 1.1476	1.1494 1.1932	1.1788 1.1441	1.1601	Ave		1.2197				12.4		30.0			
tert-Butyl alcohol	+++++ 1.6444	1.7865 1.6019	1.6234 1.6901	1.6338 1.6296	1.6406	Ave		1.6563				3.5		30.0			
Acrylonitrile	+++++ 0.4731	0.6551 0.4435	0.5849 0.4756	0.5141 0.4865	0.4913	Ave		0.5155				13.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8362 2.5588	2.7583 2.5224	2.5712 2.6416	2.6400 2.4959	2.6421	Ave		2.6296				4.2		30.0			
Methylene Chloride	+++++ 1.1787	+++++ 1.1352	1.6026 1.1702	1.3596 1.1034	1.2331	Ave		1.2547				13.9		30.0			
3-Chloropropene	+++++ 0.9853	1.0738 0.9572	1.1596 0.9884	1.0242 0.9404	0.9989	Ave		1.0160				7.0		30.0			
Carbon disulfide	4.0949 3.7456	3.7914 3.7022	3.7035 3.7851	3.7242 3.5054	3.8383	Ave		3.7656				4.1		30.0			
trans-1,2-Dichloroethene	1.4029 1.3159	1.3275 1.2926	1.3062 1.3454	1.3208 1.2832	1.3423	Ave		1.3263				2.7		30.0			
2-Methylpentane	1.9831 1.5725	1.7392 1.5299	1.5822 1.5962	1.5781 1.5302	1.6459	Ave		1.6397				8.8		30.0			
Methyl tert-butyl ether	3.9575 3.8947	4.0383 3.5493	3.7738 3.6697	3.9043 3.7137	4.0120	Ave		3.8348				4.4		30.0			
1,1-Dichloroethane	2.4626 2.1811	2.3851 2.1242	2.1417 2.1824	2.1832 2.1017	2.2548	Ave		2.2241				5.5		30.0			
Vinyl acetate	2.0000 2.0555	2.0649 1.9392	1.8523 2.0741	1.8591 2.1479	2.0915	Ave		2.0094				5.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5655	+++++ 0.5049	0.7022 0.5266	0.6402 0.5452	0.5958	Ave		0.5829				11.9		30.0			
Hexane	0.8524 0.7487	0.8308 0.7406	0.7976 0.7626	0.7759 0.7362	0.7868	Ave		0.7813				5.1		30.0			
Isopropyl ether	2.3616 2.4628	2.5671 2.2243	2.3769 2.3238	2.4258 2.4064	2.4910	Ave		2.4044				4.1		30.0			
cis-1,2-Dichloroethene	1.4318 1.3372	1.3207 1.3087	1.2569 1.3782	1.3154 1.3411	1.3596	Ave		1.3388				3.7		30.0			
Ethyl acetate	1.4964 1.6289	1.5908 1.4485	1.5017 1.5390	1.5917 1.6321	1.6484	Ave		1.5642				4.5		30.0			
Chloroform	3.7153 3.2837	3.5111 3.1771	3.3054 3.2572	3.2932 3.1269	3.3412	Ave		3.3346				5.4		30.0			
Tert-butyl ethyl ether	3.0048 3.1040	3.0366 2.8288	2.9609 2.9640	3.0771 3.0370	3.1616	Ave		3.0194				3.2		30.0			
Tetrahydrofuran	0.9102 0.7561	0.8126 0.6985	0.8088 0.7360	0.7531 0.7763	0.7975	Ave		0.7832				7.7		30.0			
1,1,1-Trichloroethane	4.0243 3.7355	3.7611 3.6180	3.6874 3.7256	3.7126 3.5564	3.8164	Ave		3.7375				3.5		30.0			
1,2-Dichloroethane	0.4790 0.4483	0.4856 0.4339	0.4457 0.4601	0.4409 0.4358	0.4576	Ave		0.4541				4.0		30.0			
Cyclohexane	0.1515 0.1306	0.1453 0.1318	0.1287 0.1378	0.1325 0.1271	0.1346	Ave		0.1355				6.0		30.0			
Thiophene	0.5461 0.4864	0.5192 0.4819	0.4777 0.5096	0.4762 0.4678	0.4961	Ave		0.4957				5.1		30.0			
Benzene	0.8970 0.7911	0.9200 0.7676	0.8384 0.8048	0.8008 0.7455	0.8132	Ave		0.8198				7.0		30.0			
1-Butanol	+++++ 0.0466	+++++ 0.0516	0.0443 0.0581	0.0444 0.0548	0.0447	Ave		0.0492				11.4		30.0			
Carbon tetrachloride	0.8657 0.7919	0.7822 0.7866	0.7695 0.8222	0.7583 0.7416	0.8059	Ave		0.7915				4.7		30.0			
2,3-Dimethylpentane	0.2273 0.1833	0.1968 0.1838	0.1789 0.1962	0.1799 0.1845	0.1880	Ave		0.1910				7.9		30.0			
Tert-amyl methyl ether	+++++ 0.8337	0.8523 0.7732	0.7836 0.7890	0.8141 0.7903	0.8349	Ave		0.8089				3.6		30.0			
2,2,4-Trimethylpentane	1.0554 0.9279	1.0026 0.9273	0.9262 0.9709	0.9194 0.9004	0.9451	Ave		0.9528				5.1		30.0			
Heptane	0.3172 0.2819	0.3138 0.2831	0.2758 0.3010	0.2790 0.2847	0.2875	Ave		0.2915				5.3		30.0			
1,2-Dichloropropane	0.2486 0.2434	0.2426 0.2406	0.2354 0.2524	0.2465 0.2458	0.2497	Ave		0.2450				2.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3831 0.3496	0.3612 0.3524	0.3506 0.3716	0.3507 0.3526	0.3534	Ave		0.3584				3.2		30.0			
Dibromomethane	0.3895 0.3488	0.3548 0.3502	0.3437 0.3760	0.3493 0.3515	0.3537	Ave		0.3575				4.2		30.0			
Bromodichloromethane	0.6876 0.7092	0.6820 0.7181	0.6338 0.7599	0.6565 0.7102	0.7003	Ave		0.6953				5.2		30.0			
1,4-Dioxane	0.1134 0.1167	0.1165 0.1135	0.1068 0.1182	0.1121 0.1128	0.1124	Ave		0.1136				2.9		30.0			
Methyl methacrylate	0.2349 0.2258	0.2152 0.2091	0.1911 0.2310	0.2016 0.2387	0.2192	Ave		0.2185				7.3		30.0			
Methylcyclohexane	0.6839 0.6057	0.6462 0.6082	0.6222 0.6398	0.6089 0.5919	0.6149	Ave		0.6246				4.5		30.0			
4-Methyl-2-pentanone (MIBK)	0.3053 0.3355	0.3361 0.3148	0.3293 0.3281	0.3077 0.3265	0.3094	Ave		0.3214				3.8		30.0			
cis-1,3-Dichloropropene	0.4998 0.5003	0.5023 0.4903	0.4561 0.5342	0.4739 0.5081	0.4988	Ave		0.4960				4.4		30.0			
trans-1,3-Dichloropropene	0.4914 0.5214	0.4748 0.5218	0.4611 0.5383	0.4890 0.5321	0.5226	Ave		0.5058				5.4		30.0			
Toluene	0.9766 0.9594	1.0176 0.9449	0.9476 0.9460	0.9583 0.9034	0.9806	Ave		0.9594				3.3		30.0			
Toluene Range	+++++ 2.1610	+++++ 2.1067	+++++ 2.2258	2.1476 2.1474	2.1929	Ave		2.1636				1.9		30.0			
1,1,2-Trichloroethane	0.3300 0.2929	0.2767 0.2924	0.2838 0.2957	0.2910 0.2893	0.2994	Ave		0.2946				5.0		30.0			
2-Methylthiophene	0.7657 0.8226	0.8196 0.8088	0.7388 0.8146	0.8029 0.7812	0.8212	Ave		0.7973				3.7		30.0			
3-Methylthiophene	0.8030 0.8012	0.7780 0.7876	0.7275 0.7914	0.7862 0.7560	0.8049	Ave		0.7817				3.2		30.0			
2-Hexanone	0.1595 0.2019	0.1745 0.1941	0.1753 0.2038	0.1822 0.2005	0.1889	Ave		0.1867				8.1		30.0			
C8 Range	+++++ 2.1384	+++++ 2.1481	+++++ 2.3006	2.1075 2.1399	2.1652	Ave		2.1666				3.2		30.0			
Octane	0.3310 0.3331	0.3114 0.3369	0.3283 0.3417	0.3189 0.3245	0.3362	Ave		0.3291				2.9		30.0			
Dibromochloromethane	0.5712 0.6639	0.5458 0.6857	0.5338 0.6997	0.5697 0.6658	0.6418	Ave		0.6197				10.4		30.0			
1,2-Dibromoethane (EDB)	0.4965 0.5469	0.5070 0.5479	0.4793 0.5615	0.5003 0.5495	0.5463	Ave		0.5261				5.7		30.0			
Tetrachloroethene	0.4066 0.3677	0.3888 0.3723	0.3618 0.3736	0.3587 0.3543	0.3750	Ave		0.3732				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7425 0.7407	0.7927 0.7373	0.7231 0.7391	0.7336 0.7067	0.7596	Ave		0.7417				3.2		30.0			
2,3-Dimethylheptane	0.5774 0.5018	0.5129 0.5040	0.4885 0.5084	0.4991 0.4810	0.5194	Ave		0.5103				5.4		30.0			
Ethylbenzene	1.3116 1.3250	1.3170 1.2797	1.2522 1.2689	1.3026 1.1715	1.3582	Ave		1.2874				4.2		30.0			
2-Ethylthiophene	0.9508 1.0642	0.9800 1.0263	0.9670 1.0320	1.0183 0.9646	1.0585	Ave		1.0069				4.2		30.0			
m-Xylene & p-Xylene	1.0091 1.0449	1.0514 0.9898	1.0051 0.9652	1.0380 0.8619	1.0698	Ave		1.0039				6.2		30.0			
Bromoform	0.4665 0.6788	0.4714 0.7141	0.4848 0.7355	0.5142 0.7301	0.6370	Ave		0.6036				19.5		30.0			
Nonane	0.4068 0.4453	0.4304 0.4404	0.4208 0.4413	0.4243 0.4148	0.4520	Ave		0.4307				3.5		30.0			
Styrene	0.4854 0.7309	0.5335 0.7249	0.5540 0.7396	0.6151 0.7240	0.7148	Ave		0.6469				15.5		30.0			
o-Xylene	1.0306 1.0916	1.0733 1.0454	1.0439 1.0464	1.0590 0.9731	1.1194	Ave		1.0536				3.9		30.0			
1,1,2,2-Tetrachloroethane	0.6519 0.7180	0.6386 0.6827	0.6053 0.6939	0.6589 0.6749	0.7077	Ave		0.6702				5.3		30.0			
1,2,3-Trichloropropane	0.2218 0.2486	0.2596 0.2363	0.2181 0.2415	0.2397 0.2413	0.2537	Ave		0.2401				5.7		30.0			
Isopropylbenzene	1.4950 1.4420	1.4520 1.3678	1.3821 1.3616	1.4265 1.2520	1.4743	Ave		1.4059				5.3		30.0			
Propylbenzene	0.3065 0.3848	0.3515 0.3661	0.3446 0.3759	0.3623 0.3736	0.3887	Ave		0.3616				7.0		30.0			
2-Chlorotoluene	0.3072 0.3377	0.3097 0.3299	0.3272 0.3344	0.3303 0.3276	0.3444	Ave		0.3276				3.7		30.0			
4-Ethyltoluene	1.1452 1.4354	1.2792 1.3460	1.2293 1.3430	1.3293 1.2537	1.4459	Ave		1.3119				7.4		30.0			
1,3,5-Trimethylbenzene	0.5768 0.6460	0.5753 0.6150	0.5787 0.6238	0.6121 0.6151	0.6540	Ave		0.6108				4.8		30.0			
Alpha Methyl Styrene	+++++ 0.5448	0.3553 0.5477	0.3574 0.5690	0.4266 0.5700	0.5167	Ave		0.4859				18.9		30.0			
Decane	0.4300 0.5407	0.4763 0.5184	0.4677 0.5202	0.5089 0.4981	0.5574	Ave		0.5020				7.8		30.0			
tert-Butylbenzene	1.1600 1.2851	1.1830 1.1915	1.1778 1.1803	1.2476 1.1142	1.3025	Ave		1.2047				5.1		30.0			
1,2,4-Trimethylbenzene	0.9850 1.2251	1.1579 1.1445	1.0835 1.1296	1.1416 1.0623	1.2477	Ave		1.1308				7.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.4708 1.6845	1.5862 1.5600	1.5420 1.5232	1.6267 1.3697	1.7222	Ave		1.5650				6.9		30.0			
1,3-Dichlorobenzene	0.5770 0.7433	0.6505 0.7187	0.6301 0.7363	0.6674 0.7185	0.7372	Ave		0.6866				8.5		30.0			
Benzyl chloride	0.6683 1.0445	0.7827 1.0301	0.7315 1.0696	0.8636 1.0280	1.0045	Ave		0.9136				16.8		30.0			
1,4-Dichlorobenzene	0.5250 0.7290	0.6241 0.7118	0.6114 0.7308	0.6428 0.7191	0.7114	Ave		0.6673				10.6		30.0			
4-Isopropyltoluene	1.0670 1.4358	1.2691 1.3250	1.2331 1.2955	1.3495 1.2050	1.4510	Ave		1.2923				9.2		30.0			
1,2,3-Trimethylbenzene	0.7475 0.9204	0.8258 0.8631	0.8282 0.8563	0.8773 0.8263	0.9400	Ave		0.8539				6.7		30.0			
Butylcyclohexane	0.8296 0.8902	0.8670 0.8538	0.8446 0.8366	0.8763 0.7831	0.9198	Ave		0.8557				4.6		30.0			
1,2-Dichlorobenzene	0.5702 0.7217	0.6701 0.6913	0.6138 0.6966	0.6636 0.6824	0.7165	Ave		0.6696				7.3		30.0			
Indane	0.8612 1.0321	0.9219 0.9803	0.9010 0.9727	0.9535 0.9178	1.0432	Ave		0.9538				6.3		30.0			
Indene	+++++ 0.7757	+++++ 0.7471	0.5856 0.7641	0.6381 0.7513	0.7518	Ave		0.7162				10.3		30.0			
Butylbenzene	0.9198 1.3753	1.1072 1.2509	1.0880 1.2201	1.2074 1.1300	1.3864	Ave		1.1872				12.3		30.0			
Undecane	+++++ 0.5664	+++++ 0.5328	0.3653 0.5287	0.4303 0.5173	0.5506	Ave		0.4988				14.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0200	0.7967 0.9342	0.8237 0.9271	0.8688 0.8894	1.0244	Ave		0.9105				9.1		30.0			
1,2-Dibromo-3-Chloropropane	0.1841 0.3242	0.2059 0.3179	0.1915 0.3279	0.2272 0.3525	0.2887	Ave		0.2689				24.7		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.1981	0.8890 1.1084	0.8822 1.0701	0.9402 1.0184	1.1658	Ave		1.0340				11.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.7335	0.5072 0.6849	0.5426 0.6639	0.5773 0.6590	0.7030	Ave		0.6339				12.8		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.9474	0.6115 0.9034	0.6526 0.8692	0.6782 0.8355	0.8860	Ave		0.7980				16.3		30.0			
Dodecane	+++++ 0.2974	+++++ 0.3690	0.2437 0.3623	0.1858 0.3793	0.2608	Ave		0.2998				24.6		30.0			
1,2,4-Trichlorobenzene	0.3611 0.5045	0.3568 0.5742	0.3453 0.5814	0.3051 0.5964	0.4153	Ave		0.4489				25.7		30.0			
Naphthalene	0.6056 0.9630	0.6781 1.1134	0.5939 1.1208	0.5435 1.0727	0.7703	Ave		0.8290				28.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	0.3999 0.4398	0.4206 0.5731	0.3275 0.5950	0.2908 0.5982	0.3678	Ave		0.4459				26.1		30.0			
Hexachlorobutadiene	0.5442 0.7246	0.5863 0.6982	0.6210 0.6596	0.5728 0.6511	0.7133	Ave		0.6412				10.1		30.0			
1,2,3-Trichlorobenzene	0.3237 0.3674	0.3270 0.4807	0.3039 0.4929	0.2348 0.4849	0.3122	Ave		0.3697				25.4		30.0			
2-Methylnaphthalene	0.1687 0.1736	0.1906 0.2142	0.1910 0.2092	0.0971 0.1277	0.1610	Ave		0.1703				22.3		50.0			
1-Methylnaphthalene	0.1531 0.1471	0.1587 0.1786	0.1700 0.1721	0.0735 0.0995	0.1416	Ave		0.1438				24.5		50.0			
4-Bromofluorobenzene (Surr)	0.8114 0.8239	0.8130 0.8129	0.8120 0.8309	0.8304 0.8100	0.8219	Ave		0.8185				1.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6379/3	EH23IC01A.D
Level 2	IC 140-6379/4	EH23IC02A.D
Level 3	IC 140-6379/5	EH23IC03A.D
Level 4	IC 140-6379/6	EH23IC04.D
Level 5	IC 140-6379/7	EH23IC05.D
Level 6	ICIS 140-6379/8	EH23IC06.D
Level 7	IC 140-6379/9	EH23IC07.D
Level 8	IC 140-6379/10	EH23IC08.D
Level 9	IC 140-6379/11	EH23IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 61822	2928 122753	4908 242433	12124 469686	31671	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 84095	3566 164168	7544 334314	17666 649043	43114	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	12814 570285	23179 1065086	44567 2073013	113130 3746080	285347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	835 31364	1895 61884	3298 122595	6795 240332	16758	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	6689 301658	12333 536115	23446 1128953	61020 2114275	151194	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 160626	+++++ 298221	+++++ 603191	41149 1228060	102442	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	3272 140638	5569 280576	11211 570655	27219 1097667	71324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	3804 149120	6398 297557	11924 603481	30014 1194649	75855	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	2032 86814	3861 174350	6758 358281	17338 711110	44842	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 156847	7330 316269	12380 637838	31392 1260571	80807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	1871 73166	3106 144362	5751 294933	14567 584496	37379	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 179028	8936 344174	16292 682822	38188 1350335	94084	+++++ 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	3616 151363	5787 304097	11678 616492	30365 1222946	77061	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	3057 109370	5862 218301	8881 440024	21789 880719	55332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	11819 531022	22656 1051244	42491 2071990	108799 3859984	276442	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 35585	+++++ 65676	3766 131570	6243 291990	15226	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 31720	+++++ 62514	2881 127213	7085 300347	18124	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 147307	+++++ 262456	+++++ 520254	37431 1102505	89220	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	9276 396373	17011 752605	32758 1499717	79096 2961253	202651	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 28100	1008 58677	2051 116174	5985 236638	14910	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	1896 87130	3746 163685	6354 335199	17552 715101	44219	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4277 150972	6609 305462	11990 618548	31108 1230023	77206	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 221435	9247 426365	16935 876118	43118 1751968	109176	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 63707	3391 118033	6101 246559	13567 523026	32693	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	7553 344561	14277 671371	26822 1369350	69670 2683210	175826	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 158716	+++++ 302156	16718 606626	35881 1186247	82064	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 132672	5558 254777	12096 512353	27029 1010942	66473	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	10905 504376	19624 985401	38633 1962117	98285 3768546	255435	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	3736 177199	6871 344048	13626 697415	34857 1379488	89328	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	5281 211749	9002 407193	16505 827410	41648 1645031	109529	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10539 524448	20902 944686	39367 1902290	103036 3992522	266995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	6558 293707	12345 565390	22341 1131279	57616 2259461	150055	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	5326 276789	10688 516154	19323 1075172	49063 2309147	139184	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 76143	+++++ 134374	7325 272986	16894 586143	39647	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	2270 100815	4300 197120	8320 395291	20477 791459	52363	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	6289 331632	13287 592024	24795 1204622	64018 2587020	165774	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	3813 180059	6836 348332	13111 714434	34713 1441790	90478	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	3985 219344	8234 385530	15665 797761	42005 1754653	109695	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	9894 442178	18173 845620	34481 1688433	86910 3361601	222354	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	8002 417978	15717 752929	30887 1536459	81207 3265007	210400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	2424 101819	4206 185923	8437 381534	19875 834578	53071	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10717 503011	19467 962972	38466 1931274	97977 3823404	253978	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	5982 288122	11809 537769	21847 1083476	55807 2199272	145593	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	1892 83943	3534 163307	6309 324420	16775 641188	42831	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	6819 312594	12627 597290	23414 1200122	60273 2360523	157834	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	11202 508450	22374 951416	41095 1895126	101363 3761648	258726	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 29976	+++++ 63903	2173 136710	5619 276402	14208	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10810 508933	19024 974957	37717 1936171	95982 3741835	256403	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	2838 117785	4787 227817	8770 461939	22772 931179	59803	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 504302	19478 895818	36281 1820156	96249 3872410	248836	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	13180 596371	24385 1149309	45400 2286361	116372 4543372	300690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	3961 181150	7633 350840	13516 708768	35307 1436461	91476	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	3104 156418	5901 298142	11537 594381	31204 1240155	79431	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	4784 224706	8785 436756	17186 875136	44392 1779192	112424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	4864 224186	8628 434049	16846 885348	44214 1773527	112531	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	8587 455767	16586 890002	31068 1789431	83097 3583453	222787	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1416 75001	2833 140622	5236 278394	14190 569065	35770	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	2933 145099	5235 259190	9366 543935	25512 1204588	69730	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	8540 389263	15716 753857	30495 1506790	77063 2986759	195638	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	3813 215605	8173 390128	16142 772677	38946 1647426	98443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6241 321547	12216 607644	22355 1257896	59979 2563611	158688	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	5692 315429	10851 604586	21349 1241706	57807 2606992	155761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	11312 580354	23255 1094823	43873 2182437	113294 4426217	292256	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 1388876	+++++ 2611091	+++++ 5241600	271821 10835824	697680	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3822 177178	6323 338754	13139 682266	34398 1417572	89240	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	8869 497602	18731 937085	34204 1879129	94924 3827830	244758	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	9301 484667	17780 912530	33682 1825649	92948 3704338	239879	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	1847 122120	3989 224945	8116 470040	21539 982468	56286	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 1374344	+++++ 2662409	+++++ 5417670	266745 10797608	688848	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3834 201515	7117 390371	15198 788319	37708 1590022	100195	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	6616 401579	12474 794467	24716 1614046	67349 3262185	191276	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5751 330814	11586 634861	22191 1295383	59149 2692354	162823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	4710 222437	8885 431359	16751 861861	42406 1736176	111764	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8601 448078	18115 854251	33481 1705133	86732 3462502	226397	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	6688 303525	11722 583942	22617 1172837	59008 2356966	154795	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	15193 801501	30099 1482682	57978 2927336	154002 5740123	404807	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	11013 643748	22396 1189105	44774 2380715	120392 4726350	315480	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	23377 1264106	48055 2293730	93076 4453513	245430 8445950	637658	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	5404 410628	10774 827421	22445 1696654	60792 3577134	189843	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	4712 269364	9836 510303	19483 1018016	50166 2032588	134711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5622 442128	12193 839948	25652 1706172	72725 3547238	213035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	11938 660323	24528 1211234	48334 2413900	125205 4767807	333631	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7551 434322	14594 791030	28026 1600723	77899 3306686	210910	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	2569 150393	5933 273751	10099 557217	28342 1182507	75599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	17317 872303	33182 1584733	63990 3141082	168653 6134373	439412	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3550 232788	8033 424172	15956 867100	42831 1830699	115851	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3558 204257	7078 382213	15148 771336	39045 1605221	102641	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	13265 868312	29234 1559536	56915 3098109	157161 6142846	430948	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	6681 390767	13148 712511	26795 1439108	72362 3013892	194923	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 329584	8119 634614	16546 1312588	50440 2792870	153984	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	4981 327049	10886 600636	21656 1200057	60168 2440593	166121	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	13437 777364	27036 1380562	54531 2722919	147503 5459193	388192	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	11410 741071	26463 1326106	50168 2605971	134962 5205042	371867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	17037 1018995	36249 1807431	71394 3513808	192323 6710905	513295	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	6684 449629	14866 832738	29174 1698531	78900 3520402	219701	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	7741 631803	17888 1193451	33870 2467506	102099 5037033	299387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	6081 440987	14262 824733	28310 1686002	76000 3523407	212012	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	12359 868508	29003 1535240	57090 2988630	159549 5904118	432443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	8659 556747	18872 999985	38345 1975362	103719 4048474	280160	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	9610 538465	19815 989255	39107 1929931	103599 3837052	274151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	6605 436557	15315 800951	28420 1607098	78457 3343640	213558	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	9976 624298	21069 1135862	41715 2244014	112724 4497011	310919	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 469235	+++++ 865612	27114 1762740	75444 3680888	224053	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	10654 831941	25304 1449313	50373 2814718	142744 5536359	413197	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 342623	+++++ 617284	16912 1219733	50871 2534545	164093	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 616989	18208 1082391	38137 2138720	102719 4357916	305314	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2132 196098	4706 368272	8867 756511	26856 1727184	86056	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 724740	20317 1284194	40848 2468612	111155 4989637	347469	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 443730	11592 793534	25123 1531519	68246 3228944	209526	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 573073	13974 1046682	30214 2005252	80186 4093587	264067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 179885	+++++ 427564	11284 835790	21967 1858569	77719	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	4183 305159	8155 665315	15989 1341362	36073 2922266	123778	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	7015 582551	15496 1290008	27498 2585522	64256 5255646	229592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	4632 266068	9611 663992	15165 1372667	34379 2930895	109620	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	6304 438302	13399 808993	28753 1521596	67724 3190142	212592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	3749 222221	7473 556933	14072 1137089	27762 2375998	93044	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	6105 328115	13609 775394	27638 1508159	35887 1955688	149931	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	5543 277982	11330 646523	24598 1240578	27147 1523739	131902	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	959094 998139	947995 941828	947828 958423	981774 992236	978264	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5046		2.13	2.00	6.3	35.0
Propene	Ave	0.6524	0.6817		2.09	2.00	4.5	35.0
Dichlorodifluoromethane	Ave	4.206	4.489		2.13	2.00	6.7	35.0
Chloromethane	Ave	0.2701	0.2490		1.84	2.00	-7.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.359		2.11	2.00	5.5	35.0
Acetaldehyde	Ave	0.2573	0.2265		8.80	10.0	-12.0	35.0
Vinyl chloride	Ave	1.078	1.157		2.15	2.00	7.3	35.0
1,3-Butadiene	Ave	0.6822	0.6973		2.04	2.00	2.2	35.0
Butane	Ave	1.176	1.230		2.09	2.00	4.6	35.0
Bromomethane	Ave	1.220	1.246		2.04	2.00	2.1	35.0
Chloroethane	Ave	0.5740	0.5737		2.00	2.00	-0.0	35.0
Ethanol	Ave	0.2836	0.2613		9.21	10.0	-7.9	35.0
Vinyl bromide	Ave	1.166	1.291		2.21	2.00	10.7	35.0
2-Methylbutane	Ave	0.8988	0.8896		1.98	2.00	-1.0	35.0
Trichlorofluoromethane	Ave	4.072	4.243		2.08	2.00	4.2	35.0
Acrolein	Ave	0.2661	0.2482		1.87	2.00	-6.7	35.0
Acetonitrile	Ave	0.2589	0.2415		1.87	2.00	-6.7	35.0
Acetone	Ave	0.3815	0.3226		5.07	6.00	-15.5	35.0
Isopropyl alcohol	Ave	1.014	0.9494		5.62	6.00	-6.3	35.0
Pentane	Ave	0.2144	0.2340		2.18	2.00	9.1	35.0
Ethyl ether	Ave	0.6609	0.6532		1.98	2.00	-1.2	35.0
1,1-Dichloroethene	Ave	1.220	1.204		1.97	2.00	-1.3	35.0
tert-Butyl alcohol	Ave	1.656	1.652		2.00	2.00	-0.2	35.0
Acrylonitrile	Ave	0.5155	0.4859		1.89	2.00	-5.7	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.596		1.97	2.00	-1.3	35.0
Methylene Chloride	Ave	1.255	1.205		1.92	2.00	-4.0	35.0
3-Chloropropene	Ave	1.016	0.9020		1.78	2.00	-11.2	35.0
Carbon disulfide	Ave	3.766	3.967		2.11	2.00	5.4	35.0
trans-1,2-Dichloroethene	Ave	1.326	1.345		2.03	2.00	1.4	35.0
2-Methylpentane	Ave	1.640	1.754		2.14	2.00	7.0	35.0
Methyl tert-butyl ether	Ave	3.835	3.629		1.89	2.00	-5.4	35.0
1,1-Dichloroethane	Ave	2.224	2.276		2.05	2.00	2.3	35.0
Vinyl acetate	Ave	2.009	1.795		1.79	2.00	-10.7	35.0
2-Butanone (MEK)	Ave	0.5829	0.4994		1.71	2.00	-14.3	35.0
Hexane	Ave	0.7813	0.7819		2.00	2.00	0.0	35.0
Isopropyl ether	Ave	2.404	2.149		1.79	2.00	-10.6	35.0
cis-1,2-Dichloroethene	Ave	1.339	1.403		2.10	2.00	4.8	35.0
Ethyl acetate	Ave	1.564	1.348		1.72	2.00	-13.8	35.0
Chloroform	Ave	3.335	3.413		2.05	2.00	2.4	35.0
Tert-butyl ethyl ether	Ave	3.019	3.074		2.04	2.00	1.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.7092		1.81	2.00	-9.5	35.0
1,1,1-Trichloroethane	Ave	3.737	3.887		2.08	2.00	4.0	35.0
1,2-Dichloroethane	Ave	0.4541	0.4612		2.03	2.00	1.6	35.0
Cyclohexane	Ave	0.1355	0.1371		2.02	2.00	1.1	35.0
1-Butanol	Ave	0.0492	0.0554		2.25	2.00	12.7	35.0
Benzene	Ave	0.8198	0.8478		2.07	2.00	3.4	35.0
Thiophene	Ave	0.4957	0.5108		2.06	2.00	3.1	35.0
Carbon tetrachloride	Ave	0.7915	0.8269		2.09	2.00	4.5	35.0
2,3-Dimethylpentane	Ave	0.1910	0.1774		1.86	2.00	-7.1	35.0
Tert-amyl methyl ether	Ave	0.8089	0.7689		1.90	2.00	-4.9	35.0
2,2,4-Trimethylpentane	Ave	0.9528	0.9934		2.09	2.00	4.3	35.0
Heptane	Ave	0.2915	0.2971		2.04	2.00	1.9	35.0
1,2-Dichloropropane	Ave	0.2450	0.2556		2.09	2.00	4.3	35.0
Trichloroethene	Ave	0.3584	0.4116		2.30	2.00	14.9	35.0
Dibromomethane	Ave	0.3575	0.3730		2.09	2.00	4.3	35.0
Bromodichloromethane	Ave	0.6953	0.7520		2.16	2.00	8.2	35.0
1,4-Dioxane	Ave	0.1136	0.1060		1.87	2.00	-6.7	35.0
Methyl methacrylate	Ave	0.2185	0.1885		1.73	2.00	-13.7	35.0
Methylcyclohexane	Ave	0.6246	0.5214		1.67	2.00	-16.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.2988		1.86	2.00	-7.0	35.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5210		2.10	2.00	5.1	35.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5322		2.10	2.00	5.2	35.0
Toluene	Ave	0.9594	1.032		2.15	2.00	7.5	35.0
1,1,2-Trichloroethane	Ave	0.2946	0.3064		2.08	2.00	4.0	35.0
2-Methylthiophene	Ave	0.7973	0.8950		2.25	2.00	12.3	35.0
3-Methylthiophene	Ave	0.7817	0.9074		2.32	2.00	16.1	35.0
2-Hexanone	Ave	0.1867	0.1880		2.01	2.00	0.6	35.0
Octane	Ave	0.3291	0.3599		2.19	2.00	9.3	35.0
Dibromochloromethane	Ave	0.6197	0.6932		2.24	2.00	11.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.5606		2.13	2.00	6.5	35.0
Tetrachloroethene	Ave	0.3732	0.3991		2.14	2.00	6.9	35.0
Chlorobenzene	Ave	0.7417	0.7955		2.14	2.00	7.2	35.0
2,3-Dimethylheptane	Ave	0.5103	0.5575		2.18	2.00	9.2	35.0
Ethylbenzene	Ave	1.287	1.367		2.12	2.00	6.2	35.0
2-Ethylthiophene	Ave	1.007	1.070		2.13	2.00	6.3	35.0
m-Xylene & p-Xylene	Ave	1.004	1.071		4.27	4.00	6.7	35.0
Bromoform	Ave	0.6036	0.6731		2.23	2.00	11.5	35.0
Nonane	Ave	0.4307	0.4703		2.18	2.00	9.2	35.0
Styrene	Ave	0.6469	0.7439		2.30	2.00	15.0	35.0
o-Xylene	Ave	1.054	1.086		2.06	2.00	3.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.6159		1.84	2.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2388		1.99	2.00	-0.5	35.0
Isopropylbenzene	Ave	1.406	1.469		2.09	2.00	4.5	35.0
Propylbenzene	Ave	0.3616	0.3822		2.11	2.00	5.7	35.0
2-Chlorotoluene	Ave	0.3276	0.3492		2.13	2.00	6.6	35.0
4-Ethyltoluene	Ave	1.312	1.324		2.02	2.00	0.9	35.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.6390		2.09	2.00	4.6	35.0
Alpha Methyl Styrene	Ave	0.4859	0.5360		2.21	2.00	10.3	35.0
Decane	Ave	0.5020	0.5428		2.16	2.00	8.1	35.0
tert-Butylbenzene	Ave	1.205	1.239		2.06	2.00	2.8	35.0
1,2,4-Trimethylbenzene	Ave	1.131	1.178		2.08	2.00	4.2	35.0
sec-Butylbenzene	Ave	1.565	1.625		2.08	2.00	3.8	35.0
1,3-Dichlorobenzene	Ave	0.6866	0.7347		2.14	2.00	7.0	35.0
Benzyl chloride	Ave	0.9136	0.9711		2.13	2.00	6.3	35.0
1,4-Dichlorobenzene	Ave	0.6673	0.7139		2.14	2.00	7.0	35.0
4-Isopropyltoluene	Ave	1.292	1.323		2.05	2.00	2.4	35.0
1,2,3-Trimethylbenzene	Ave	0.8539	0.9481		2.22	2.00	11.0	35.0
Butylcyclohexane	Ave	0.8557	0.8876		2.07	2.00	3.7	35.0
1,2-Dichlorobenzene	Ave	0.6696	0.7022		2.10	2.00	4.9	35.0
Indane	Ave	0.9538	0.9486		1.99	2.00	-0.5	35.0
Indene	Ave	0.7162	0.9197		2.57	2.00	28.4	35.0
Butylbenzene	Ave	1.187	1.254		2.11	2.00	5.6	35.0
Undecane	Ave	0.4988	0.4581		1.84	2.00	-8.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.132		2.49	2.00	24.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.1772		1.32	2.00	-34.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.152		2.23	2.00	11.4	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7358		2.32	2.00	16.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.9101		2.28	2.00	14.0	35.0
Dodecane	Ave	0.2998	0.3737		2.49	2.00	24.7	35.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5310		2.37	2.00	18.3	35.0
Naphthalene	Ave	0.8290	1.027		2.48	2.00	23.9	35.0
Benzo(b)thiophene	Ave	0.4459	0.5779		2.59	2.00	29.6	35.0
Hexachlorobutadiene	Ave	0.6412	0.6964		2.17	2.00	8.6	35.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.4754		2.57	2.00	28.6	35.0
2-Methylnaphthalene	Ave	0.1703	0.1317		4.83	6.25	-22.7	50.0
1-Methylnaphthalene	Ave	0.1438	0.0985		4.28	6.25	-31.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8034		3.93	4.00	-1.8	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: EBFBH25.D BFB Injection Date: 08/25/2016

Instrument ID: ME BFB Injection Time: 10:01

Analysis Batch No.: 6406

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.3	
75	30.0 - 60.0 % of mass 95	55.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.5	(0.6) 1
174	50.0 - 120.00 % of mass 95	81.4	
175	5.0 - 9.0 % of mass 174	5.8	(7.2) 1
176	95.0 - 101.0 % of mass 174	78.8	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.3	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6406/2	ECCVH25.D	08/25/2016	10:29
	LCS 140-6406/1002	ECCVH25-LCS.d	08/25/2016	10:29
	MB 140-6406/4	EMB500G25.D	08/25/2016	13:15
SV-015-A-21	140-5670-14	EG25P101.D	08/25/2016	15:15
SV-118-A-21	140-5670-15	EG25P102.D	08/25/2016	15:59
IA-078-A-21	140-5670-1	EG25P103.D	08/25/2016	16:45
IA-136-A-21	140-5670-2	EG25P104.D	08/25/2016	17:29
IA-076-A-21	140-5670-3	EG25P105.D	08/25/2016	18:16
IA-021-A-21	140-5670-4	EG25P106.D	08/25/2016	19:00
IA-075-A-21	140-5670-5	EG25P107.D	08/25/2016	19:45
IA-095-A-21	140-5670-6	EG25P108.D	08/25/2016	20:29
IA-033-B-21	140-5670-7	EG25P109.D	08/25/2016	21:14
IA-101-B-21	140-5670-8	EG25P110.D	08/25/2016	21:59
IA-100-B-21	140-5670-9	EG25P111.D	08/25/2016	22:44
SV-093-A-21	140-5670-10	EG25P112.D	08/25/2016	23:27
SV-138-A-21	140-5670-11	EG25P113.D	08/26/2016	00:12
SV-116-A-21	140-5670-12	EG25P114.D	08/26/2016	00:56
SV-DUP03-A-21	140-5670-13	EG25P115D.D	08/26/2016	02:26

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6406/2 Calibration Date: 08/25/2016 10:29

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5852		2.47	2.00	23.3	30.0
Propene	Ave	0.6524	0.8071		2.48	2.00	23.7	30.0
Dichlorodifluoromethane	Ave	4.206	5.155		2.45	2.00	22.6	30.0
Chloromethane	Ave	0.2701	0.3122		2.31	2.00	15.6	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.719		2.43	2.00	21.6	30.0
Acetaldehyde	Ave	0.2573	0.2647		10.3	10.0	2.9	30.0
Vinyl chloride	Ave	1.078	1.347		2.50	2.00	25.0	30.0
1,3-Butadiene	Ave	0.6822	0.8176		2.40	2.00	19.8	30.0
Butane	Ave	1.176	1.412		2.40	2.00	20.0	30.0
Bromomethane	Ave	1.220	1.400		2.30	2.00	14.7	30.0
Chloroethane	Ave	0.5740	0.6633		2.31	2.00	15.6	30.0
Ethanol	Ave	0.2836	0.2962		10.4	10.0	4.4	30.0
Vinyl bromide	Ave	1.166	1.409		2.42	2.00	20.8	30.0
2-Methylbutane	Ave	0.8988	0.9917		2.21	2.00	10.3	30.0
Trichlorofluoromethane	Ave	4.072	4.800		2.36	2.00	17.9	30.0
Acrolein	Ave	0.2661	0.3185		2.40	2.00	19.7	30.0
Acetonitrile	Ave	0.2589	0.2855		2.21	2.00	10.3	30.0
Acetone	Ave	0.3815	0.3777		5.94	6.00	-1.0	30.0
Isopropyl alcohol	Ave	1.014	1.058		6.27	6.00	4.4	30.0
Pentane	Ave	0.2144	0.2612		2.44	2.00	21.8	30.0
Ethyl ether	Ave	0.6609	0.7128		2.16	2.00	7.9	30.0
1,1-Dichloroethene	Ave	1.220	1.332		2.18	2.00	9.2	30.0
tert-Butyl alcohol	Ave	1.656	1.831		2.21	2.00	10.5	30.0
Acrylonitrile	Ave	0.5155	0.5502		2.14	2.00	6.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.984		2.27	2.00	13.5	30.0
Methylene Chloride	Ave	1.255	1.379		2.20	2.00	9.9	30.0
3-Chloropropene	Ave	1.016	1.095		2.16	2.00	7.7	30.0
Carbon disulfide	Ave	3.766	4.441		2.36	2.00	17.9	30.0
trans-1,2-Dichloroethene	Ave	1.326	1.494		2.25	2.00	12.6	30.0
2-Methylpentane	Ave	1.640	2.020		2.47	2.00	23.2	30.0
Methyl tert-butyl ether	Ave	3.835	4.219		2.20	2.00	10.0	30.0
1,1-Dichloroethane	Ave	2.224	2.559		2.30	2.00	15.1	30.0
Vinyl acetate	Ave	2.009	2.317		2.31	2.00	15.3	30.0
2-Butanone (MEK)	Ave	0.5829	0.5824		2.00	2.00	-0.0	30.0
Hexane	Ave	0.7813	0.8807		2.26	2.00	12.7	30.0
Isopropyl ether	Ave	2.404	2.482		2.07	2.00	3.2	30.0
cis-1,2-Dichloroethene	Ave	1.339	1.550		2.32	2.00	15.7	30.0
Ethyl acetate	Ave	1.564	1.615		2.07	2.00	3.3	30.0
Chloroform	Ave	3.335	3.793		2.28	2.00	13.8	30.0
Tert-butyl ethyl ether	Ave	3.019	3.595		2.38	2.00	19.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6406/2 Calibration Date: 08/25/2016 10:29

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.8292		2.12	2.00	5.9	30.0
1,1,1-Trichloroethane	Ave	3.737	4.194		2.25	2.00	12.2	30.0
1,2-Dichloroethane	Ave	0.4541	0.5280		2.33	2.00	16.3	30.0
Benzene	Ave	0.8198	0.9365		2.29	2.00	14.2	30.0
Cyclohexane	Ave	0.1355	0.1540		2.27	2.00	13.6	30.0
Thiophene	Ave	0.4957	0.5743		2.32	2.00	15.9	30.0
1-Butanol	Ave	0.0492	0.0520		2.11	2.00	5.7	30.0
Carbon tetrachloride	Ave	0.7915	0.9220		2.33	2.00	16.5	30.0
2,3-Dimethylpentane	Ave	0.1910	0.2034		2.13	2.00	6.5	30.0
Tert-amyl methyl ether	Ave	0.8089	0.8821		2.18	2.00	9.1	30.0
2,2,4-Trimethylpentane	Ave	0.9528	1.107		2.32	2.00	16.2	30.0
Heptane	Ave	0.2915	0.3326		2.28	2.00	14.1	30.0
1,2-Dichloropropane	Ave	0.2450	0.2812		2.30	2.00	14.8	30.0
Trichloroethene	Ave	0.3584	0.4081		2.28	2.00	13.9	30.0
Dibromomethane	Ave	0.3575	0.4087		2.29	2.00	14.3	30.0
Bromodichloromethane	Ave	0.6953	0.8276		2.38	2.00	19.0	30.0
1,4-Dioxane	Ave	0.1136	0.1123		1.98	2.00	-1.1	30.0
Methyl methacrylate	Ave	0.2185	0.2300		2.11	2.00	5.3	30.0
Methylcyclohexane	Ave	0.6246	0.5801		1.86	2.00	-7.1	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.3216		2.00	2.00	0.0	30.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5932		2.39	2.00	19.6	30.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5917		2.34	2.00	17.0	30.0
Toluene	Ave	0.9594	1.118		2.33	2.00	16.5	30.0
1,1,2-Trichloroethane	Ave	0.2946	0.3346		2.27	2.00	13.6	30.0
2-Methylthiophene	Ave	0.7973	0.9628		2.42	2.00	20.8	30.0
3-Methylthiophene	Ave	0.7817	0.9782		2.50	2.00	25.1	30.0
2-Hexanone	Ave	0.1867	0.1957		2.10	2.00	4.8	30.0
Octane	Ave	0.3291	0.3882		2.36	2.00	17.9	30.0
Dibromochloromethane	Ave	0.6197	0.7407		2.39	2.00	19.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.6050		2.30	2.00	15.0	30.0
Tetrachloroethene	Ave	0.3732	0.4268		2.29	2.00	14.4	30.0
Chlorobenzene	Ave	0.7417	0.8537		2.30	2.00	15.1	30.0
2,3-Dimethylheptane	Ave	0.5103	0.5978		2.34	2.00	17.2	30.0
Ethylbenzene	Ave	1.287	1.491		2.32	2.00	15.8	30.0
2-Ethylthiophene	Ave	1.007	1.167		2.32	2.00	15.9	30.0
m-Xylene & p-Xylene	Ave	1.004	1.179		4.70	4.00	17.5	30.0
Bromoform	Ave	0.6036	0.7382		2.45	2.00	22.3	30.0
Nonane	Ave	0.4307	0.5126		2.38	2.00	19.0	30.0
Styrene	Ave	0.6469	0.8193		2.53	2.00	26.6	30.0
o-Xylene	Ave	1.054	1.209		2.30	2.00	14.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.7796		2.33	2.00	16.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6406/2 Calibration Date: 08/25/2016 10:29

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH25.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2709		2.26	2.00	12.8	30.0
Isopropylbenzene	Ave	1.406	1.631		2.32	2.00	16.0	30.0
Propylbenzene	Ave	0.3616	0.4292		2.38	2.00	18.7	30.0
2-Chlorotoluene	Ave	0.3276	0.3856		2.36	2.00	17.7	30.0
4-Ethyltoluene	Ave	1.312	1.476		2.25	2.00	12.5	30.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.7208		2.36	2.00	18.0	30.0
Alpha Methyl Styrene	Ave	0.4859	0.5955		2.45	2.00	22.5	30.0
Decane	Ave	0.5020	0.6236		2.49	2.00	24.2	30.0
tert-Butylbenzene	Ave	1.205	1.401		2.33	2.00	16.3	30.0
1,2,4-Trimethylbenzene	Ave	1.131	1.336		2.36	2.00	18.2	30.0
1,3-Dichlorobenzene	Ave	0.6866	0.8157		2.38	2.00	18.8	30.0
sec-Butylbenzene	Ave	1.565	1.854		2.37	2.00	18.4	30.0
Benzyl chloride	Ave	0.9136	1.130		2.47	2.00	23.6	30.0
1,4-Dichlorobenzene	Ave	0.6673	0.7985		2.39	2.00	19.7	30.0
4-Isopropyltoluene	Ave	1.292	1.524		2.36	2.00	18.0	30.0
1,2,3-Trimethylbenzene	Ave	0.8539	1.070		2.51	2.00	25.3	30.0
Butylcyclohexane	Ave	0.8557	0.996		2.33	2.00	16.3	30.0
1,2-Dichlorobenzene	Ave	0.6696	0.7851		2.35	2.00	17.2	30.0
Indane	Ave	0.9538	1.068		2.24	2.00	12.0	30.0
Indene	Ave	0.7162	1.029		2.87	2.00	43.6*	30.0
Butylbenzene	Ave	1.187	1.469		2.48	2.00	23.8	30.0
Undecane	Ave	0.4988	0.6000		2.41	2.00	20.3	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.303		2.86	2.00	43.1*	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.2152		1.60	2.00	-20.0	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.330		2.57	2.00	28.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.8360		2.64	2.00	31.9*	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	1.041		2.61	2.00	30.5*	30.0
Dodecane	Ave	0.2998	0.3700		2.47	2.00	23.4	30.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5491		2.45	2.00	22.3	30.0
Naphthalene	Ave	0.8290	1.027		2.48	2.00	23.8	30.0
Benzo(b)thiophene	Ave	0.4459	0.5395		2.42	2.00	21.0	30.0
Hexachlorobutadiene	Ave	0.6412	0.7518		2.35	2.00	17.2	30.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.4642		2.51	2.00	25.6	30.0
2-Methylnaphthalene	Ave	0.1703	0.0874		3.21	6.25	-48.7	50.0
1-Methylnaphthalene	Ave	0.1438	0.0670		2.91	6.25	-53.4*	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8376		4.09	4.00	2.3	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: EBFBH26A.D BFB Injection Date: 08/26/2016

Instrument ID: ME BFB Injection Time: 10:11

Analysis Batch No.: 6407

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.2	
75	30.0 - 60.0 % of mass 95	55.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	82.5	
175	5.0 - 9.0 % of mass 174	5.7	(7.0) 1
176	95.0 - 101.0 % of mass 174	80.0	(96.9) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6407/6	ECCVH26A.D	08/26/2016	10:40
	LCS 140-6407/1006	ECCVH26A-LCS .d	08/26/2016	10:40
	MB 140-6407/8	EMB500H26.D	08/26/2016	12:59
SV-136-A-21 DL	140-5670-21 DL	EH26P113.D	08/26/2016	23:19
SV-095-A-21	140-5670-24	EH26P114.D	08/27/2016	00:03
SV-100-B-21	140-5670-26	EH26P115.D	08/27/2016	00:46

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6407/6 Calibration Date: 08/26/2016 10:40

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5515		2.33	2.00	16.2	30.0
Propene	Ave	0.6524	0.7679		2.36	2.00	17.7	30.0
Dichlorodifluoromethane	Ave	4.206	5.093		2.42	2.00	21.1	30.0
Chloromethane	Ave	0.2701	0.2973		2.20	2.00	10.1	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.711		2.43	2.00	21.2	30.0
Acetaldehyde	Ave	0.2573	0.2856		11.1	10.0	11.0	30.0
Vinyl chloride	Ave	1.078	1.303		2.42	2.00	20.9	30.0
1,3-Butadiene	Ave	0.6822	0.8086		2.37	2.00	18.5	30.0
Butane	Ave	1.176	1.377		2.34	2.00	17.1	30.0
Bromomethane	Ave	1.220	1.445		2.37	2.00	18.4	30.0
Chloroethane	Ave	0.5740	0.6668		2.32	2.00	16.2	30.0
Ethanol	Ave	0.2836	0.3037		10.7	10.0	7.1	30.0
Vinyl bromide	Ave	1.166	1.357		2.33	2.00	16.3	30.0
2-Methylbutane	Ave	0.8988	0.9664		2.15	2.00	7.5	30.0
Trichlorofluoromethane	Ave	4.072	4.730		2.32	2.00	16.2	30.0
Acrolein	Ave	0.2661	0.3218		2.42	2.00	20.9	30.0
Acetonitrile	Ave	0.2589	0.3118		2.41	2.00	20.4	30.0
Acetone	Ave	0.3815	0.3938		6.20	6.00	3.2	30.0
Isopropyl alcohol	Ave	1.014	1.107		6.56	6.00	9.2	30.0
Pentane	Ave	0.2144	0.2541		2.37	2.00	18.5	30.0
Ethyl ether	Ave	0.6609	0.7467		2.26	2.00	13.0	30.0
1,1-Dichloroethene	Ave	1.220	1.317		2.16	2.00	8.0	30.0
tert-Butyl alcohol	Ave	1.656	1.909		2.31	2.00	15.3	30.0
Acrylonitrile	Ave	0.5155	0.5392		2.09	2.00	4.6	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.973		2.26	2.00	13.0	30.0
Methylene Chloride	Ave	1.255	1.359		2.17	2.00	8.3	30.0
3-Chloropropene	Ave	1.016	1.060		2.09	2.00	4.3	30.0
Carbon disulfide	Ave	3.766	4.394		2.33	2.00	16.7	30.0
trans-1,2-Dichloroethene	Ave	1.326	1.513		2.28	2.00	14.0	30.0
2-Methylpentane	Ave	1.640	1.840		2.24	2.00	12.2	30.0
Methyl tert-butyl ether	Ave	3.835	4.358		2.27	2.00	13.6	30.0
1,1-Dichloroethane	Ave	2.224	2.547		2.29	2.00	14.5	30.0
Vinyl acetate	Ave	2.009	2.328		2.32	2.00	15.9	30.0
2-Butanone (MEK)	Ave	0.5829	0.5966		2.05	2.00	2.4	30.0
Hexane	Ave	0.7813	0.8861		2.27	2.00	13.4	30.0
Isopropyl ether	Ave	2.404	2.727		2.27	2.00	13.4	30.0
cis-1,2-Dichloroethene	Ave	1.339	1.507		2.25	2.00	12.5	30.0
Ethyl acetate	Ave	1.564	1.764		2.26	2.00	12.8	30.0
Chloroform	Ave	3.335	3.787		2.27	2.00	13.6	30.0
Tert-butyl ethyl ether	Ave	3.019	3.467		2.30	2.00	14.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6407/6 Calibration Date: 08/26/2016 10:40

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.8471		2.16	2.00	8.2	30.0
1,1,1-Trichloroethane	Ave	3.737	4.201		2.25	2.00	12.4	30.0
1,2-Dichloroethane	Ave	0.4541	0.5261		2.32	2.00	15.8	30.0
Cyclohexane	Ave	0.1355	0.1542		2.28	2.00	13.8	30.0
Thiophene	Ave	0.4957	0.5736		2.32	2.00	15.7	30.0
Benzene	Ave	0.8198	0.9298		2.27	2.00	13.4	30.0
1-Butanol	Ave	0.0492	0.0537		2.18	2.00	9.1	30.0
Carbon tetrachloride	Ave	0.7915	0.9008		2.28	2.00	13.8	30.0
2,3-Dimethylpentane	Ave	0.1910	0.2175		2.28	2.00	13.9	30.0
Tert-amyl methyl ether	Ave	0.8089	0.9160		2.27	2.00	13.2	30.0
2,2,4-Trimethylpentane	Ave	0.9528	1.098		2.31	2.00	15.2	30.0
Heptane	Ave	0.2915	0.3360		2.31	2.00	15.2	30.0
1,2-Dichloropropane	Ave	0.2450	0.2858		2.33	2.00	16.6	30.0
Trichloroethene	Ave	0.3584	0.4084		2.28	2.00	14.0	30.0
Dibromomethane	Ave	0.3575	0.4028		2.25	2.00	12.7	30.0
Bromodichloromethane	Ave	0.6953	0.8191		2.36	2.00	17.8	30.0
1,4-Dioxane	Ave	0.1136	0.1231		2.17	2.00	8.3	30.0
Methyl methacrylate	Ave	0.2185	0.2396		2.19	2.00	9.6	30.0
Methylcyclohexane	Ave	0.6246	0.7178		2.30	2.00	14.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.3414		2.13	2.00	6.2	30.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5929		2.39	2.00	19.6	30.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5848		2.31	2.00	15.6	30.0
Toluene	Ave	0.9594	1.094		2.28	2.00	14.0	30.0
1,1,2-Trichloroethane	Ave	0.2946	0.3379		2.30	2.00	14.7	30.0
2-Methylthiophene	Ave	0.7973	0.9483		2.38	2.00	18.9	30.0
3-Methylthiophene	Ave	0.7817	0.9228		2.36	2.00	18.0	30.0
2-Hexanone	Ave	0.1867	0.2112		2.26	2.00	13.1	30.0
Octane	Ave	0.3291	0.3828		2.33	2.00	16.3	30.0
Dibromochloromethane	Ave	0.6197	0.7344		2.37	2.00	18.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.6071		2.31	2.00	15.4	30.0
Tetrachloroethene	Ave	0.3732	0.4262		2.29	2.00	14.2	30.0
Chlorobenzene	Ave	0.7417	0.8523		2.30	2.00	14.9	30.0
2,3-Dimethylheptane	Ave	0.5103	0.5891		2.31	2.00	15.4	30.0
Ethylbenzene	Ave	1.287	1.505		2.34	2.00	16.9	30.0
2-Ethylthiophene	Ave	1.007	1.202		2.39	2.00	19.4	30.0
m-Xylene & p-Xylene	Ave	1.004	1.183		4.72	4.00	17.8	30.0
Bromoform	Ave	0.6036	0.7378		2.45	2.00	22.2	30.0
Nonane	Ave	0.4307	0.5191		2.41	2.00	20.5	30.0
Styrene	Ave	0.6469	0.8211		2.54	2.00	26.9	30.0
o-Xylene	Ave	1.054	1.232		2.34	2.00	16.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.8007		2.39	2.00	19.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6407/6 Calibration Date: 08/26/2016 10:40

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVH26A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2785		2.32	2.00	16.0	30.0
Isopropylbenzene	Ave	1.406	1.635		2.33	2.00	16.3	30.0
Propylbenzene	Ave	0.3616	0.4316		2.39	2.00	19.4	30.0
2-Chlorotoluene	Ave	0.3276	0.3791		2.32	2.00	15.7	30.0
4-Ethyltoluene	Ave	1.312	1.567		2.39	2.00	19.5	30.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.7178		2.35	2.00	17.5	30.0
Alpha Methyl Styrene	Ave	0.4859	0.5873		2.42	2.00	20.9	30.0
Decane	Ave	0.5020	0.6309		2.51	2.00	25.7	30.0
tert-Butylbenzene	Ave	1.205	1.411		2.34	2.00	17.2	30.0
1,2,4-Trimethylbenzene	Ave	1.131	1.351		2.39	2.00	19.4	30.0
1,3-Dichlorobenzene	Ave	0.6866	0.8147		2.37	2.00	18.7	30.0
sec-Butylbenzene	Ave	1.565	1.873		2.40	2.00	19.7	30.0
Benzyl chloride	Ave	0.9136	1.152		2.52	2.00	26.1	30.0
1,4-Dichlorobenzene	Ave	0.6673	0.8015		2.40	2.00	20.1	30.0
4-Isopropyltoluene	Ave	1.292	1.559		2.41	2.00	20.6	30.0
1,2,3-Trimethylbenzene	Ave	0.8539	1.019		2.39	2.00	19.3	30.0
Butylcyclohexane	Ave	0.8557	1.023		2.39	2.00	19.6	30.0
1,2-Dichlorobenzene	Ave	0.6696	0.7867		2.35	2.00	17.5	30.0
Indane	Ave	0.9538	1.149		2.41	2.00	20.5	30.0
Indene	Ave	0.7162	0.8384		2.34	2.00	17.1	30.0
Butylbenzene	Ave	1.187	1.479		2.49	2.00	24.6	30.0
Undecane	Ave	0.4988	0.6048		2.43	2.00	21.3	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.088		2.39	2.00	19.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.3353		2.50	2.00	24.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.257		2.43	2.00	21.5	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7638		2.41	2.00	20.5	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.997		2.50	2.00	24.9	30.0
Dodecane	Ave	0.2998	0.3811		2.54	2.00	27.1	30.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5821		2.59	2.00	29.7	30.0
Naphthalene	Ave	0.8290	1.140		2.75	2.00	37.5*	30.0
Benzo(b)thiophene	Ave	0.4459	0.5784		2.60	2.00	29.7	30.0
Hexachlorobutadiene	Ave	0.6412	0.7587		2.37	2.00	18.3	30.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.5098		2.76	2.00	37.9*	30.0
2-Methylnaphthalene	Ave	0.1703	0.2032		7.46	6.25	19.3	50.0
1-Methylnaphthalene	Ave	0.1438	0.1717		7.47	6.25	19.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8374		4.09	4.00	2.3	30.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: JBFBF22Z.D BFB Injection Date: 06/22/2016

Instrument ID: MJ BFB Injection Time: 15:21

Analysis Batch No.: 5523

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.9	
75	30.0 - 60.0 % of mass 95	52.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	114.8	
175	5.0 - 9.0 % of mass 174	9.0	(7.9) 1
176	95.0 - 101.0 % of mass 174	111.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5523/2	JF22IC01.D	06/22/2016	15:49
	IC 140-5523/3	JF22IC02.D	06/22/2016	16:44
	IC 140-5523/4	JF22IC03.D	06/22/2016	17:38
	IC 140-5523/5	JF22IC04.D	06/22/2016	18:32
	IC 140-5523/6	JF22IC05.D	06/22/2016	19:26
	ICIS 140-5523/7	JF22IC06.D	06/22/2016	20:20
	IC 140-5523/8	JF22IC07.D	06/22/2016	21:14
	IC 140-5523/9	JF22IC08.D	06/22/2016	22:07
	IC 140-5523/10	JF22IC09.D	06/22/2016	23:00
	ICV 140-5523/17	JF22ICVR.D	06/23/2016	09:52

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5042	0.5590 0.4610	0.5175 0.4813	0.4967 0.4379	0.5141	Ave		0.4965				7.5		30.0			
Propene	+++++ 1.1654	+++++ 1.0702	1.3313 1.0844	1.2623 0.8964	1.2696	Ave		1.1542				13.0		30.0			
Dichlorodifluoromethane	+++++ 4.4166	4.8390 4.2049	4.6794 4.1701	4.5997 3.4026	4.8596	Ave		4.3965				10.9		30.0			
Chloromethane	+++++ 0.3110	+++++ 0.2838	0.3981 0.2566	0.3567 0.2332	0.3351	Ave		0.3106				18.6		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.5211	2.7057 2.3404	2.5717 2.3442	2.5081 1.8650	2.6621	Ave		2.4398				10.9		30.0			
Acetaldehyde	+++++ 0.2760	+++++ 0.2256	+++++ 0.2022	0.3974 0.2058	0.3104	Ave		0.2696				28.1		30.0			
Vinyl chloride	1.3247 1.0033	1.1693 0.9547	1.1093 0.8894	1.1001 0.8297	1.0972	Ave		1.0531				14.4		30.0			
1,3-Butadiene	+++++ 0.7042	+++++ 0.6593	0.7516 0.6084	0.7719 0.5749	0.7683	Ave		0.6912				11.5		30.0			
Butane	+++++ 1.1108	+++++ 1.0854	1.3903 0.9510	1.3397 0.8927	1.2784	Ave		1.1498				16.7		30.0			
Bromomethane	+++++ 0.9572	1.2135 0.9001	1.0838 0.8839	1.0122 0.8550	1.0221	Ave		0.9910				12.0		30.0			
Chloroethane	+++++ 0.3713	0.4395 0.3551	0.4065 0.3441	0.3781 0.3371	0.3895	Ave		0.3777				9.0		30.0			
Ethanol	+++++ 0.1580	+++++ 0.1433	0.1952 0.1267	0.1606 0.1294	0.1687	Ave		0.1546				15.5		30.0			
Vinyl bromide	+++++ 1.2066	1.2166 1.1251	1.2066 1.1391	1.1666 1.0824	1.2299	Ave		1.1716				4.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.4563	+++++ 1.3127	1.5024 1.2679	1.4848 1.0960	1.5352	Ave		1.3793				11.6		30.0			
Trichlorofluoromethane	+++++ 4.2191	4.3771 3.8766	4.2739 3.8302	4.1645 3.4211	4.3784	Ave		4.0676				8.2		30.0			
Acrolein	+++++ 0.3452	+++++ 0.3014	0.4460 0.2782	0.3277 0.2999	0.3533	Ave		0.3360				16.5		30.0			
Acetonitrile	+++++ 0.3905	+++++ 0.3504	0.4332 0.3275	0.3310 0.3740	0.3713	Ave		0.3683				10.0		30.0			
Acetone	+++++ 0.4995	+++++ 0.3749	+++++ 0.3337	0.6209 0.3831	0.5374	Ave		0.4583				24.4		30.0			
Isopropyl alcohol	+++++ 1.6846	+++++ 1.4120	1.7563 1.3941	1.5917 1.1233	1.7285	Ave		1.5272				15.0		30.0			
Pentane	+++++ 0.1768	+++++ 0.1611	0.1866 0.1627	0.1887 0.1441	0.1856	Ave		0.1722				9.7		30.0			
Ethyl ether	+++++ 0.8543	+++++ 0.7808	0.8344 0.6842	0.7323 0.7660	0.8240	Ave		0.7823				7.7		30.0			
1,1-Dichloroethene	+++++ 1.2103	1.2889 1.1318	1.1478 1.1609	1.1752 1.1003	1.2527	Ave		1.1835				5.3		30.0			
tert-Butyl alcohol	+++++ 2.1544	2.3633 1.8642	2.1846 2.0640	2.0389 1.8350	2.1692	Ave		2.0842				8.4		30.0			
Acrylonitrile	+++++ 0.7316	0.8425 0.6684	0.7037 0.6289	0.6206 0.7025	0.7106	Ave		0.7011				9.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8940	3.0400 2.6051	2.8530 2.5798	2.8273 2.3385	2.9837	Ave		2.7652				8.6		30.0			
Methylene Chloride	+++++ 1.1059	+++++ 0.9818	1.3956 0.9738	1.1804 0.9093	1.1484	Ave		1.0993				15.0		30.0			
3-Chloropropene	+++++ 1.1096	1.3296 0.9480	1.0951 0.9570	1.0768 0.8054	1.1176	Ave		1.0549				14.7		30.0			
Carbon disulfide	+++++ 3.4879	3.7064 3.1922	3.4140 3.2589	3.3188 2.9260	3.5637	Ave		3.3585				7.2		30.0			
trans-1,2-Dichloroethene	+++++ 1.2345	1.2722 1.1378	1.2480 1.1094	1.1895 1.0359	1.2737	Ave		1.1876				7.3		30.0			
2-Methylpentane	+++++ 2.5988	2.7409 2.2724	2.6201 2.1287	2.5383 1.7920	2.7029	Ave		2.4243				13.7		30.0			
Methyl tert-butyl ether	+++++ 2.6733	+++++ 2.4385	2.4636 2.2127	2.2707 2.4681	2.5559	Ave		2.4404				6.5		30.0			
1,1-Dichloroethane	+++++ 2.5611	2.6814 2.2112	2.5084 2.1727	2.4933 2.1386	2.5672	Ave		2.4168				8.7		30.0			
Vinyl acetate	+++++ 2.2123	+++++ 2.0875	1.9035 1.8409	1.7361 2.1276	2.0974	Ave		2.0007				8.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3871	+++++ 0.3312	0.5093 0.3229	0.3971 0.3467	0.3930	Ave		0.3839				16.4		30.0			
Hexane	+++++ 1.1210	1.0912 0.9657	1.1007 0.9551	1.0917 0.8804	1.1344	Ave		1.0425				9.1		30.0			
Isopropyl ether	+++++ 3.2904	3.6307 2.9115	3.0105 2.6766	2.8081 2.7075	3.1314	Ave		3.0208				10.7		30.0			
cis-1,2-Dichloroethene	+++++ 1.2327	1.3301 1.0874	1.2146 1.0707	1.1880 1.1014	1.2398	Ave		1.1831				7.6		30.0			
Ethyl acetate	+++++ 1.7615	+++++ 1.5655	1.5737 1.5009	1.5300 1.5623	1.7015	Ave		1.5994				6.0		30.0			
Chloroform	+++++ 2.8139	2.9572 2.4353	2.8805 2.3198	2.7803 2.3852	2.8515	Ave		2.6780				9.5		30.0			
Tert-butyl ethyl ether	+++++ 3.2339	3.5685 2.8582	2.9393 2.7149	2.6805 2.8523	3.0716	Ave		2.9899				9.9		30.0			
Tetrahydrofuran	+++++ 0.9293	+++++ 0.8424	0.8383 0.7823	0.7949 0.8926	0.8890	Ave		0.8527				6.3		30.0			
1,1,1-Trichloroethane	+++++ 3.3351	3.2168 2.9132	3.2372 2.7334	3.2140 2.7851	3.3406	Ave		3.0969				8.0		30.0			
1,2-Dichloroethane	+++++ 0.4569	0.4832 0.3864	0.4749 0.3701	0.4633 0.3885	0.4718	Ave		0.4369				10.7		30.0			
1-Butanol	+++++ 0.0639	+++++ 0.0558	+++++ 0.0671	0.0551 0.0618	0.0622	Ave		0.0610				7.7		30.0			
Cyclohexane	+++++ 0.1302	0.1149 0.1101	0.1184 0.1040	0.1260 0.0955	0.1376	Ave		0.1171				11.9		30.0			
Benzene	+++++ 0.7322	0.8437 0.6046	0.7950 0.5722	0.7510 0.5312	0.7564	Ave		0.6983				16.3		30.0			
Carbon tetrachloride	0.7843 0.8287	0.7618 0.6999	0.7098 0.6615	0.8109 0.6518	0.7826	Ave		0.7435				8.7		30.0			
2,3-Dimethylpentane	+++++ 0.1712	0.1714 0.1427	0.1694 0.1404	0.1761 0.1395	0.1745	Ave		0.1606				10.3		30.0			
Thiophene	+++++ 0.4165	0.4347 0.3632	0.4135 0.3555	0.4081 0.3680	0.4313	Ave		0.3988				8.0		30.0			
Tert-amyl methyl ether	+++++ 0.6605	0.7406 0.5623	0.6416 0.5191	0.6024 0.5263	0.6679	Ave		0.6151				12.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.3875	1.5390 1.1576	1.4751 1.0883	1.4432 0.9871	1.4449	Ave		1.3153				15.7		30.0			
Heptane	+++++ 0.2442	+++++ 0.2109	0.2503 0.2088	0.2439 0.2062	0.2496	Ave		0.2306				9.0		30.0			
1,2-Dichloropropane	+++++ 0.3010	0.3185 0.2604	0.2894 0.2489	0.2858 0.2435	0.3065	Ave		0.2817				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4078 0.3542	0.3744 0.3116	0.3733 0.3033	0.3548 0.3216	0.3704	Ave		0.3524				9.7		30.0			
Dibromomethane	+++++ 0.3291	0.3266 0.2856	0.3204 0.2795	0.3280 0.2908	0.3356	Ave		0.3120				7.3		30.0			
Bromodichloromethane	0.5980 0.6148	0.5486 0.5461	0.5576 0.5252	0.5596 0.5377	0.6308	Ave		0.5687				6.5		30.0			
1,4-Dioxane	+++++ 0.0907	+++++ 0.0795	0.0796 0.0853	0.0803 0.0765	0.0906	Ave		0.0832				6.8		30.0			
Methyl methacrylate	+++++ 0.2190	0.2024 0.1965	0.1813 0.1935	0.3185 0.2086	0.2018	Ave		0.2152				20.1		30.0			
Methylcyclohexane	+++++ 0.5679	0.5877 0.4747	0.5782 0.4633	0.5735 0.4476	0.5931	Ave		0.5358				11.6		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4572	0.5094 0.3912	0.6711 0.4240	0.4244 0.3787	0.5230	Ave		0.4724				20.2		30.0			
cis-1,3-Dichloropropene	0.3836 0.4002	0.3632 0.3656	0.3419 0.3525	0.3346 0.3814	0.3874	Ave		0.3678				6.0		30.0			
trans-1,3-Dichloropropene	+++++ 0.3595	0.3152 0.3337	0.2950 0.3226	0.2686 0.3655	0.3573	Ave		0.3272				10.4		30.0			
Toluene	+++++ 0.9093	1.0070 0.7987	0.8963 0.6980	0.8459 0.7268	0.9326	Ave		0.8518				12.4		30.0			
Toluene Range	+++++ 2.0809	+++++ 1.9007	+++++ 1.6308	1.8813 1.7440	2.1031	Ave		1.8901				9.8		30.0			
1,1,2-Trichloroethane	+++++ 0.2634	0.2733 0.2315	0.2567 0.2104	0.2485 0.2212	0.2692	Ave		0.2468				9.4		30.0			
2-Methylthiophene	+++++ 0.7820	0.7234 0.6802	0.7793 0.6080	0.6860 0.6275	0.7941	Ave		0.7101				10.1		30.0			
3-Methylthiophene	+++++ 0.7359	0.7177 0.6520	0.7055 0.5863	0.6857 0.6160	0.7508	Ave		0.6812				8.6		30.0			
2-Hexanone	+++++ 0.2800	+++++ 0.2386	0.2217 0.2430	0.2392 0.2307	0.2834	Ave		0.2481				9.7		30.0			
Octane	+++++ 0.3030	0.3024 0.2605	0.2978 0.2316	0.2891 0.2326	0.3146	Ave		0.2789				11.8		30.0			
C8 Range	+++++ 2.8050	+++++ 2.3297	+++++ 2.0345	2.8095 1.9518	2.9926	Ave		2.4872				17.8		30.0			
Dibromochloromethane	0.5674 0.6659	0.5543 0.5923	0.5728 0.5443	0.5770 0.5832	0.6580	Ave		0.5906				7.3		30.0			
1,2-Dibromoethane (EDB)	0.4552 0.4797	0.4768 0.4280	0.4555 0.4034	0.4307 0.4503	0.4785	Ave		0.4509				5.8		30.0			
Tetrachloroethene	0.4875 0.4016	0.4396 0.3385	0.4357 0.3067	0.4287 0.3230	0.4309	Ave		0.3991				15.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.8566	1.0104 0.6661	0.9749 0.5494	0.9109 0.4479	0.9375	Ave		0.7942				26.7		30.0			
Chlorobenzene	+++++ 0.6770	0.7480 0.5890	0.6968 0.5278	0.6430 0.5490	0.6927	Ave		0.6404				12.2		30.0			
Ethylbenzene	+++++ 1.0567	1.1550 0.9468	0.9801 0.8178	0.8973 0.8923	1.0251	Ave		0.9714				11.0		30.0			
2-Ethylthiophene	+++++ 0.8055	0.8105 0.7294	0.7199 0.6458	0.6669 0.7164	0.7795	Ave		0.7342				8.3		30.0			
m-Xylene & p-Xylene	0.9369 0.8068	0.8738 0.6978	0.7634 0.5911	0.6968 0.6181	0.8006	Ave		0.7539				15.1		30.0			
Nonane	+++++ 0.6451	0.5885 0.5662	0.5459 0.4907	0.5382 0.4585	0.6311	Ave		0.5580				11.5		30.0			
Bromoform	+++++ 0.5090	0.3393 0.4915	0.3617 0.4772	0.3571 0.5497	0.4679	Ave		0.4442				18.0		30.0			
Styrene	0.5013 0.5292	0.4332 0.4944	0.3824 0.4484	0.3826 0.5156	0.4866	Ave		0.4637				11.9		30.0			
o-Xylene	+++++ 0.8703	0.9793 0.7561	0.8386 0.6600	0.7655 0.7338	0.8759	Ave		0.8099				12.4		30.0			
1,1,2,2-Tetrachloroethane	0.5577 0.5616	0.5348 0.5019	0.4870 0.4665	0.4817 0.4930	0.5584	Ave		0.5159				7.2		30.0			
1,2,3-Trichloropropane	+++++ 0.1561	0.1432 0.1434	0.1415 0.1353	0.1349 0.1602	0.1554	Ave		0.1463				6.7		30.0			
Isopropylbenzene	+++++ 1.1442	+++++ 1.0035	1.0700 0.8681	0.9886 0.9337	1.1229	Ave		1.0187				9.8		30.0			
Propylbenzene	+++++ 0.2806	0.2553 0.2565	0.2405 0.2426	0.2166 0.2918	0.2618	Ave		0.2557				9.2		30.0			
2-Chlorotoluene	+++++ 0.2906	0.2913 0.2672	0.2599 0.2412	0.2428 0.2871	0.2787	Ave		0.2699				7.6		30.0			
4-Ethyltoluene	+++++ 0.9839	0.8822 0.8719	0.8073 0.8004	0.7766 0.8681	0.9414	Ave		0.8665				8.2		30.0			
1,3,5-Trimethylbenzene	+++++ 0.5002	0.5144 0.4334	0.4547 0.4008	0.4225 0.4561	0.4860	Ave		0.4585				8.6		30.0			
Alpha Methyl Styrene	+++++ 0.3517	+++++ 0.3492	0.2284 0.3478	0.2209 0.4145	0.3127	Ave		0.3179				22.2		30.0			
Decane	+++++ 0.6574	0.6037 0.5756	0.5696 0.4989	0.5427 0.4758	0.6398	Ave		0.5704				11.2		30.0			
tert-Butylbenzene	+++++ 1.0212	+++++ 0.8699	0.9497 0.7834	0.8998 0.8218	1.0369	Ave		0.9118				10.6		30.0			
1,2,4-Trimethylbenzene	+++++ 0.8794	0.8435 0.7418	0.7504 0.6841	0.7285 0.7099	0.8721	Ave		0.7762				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.2919	+++++ 1.0984	1.1691 0.9877	1.0927 0.9921	1.2854	Ave		1.1310				11.0		30.0			
1,3-Dichlorobenzene	+++++ 0.4099	0.3775 0.3972	0.3536 0.4064	0.3342 0.5042	0.3891	Ave		0.3965				12.8		30.0			
Benzyl chloride	+++++ 0.4101	+++++ 0.4053	0.2838 0.4575	0.2701 0.5420	0.3568	Ave		0.3894				24.6		30.0			
1,4-Dichlorobenzene	+++++ 0.3467	0.3085 0.3409	0.2862 0.3681	0.2766 0.4691	0.3181	Ave		0.3393				17.9		30.0			
4-Isopropyltoluene	+++++ 1.0572	0.9805 0.8935	0.8980 0.8441	0.8621 0.8504	1.0514	Ave		0.9296				9.5		30.0			
1,2,3-Trimethylbenzene	+++++ 0.6839	0.6824 0.5727	0.5992 0.5466	0.5790 0.5862	0.6829	Ave		0.6166				9.2		30.0			
Butylcyclohexane	+++++ 0.7573	0.7963 0.6471	0.6759 0.5621	0.6417 0.5557	0.7464	Ave		0.6728				13.2		30.0			
Indane	+++++ 0.7243	0.6832 0.6413	0.6020 0.6072	0.5803 0.6525	0.6998	Ave		0.6488				7.9		30.0			
1,2-Dichlorobenzene	+++++ 0.4281	0.3879 0.4016	0.3773 0.4016	0.3434 0.4773	0.4106	Ave		0.4035				9.7		30.0			
Butylbenzene	+++++ 0.8271	0.6800 0.7161	0.6905 0.7000	0.6278 0.6951	0.8050	Ave		0.7177				9.2		30.0			
Indene	+++++ 0.4211	0.3055 0.3945	0.3055 0.4031	0.2953 0.4594	0.3928	Ave		0.3721				16.6		30.0			
Undecane	+++++ 0.6130	0.5334 0.5348	0.5637 0.5122	0.5086 0.4720	0.6159	Ave		0.5442				9.3		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6948	0.5622 0.5936	0.5720 0.6048	0.5150 0.6225	0.6684	Ave		0.6042				9.6		30.0			
1,2-Dibromo-3-Chloropropane	0.1652 0.1391	0.0826 0.1371	0.0917 0.1612	0.0919 0.1992	0.1259	Ave		0.1327				29.5		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8351	0.7116 0.7142	0.7250 0.7364	0.6413 0.7290	0.8195	Ave		0.7390				8.4		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.5341	0.4665 0.4486	0.4771 0.4694	0.4161 0.4778	0.5255	Ave		0.4769				8.0		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.6468	0.5792 0.5569	0.5811 0.5902	0.5017 0.6010	0.6481	Ave		0.5881				8.1		30.0			
Dodecane	+++++ 0.5636	+++++ 0.4338	+++++ 0.4825	0.4346 0.4212	0.5682	Ave		0.4840				13.8		30.0			
1,2,4-Trichlorobenzene	+++++ 0.1153	0.0949 0.1129	0.0905 0.1585	0.0762 +++++	0.1009	Ave		0.1070				24.6		30.0			
Naphthalene	0.4313 0.2773	0.1979 0.2653	0.2048 0.3417	0.1751 0.4174	0.2443	Ave		0.2839				33.0	*	30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1041	0.0933 0.1002	0.0961 0.1397	0.0715 +++++	0.0929	Ave		0.0997				20.5		30.0			
Hexachlorobutadiene	+++++ 0.4409	0.4968 0.3652	0.4626 0.3871	0.3746 0.4182	0.4657	Ave		0.4264				11.2		30.0			
1,2,3-Trichlorobenzene	+++++ 0.1169	0.0919 0.1090	0.1024 0.1470	0.0774 0.1883	0.1070	Ave		0.1175				29.8		30.0			
2-Methylnaphthalene	+++++ 0.0188	0.0182 0.0142	0.0198 0.0234	0.0101 0.0285	0.0152	Ave		0.0185				30.6		50.0			
1-Methylnaphthalene	+++++ 0.0200	0.0201 0.0147	0.0205 0.0246	0.0098 0.0272	0.0188	Ave		0.0195				27.8		50.0			
4-Bromofluorobenzene (Surr)	0.5569 0.6060	0.5729 0.6183	0.5669 0.6052	0.5617 0.6393	0.5880	Ave		0.5906				4.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 74322	3758 143302	6560 288544	15197 568696	38466	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 171785	+++++ 332692	16876 650144	38620 1164099	94985	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 651005	32532 1307229	59316 2500166	140732 4418618	363576	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 45845	+++++ 88214	5046 153848	10913 302773	25067	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 371615	18190 727582	32599 1405458	76736 2421902	199170	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 203386	+++++ 350643	+++++ 606067	60801 1336036	116129	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4184 147890	7861 296801	14061 533221	33657 1077395	82084	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 103801	+++++ 204963	9528 364739	23616 746524	57483	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 163737	+++++ 337432	17623 570149	40990 1159255	95645	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 141086	8158 279818	13738 529966	30969 1110251	76471	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 54729	2955 110409	5153 206332	11567 437796	29140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 116482	+++++ 222729	12374 379778	24561 840205	63110	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 177848	8179 349781	15295 682940	35692 1405653	92013	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 214661	+++++ 408100	19045 760188	45429 1423234	114860	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 621893	29427 1205159	54177 2296411	127417 4442645	327570	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 50881	+++++ 93702	5654 166781	10026 389500	26432	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 57557	+++++ 108943	5491 196326	10126 485627	27782	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 220910	+++++ 349669	+++++ 600267	56991 1492629	120631	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 744962	+++++ 1317035	66795 2507678	146107 4376471	387973	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 26066	+++++ 50079	2365 97557	5773 187143	13885	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 125926	+++++ 242733	10577 410197	22404 994775	61651	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 178394	8665 351859	14550 696021	35955 1428851	93723	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 317555	15888 579563	27692 1237494	62382 2382939	162292	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 107837	5664 207783	8920 377050	18989 912254	53165	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	+++++ 426570	20438 809888	36165 1546698	86503 3036710	223225	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 163012	+++++ 305232	17691 583873	36114 1180787	85918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 163557	8939 294729	13881 573796	32947 1045840	83611	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 514119	24918 992410	43276 1953890	101542 3799723	266620	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 181960	8553 353708	15820 665147	36395 1345260	95290	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 383056	18427 706451	33213 1276291	77661 2327114	202218	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 394051	+++++ 758096	31229 1326657	69473 3205110	191223	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 377503	18027 687439	31797 1302641	76286 2777161	192069	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 326088	+++++ 648961	24129 1103728	53117 2762820	156921	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 57065	+++++ 102957	6456 193612	12150 450257	29406	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 165234	7336 300224	13952 572625	33402 1143308	84874	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	+++++ 485009	24409 905127	38161 1604773	85916 3515890	234280	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 181693	8942 338040	15396 641922	36349 1430321	92758	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 259651	+++++ 486683	19949 899864	46813 2028801	127302	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 414764	19881 757083	36514 1390825	85067 3097387	213335	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 476674	23991 888552	37259 1627729	82013 3703920	229807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 136985	+++++ 261903	10627 469029	24321 1159161	66510	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 491600	21626 905660	41035 1638831	98335 3616674	249926	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	+++++ 295685	14298 549094	26030 987874	59968 2263123	151004	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 41337	+++++ 79338	+++++ 179047	7131 360182	19897	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 84227	3400 156430	6492 277573	16308 556586	44050	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 473833	24967 859237	43574 1527500	97218 3094582	242064	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10308 536281	22543 994733	38903 1765814	104966 3797031	250454	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 110794	5072 202801	9283 374753	22790 812542	55859	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	+++++ 269521	12865 516119	22661 949009	52829 2143783	138033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 372876	18473 723980	28733 1344086	64540 3028475	180342	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 897864	45542 1645159	80847 2905240	186825 5750307	462412	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 158034	+++++ 299782	13718 557515	31573 1201125	79881	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 194759	9425 370098	15859 664536	36991 1418404	98083	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5360 229178	11078 442884	20459 809617	45929 1873495	118547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 212934	9666 405928	17561 746153	42461 1694078	107420	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	7859 397868	16234 776050	30563 1402039	72436 3132699	201889	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 58670	+++++ 112981	4364 227685	10391 445938	28993	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 141703	5990 279290	9937 516447	41235 1215024	64577	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 367492	17392 674601	31688 1236865	74236 2607782	189819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295884	15075 556003	36781 1131908	54942 2205881	167376	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	5041 259003	10749 519520	18741 940942	43317 2221824	123970	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 202943	7861 429638	13213 835409	28773 2103301	96475	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 513330	25117 1028413	40141 1807350	90623 4182412	251819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	+++++ 1174730	+++++ 2447394	+++++ 4222753	201557 10035359	567901	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	+++++ 148679	6816 298075	11494 544854	26618 1272593	72695	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 441429	18043 875867	34902 1574396	73492 3610870	214421	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 415433	17901 839568	31597 1518071	73462 3544888	202739	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 158048	+++++ 307291	9927 629308	25630 1327800	76515	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	+++++ 171049	7543 335449	13336 599701	30969 1338237	84942	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 1583480	+++++ 2999823	+++++ 5268215	300990 11231032	808090	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	5891 375901	13827 762654	25651 1409503	61819 3355987	177672	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	4726 270820	11892 551155	20400 1044626	46147 2590955	129201	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5061 226727	10964 435890	19514 794219	45924 1858547	116368	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 483560	25203 857705	43660 1422600	97584 2577374	253140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 382171	18658 758472	31203 1366684	68884 3159295	187036	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	+++++ 596545	28810 1219170	43894 2117749	96127 5134454	276806	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	+++++ 454691	20217 939238	32238 1672366	71448 4122460	210486	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19454 910856	43588 1796987	68375 3061379	149302 7113518	432360	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	+++++ 364149	14679 729041	24448 1270603	57661 2638502	170403	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	+++++ 287325	8464 632872	16198 1235633	38261 3162893	126351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5204 298757	10805 636582	17123 1161198	40993 2966957	131396	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	+++++ 491312	24427 973620	37556 1708918	82015 4222274	236527	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	5790 317051	13340 646257	21810 1208064	51611 2836714	150790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 88107	3572 184661	6337 350332	14455 921976	41958	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 645900	+++++ 1292194	47917 2248024	105917 5373006	303206	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 158414	6367 330331	10769 628117	23208 1679331	70689	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 164057	7267 344057	11641 624631	26016 1651961	75246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 555410	22005 1122676	36155 2072618	83203 4995270	254212	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 282382	12831 558077	20363 1037781	45264 2624406	131247	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 198517	+++++ 449633	10227 900610	23661 2385158	84426	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 371127	15057 741112	25509 1291827	58146 2738103	172771	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 576459	+++++ 1120112	42532 2028581	96405 4729064	279995	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	+++++ 496438	21039 955201	33604 1771506	78046 4084905	235496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 729282	+++++ 1414365	52355 2557663	117070 5708680	347096	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 231407	9415 511453	15837 1052391	35808 2901271	105055	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 231497	+++++ 521842	12711 1184773	28941 3118761	96342	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 195721	7696 438982	12819 953235	29631 2699517	85902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 596789	24457 1150454	40217 2185786	92356 4893500	283900	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 386097	17021 737400	26836 1415266	62027 3373450	184398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	+++++ 427484	19863 833271	30267 1455558	68748 3197669	201539	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	+++++ 408894	17042 825803	26958 1572283	62168 3754466	188971	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 241683	9676 517072	16895 1039806	36785 2746451	110886	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 466916	16960 922062	30924 1812485	67262 3999716	217364	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 237730	7619 507931	13681 1043744	31634 2643801	106078	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 346076	13304 688596	25243 1326289	54486 2716283	166313	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 392201	14022 764381	25618 1566098	55179 3582044	180487	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	1715 78535	2060 176596	4107 417334	9842 1146153	33994	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 471438	17750 919685	32467 1906908	68705 4194777	221281	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 301527	11637 577643	21367 1215600	44578 2749344	141907	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 365106	14446 717139	26023 1528285	53749 3458409	175011	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 318147	+++++ 558539	+++++ 1249421	46563 2423987	153441	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 65109	2368 145399	4052 410410	8167 +++++	27246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	4478 156536	4935 341566	9172 884843	18754 2401988	65976	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 58741	2326 129062	4302 361623	7658 +++++	25086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	+++++ 248901	12392 470300	20717 1002249	40131 2406632	125753	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 66002	2292 140342	4585 380574	8296 1083656	28890	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 33085	1420 57318	2771 189512	3375 511700	12857	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 35332	1563 59070	2867 198948	3284 489210	15840	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	590004 685127	729043 796104	640074 783587	601768 919690	634109	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Curve Type Legend:
Ave = Average ISTD

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.4577		1.84	2.00	-7.8	35.0
Propene	Ave	1.154	1.043		1.81	2.00	-9.7	35.0
Dichlorodifluoromethane	Ave	4.396	4.203		1.91	2.00	-4.4	35.0
Chloromethane	Ave	0.3106	0.2987		1.92	2.00	-3.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.325		1.91	2.00	-4.7	35.0
Acetaldehyde	Ave	0.2696	0.2166		8.04	10.0	-19.6	35.0
Vinyl chloride	Ave	1.053	1.005		1.91	2.00	-4.5	35.0
Butane	Ave	1.150	1.143		1.99	2.00	-0.6	35.0
1,3-Butadiene	Ave	0.6912	0.6786		1.96	2.00	-1.8	35.0
Bromomethane	Ave	0.9910	0.8891		1.79	2.00	-10.3	35.0
Chloroethane	Ave	0.3777	0.3535		1.87	2.00	-6.4	35.0
Ethanol	Ave	0.1546	0.1422		9.20	10.0	-8.0	35.0
Vinyl bromide	Ave	1.172	1.174		2.00	2.00	0.2	35.0
2-Methylbutane	Ave	1.379	1.330		1.93	2.00	-3.6	35.0
Trichlorofluoromethane	Ave	4.068	3.824		1.88	2.00	-6.0	35.0
Acrolein	Ave	0.3360	0.2403		1.43	2.00	-28.5	35.0
Acetonitrile	Ave	0.3683	0.3377		1.83	2.00	-8.3	35.0
Acetone	Ave	0.4583	0.4025		5.27	6.00	-12.2	35.0
Isopropyl alcohol	Ave	1.527	1.389		5.46	6.00	-9.0	35.0
Pentane	Ave	0.1722	0.1657		1.92	2.00	-3.8	35.0
Ethyl ether	Ave	0.7823	0.7112		1.82	2.00	-9.1	35.0
1,1-Dichloroethene	Ave	1.183	1.132		1.91	2.00	-4.3	35.0
tert-Butyl alcohol	Ave	2.084	1.947		1.87	2.00	-6.6	35.0
Acrylonitrile	Ave	0.7011	0.6319		1.80	2.00	-9.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.650		1.92	2.00	-4.1	35.0
Methylene Chloride	Ave	1.099	1.018		1.85	2.00	-7.4	35.0
3-Chloropropene	Ave	1.055	1.039		1.97	2.00	-1.5	35.0
Carbon disulfide	Ave	3.359	3.239		1.93	2.00	-3.6	35.0
trans-1,2-Dichloroethene	Ave	1.188	1.152		1.94	2.00	-3.0	35.0
2-Methylpentane	Ave	2.424	2.494		2.06	2.00	2.9	35.0
Methyl tert-butyl ether	Ave	2.440	2.242		1.84	2.00	-8.1	35.0
1,1-Dichloroethane	Ave	2.417	2.338		1.94	2.00	-3.2	35.0
Vinyl acetate	Ave	2.001	1.878		1.88	2.00	-6.1	35.0
2-Butanone (MEK)	Ave	0.3839	0.3342		1.74	2.00	-13.0	35.0
Hexane	Ave	1.043	1.001		1.92	2.00	-3.9	35.0
Isopropyl ether	Ave	3.021	2.743		1.82	2.00	-9.2	35.0
cis-1,2-Dichloroethene	Ave	1.183	1.157		1.96	2.00	-2.2	35.0
Ethyl acetate	Ave	1.599	1.446		1.81	2.00	-9.6	35.0
Chloroform	Ave	2.678	2.528		1.89	2.00	-5.6	35.0
Tert-butyl ethyl ether	Ave	2.990	2.910		1.95	2.00	-2.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.8157		1.91	2.00	-4.3	35.0
1,1,1-Trichloroethane	Ave	3.097	2.981		1.92	2.00	-3.8	35.0
1,2-Dichloroethane	Ave	0.4369	0.4085		1.87	2.00	-6.5	35.0
1-Butanol	Ave	0.0610	0.0607		1.99	2.00	-0.4	35.0
Benzene	Ave	0.6983	0.6894		1.97	2.00	-1.3	35.0
Cyclohexane	Ave	0.1171	0.1196		2.04	2.00	2.2	35.0
Carbon tetrachloride	Ave	0.7435	0.7491		2.02	2.00	0.8	35.0
2,3-Dimethylpentane	Ave	0.1606	0.1409		1.75	2.00	-12.3	35.0
Thiophene	Ave	0.3988	0.4038		2.02	2.00	1.2	35.0
Tert-amyl methyl ether	Ave	0.6151	0.6035		1.96	2.00	-1.9	35.0
2,2,4-Trimethylpentane	Ave	1.315	1.234		1.88	2.00	-6.1	35.0
Heptane	Ave	0.2306	0.2187		1.90	2.00	-5.2	35.0
1,2-Dichloropropane	Ave	0.2817	0.2693		1.91	2.00	-4.4	35.0
Trichloroethene	Ave	0.3524	0.3368		1.91	2.00	-4.4	35.0
Dibromomethane	Ave	0.3120	0.3077		1.97	2.00	-1.4	35.0
Bromodichloromethane	Ave	0.5687	0.5455		1.92	2.00	-4.1	35.0
1,4-Dioxane	Ave	0.0832	0.0813		1.95	2.00	-2.3	35.0
Methyl methacrylate	Ave	0.2152	0.1781		1.66	2.00	-17.2	35.0
Methylcyclohexane	Ave	0.5358	0.4142		1.55	2.00	-22.7	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.3918		1.66	2.00	-17.1	35.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3528		1.92	2.00	-4.1	35.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3191		1.95	2.00	-2.5	35.0
Toluene	Ave	0.8518	0.7994		1.88	2.00	-6.2	35.0
1,1,2-Trichloroethane	Ave	0.2468	0.2300		1.86	2.00	-6.8	35.0
2-Methylthiophene	Ave	0.7101	0.7046		1.98	2.00	-0.8	35.0
3-Methylthiophene	Ave	0.6812	0.6917		2.03	2.00	1.5	35.0
2-Hexanone	Ave	0.2481	0.2334		1.88	2.00	-5.9	35.0
Octane	Ave	0.2789	0.2635		1.89	2.00	-5.5	35.0
Dibromochloromethane	Ave	0.5906	0.5581		1.89	2.00	-5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.4158		1.84	2.00	-7.8	35.0
Tetrachloroethene	Ave	0.3991	0.3509		1.76	2.00	-12.1	35.0
2,3-Dimethylheptane	Ave	0.7942	0.7444		1.87	2.00	-6.3	35.0
Chlorobenzene	Ave	0.6404	0.5994		1.87	2.00	-6.4	35.0
Ethylbenzene	Ave	0.9714	0.8773		1.81	2.00	-9.7	35.0
2-Ethylthiophene	Ave	0.7342	0.6586		1.79	2.00	-10.3	35.0
m-Xylene & p-Xylene	Ave	0.7539	0.6763		3.59	4.00	-10.3	35.0
Nonane	Ave	0.5580	0.5505		1.97	2.00	-1.4	35.0
Bromoform	Ave	0.4442	0.4033		1.82	2.00	-9.2	35.0
Styrene	Ave	0.4637	0.4468		1.93	2.00	-3.6	35.0
o-Xylene	Ave	0.8099	0.7115		1.76	2.00	-12.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4659		1.81	2.00	-9.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1320		1.80	2.00	-9.8	35.0
Isopropylbenzene	Ave	1.019	0.9649		1.89	2.00	-5.3	35.0
Propylbenzene	Ave	0.2557	0.2389		1.87	2.00	-6.6	35.0
2-Chlorotoluene	Ave	0.2699	0.2543		1.88	2.00	-5.8	35.0
4-Ethyltoluene	Ave	0.8665	0.7943		1.83	2.00	-8.3	35.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4105		1.79	2.00	-10.5	35.0
Alpha Methyl Styrene	Ave	0.3179	0.2957		1.86	2.00	-7.0	35.0
Decane	Ave	0.5704	0.5426		1.90	2.00	-4.9	35.0
tert-Butylbenzene	Ave	0.9118	0.8387		1.84	2.00	-8.0	35.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7161		1.85	2.00	-7.7	35.0
sec-Butylbenzene	Ave	1.131	1.069		1.89	2.00	-5.5	35.0
1,3-Dichlorobenzene	Ave	0.3965	0.3740		1.89	2.00	-5.7	35.0
Benzyl chloride	Ave	0.3894	0.3692		1.90	2.00	-5.2	35.0
1,4-Dichlorobenzene	Ave	0.3393	0.3250		1.92	2.00	-4.2	35.0
4-Isopropyltoluene	Ave	0.9296	0.8648		1.86	2.00	-7.0	35.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5929		1.92	2.00	-3.9	35.0
Butylcyclohexane	Ave	0.6728	0.6178		1.84	2.00	-8.2	35.0
1,2-Dichlorobenzene	Ave	0.4035	0.3783		1.88	2.00	-6.2	35.0
Indane	Ave	0.6488	0.5699		1.76	2.00	-12.2	35.0
Butylbenzene	Ave	0.7177	0.6878		1.92	2.00	-4.2	35.0
Indene	Ave	0.3721	0.4470		2.40	2.00	20.1	35.0
Undecane	Ave	0.5442	0.4861		1.79	2.00	-10.7	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.6781		2.24	2.00	12.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0899		1.36	2.00	-32.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.7152		1.94	2.00	-3.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.4575		1.92	2.00	-4.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.5337		1.81	2.00	-9.3	35.0
Dodecane	Ave	0.4840	0.4518		1.87	2.00	-6.7	35.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.1201		2.24	2.00	12.2	35.0
Naphthalene	Ave	0.2839	0.2802		1.97	2.00	-1.3	35.0
Benzo(b)thiophene	Ave	0.0997	0.1163		2.33	2.00	16.7	35.0
Hexachlorobutadiene	Ave	0.4264	0.3419		1.60	2.00	-19.8	35.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.1161		1.98	2.00	-1.2	35.0
2-Methylnaphthalene	Ave	0.0185	0.0246		8.30	6.25	32.8	50.0
1-Methylnaphthalene	Ave	0.0195	0.0272		8.75	6.25	40.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6438		4.36	4.00	9.0	35.0

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: JBFBG25A.D BFB Injection Date: 08/25/2016

Instrument ID: MJ BFB Injection Time: 12:30

Analysis Batch No.: 6398

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.4	
75	30.0 - 60.0 % of mass 95	52.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	113.9	
175	5.0 - 9.0 % of mass 174	8.7	(7.7) 1
176	95.0 - 101.0 % of mass 174	112.0	(98.3) 1
177	5.0 - 9.0 % of mass 176	7.5	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6398/6	JCCVG25A.D	08/25/2016	12:56
	LCS 140-6398/1006	JCCVG25A-LCS .d	08/25/2016	12:56
	MB 140-6398/8	J500BG25.D	08/25/2016	15:28
SV-139-A-21	140-5670-17	JG25P102.D	08/25/2016	17:15
SV-DUP04-A-21	140-5670-18	JG25P103.D	08/25/2016	18:08
SV-079-A-21	140-5670-19	JG25P104.D	08/25/2016	19:01
SV-078-A-21	140-5670-20	JG25P105.D	08/25/2016	19:54
SV-136-A-21	140-5670-21	JG25P106.D	08/25/2016	20:47
SV-076-A-21	140-5670-22	JG25P107.D	08/25/2016	21:41
SV-075-A-21	140-5670-23	JG25P108.D	08/25/2016	22:34
SV-101-B-21	140-5670-25	JG25P110.D	08/26/2016	00:21
BCK-1-21	140-5670-27	JG25P112.D	08/26/2016	02:09
BCK-2-21	140-5670-28	JG25P113.D	08/26/2016	03:03
BCK-3-21	140-5670-29	JG25P114.D	08/26/2016	03:56
BCK-4-21	140-5670-30	JG25P115.D	08/26/2016	04:50
SV-081-A-21	140-5670-16	JG25P101DL.D	08/26/2016	06:37

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6398/6 Calibration Date: 08/25/2016 12:56

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG25A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.5214		2.10	2.00	5.0	30.0
Propene	Ave	1.154	1.071		1.86	2.00	-7.2	30.0
Dichlorodifluoromethane	Ave	4.396	4.600		2.09	2.00	4.6	30.0
Chloromethane	Ave	0.3106	0.3178		2.05	2.00	2.3	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.561		2.10	2.00	5.0	30.0
Acetaldehyde	Ave	0.2696	0.2010		7.46	10.0	-25.4	30.0
Vinyl chloride	Ave	1.053	1.041		1.98	2.00	-1.1	30.0
1,3-Butadiene	Ave	0.6912	0.7441		2.15	2.00	7.7	30.0
Butane	Ave	1.150	1.300		2.26	2.00	13.0	30.0
Bromomethane	Ave	0.9910	0.9513		1.92	2.00	-4.0	30.0
Chloroethane	Ave	0.3777	0.4017		2.13	2.00	6.4	30.0
Ethanol	Ave	0.1546	0.1725		11.2	10.0	11.6	30.0
Vinyl bromide	Ave	1.172	1.040		1.78	2.00	-11.2	30.0
2-Methylbutane	Ave	1.379	1.283		1.86	2.00	-7.0	30.0
Trichlorofluoromethane	Ave	4.068	4.253		2.09	2.00	4.6	30.0
Acrolein	Ave	0.3360	0.2656		1.58	2.00	-20.9	30.0
Acetonitrile	Ave	0.3683	0.3376		1.83	2.00	-8.3	30.0
Acetone	Ave	0.4583	0.3043		3.99	6.00	-33.6*	30.0
Isopropyl alcohol	Ave	1.527	1.106		4.35	6.00	-27.6	30.0
Pentane	Ave	0.1722	0.1445		1.68	2.00	-16.1	30.0
Ethyl ether	Ave	0.7823	0.6952		1.78	2.00	-11.1	30.0
1,1-Dichloroethene	Ave	1.183	0.995		1.68	2.00	-15.9	30.0
tert-Butyl alcohol	Ave	2.084	1.723		1.65	2.00	-17.3	30.0
Acrylonitrile	Ave	0.7011	0.5509		1.57	2.00	-21.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.556		1.85	2.00	-7.6	30.0
Methylene Chloride	Ave	1.099	0.9059		1.65	2.00	-17.6	30.0
3-Chloropropene	Ave	1.055	1.017		1.93	2.00	-3.6	30.0
Carbon disulfide	Ave	3.359	2.780		1.66	2.00	-17.2	30.0
trans-1,2-Dichloroethene	Ave	1.188	1.031		1.74	2.00	-13.2	30.0
2-Methylpentane	Ave	2.424	2.599		2.15	2.00	7.2	30.0
Methyl tert-butyl ether	Ave	2.440	2.243		1.84	2.00	-8.1	30.0
1,1-Dichloroethane	Ave	2.417	2.367		1.96	2.00	-2.1	30.0
Vinyl acetate	Ave	2.001	1.906		1.91	2.00	-4.8	30.0
2-Butanone (MEK)	Ave	0.3839	0.2779		1.45	2.00	-27.6	30.0
Hexane	Ave	1.043	1.004		1.93	2.00	-3.7	30.0
Isopropyl ether	Ave	3.021	2.684		1.78	2.00	-11.2	30.0
cis-1,2-Dichloroethene	Ave	1.183	1.073		1.82	2.00	-9.3	30.0
Ethyl acetate	Ave	1.599	1.551		1.94	2.00	-3.0	30.0
Chloroform	Ave	2.678	2.789		2.08	2.00	4.1	30.0
Tert-butyl ethyl ether	Ave	2.990	2.692		1.80	2.00	-10.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6398/6 Calibration Date: 08/25/2016 12:56

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG25A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.7884		1.85	2.00	-7.5	30.0
1,1,1-Trichloroethane	Ave	3.097	3.456		2.23	2.00	11.6	30.0
1,2-Dichloroethane	Ave	0.4369	0.4579		2.10	2.00	4.8	30.0
1-Butanol	Ave	0.0610	0.0528		1.73	2.00	-13.4	30.0
Benzene	Ave	0.6983	0.6333		1.81	2.00	-9.3	30.0
Cyclohexane	Ave	0.1171	0.1104		1.89	2.00	-5.7	30.0
Carbon tetrachloride	Ave	0.7435	0.8429		2.27	2.00	13.4	30.0
2,3-Dimethylpentane	Ave	0.1606	0.1336		1.66	2.00	-16.8	30.0
Thiophene	Ave	0.3988	0.3729		1.87	2.00	-6.5	30.0
Tert-amyl methyl ether	Ave	0.6151	0.4886		1.59	2.00	-20.6	30.0
2,2,4-Trimethylpentane	Ave	1.315	1.239		1.88	2.00	-5.8	30.0
Heptane	Ave	0.2306	0.2024		1.76	2.00	-12.2	30.0
1,2-Dichloropropane	Ave	0.2817	0.2339		1.66	2.00	-17.0	30.0
Trichloroethene	Ave	0.3524	0.3163		1.80	2.00	-10.3	30.0
Dibromomethane	Ave	0.3120	0.3015		1.93	2.00	-3.3	30.0
Bromodichloromethane	Ave	0.5687	0.5413		1.90	2.00	-4.8	30.0
1,4-Dioxane	Ave	0.0832	0.0657		1.58	2.00	-21.0	30.0
Methyl methacrylate	Ave	0.2152	0.2107		1.96	2.00	-2.1	30.0
Methylcyclohexane	Ave	0.5358	0.4036		1.51	2.00	-24.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.3850		1.63	2.00	-18.5	30.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3218		1.75	2.00	-12.5	30.0
trans-1,3-Dichloropropene	Ave	0.3272	0.2682		1.64	2.00	-18.0	30.0
Toluene	Ave	0.8518	0.6613		1.55	2.00	-22.4	30.0
1,1,2-Trichloroethane	Ave	0.2468	0.1809		1.47	2.00	-26.7	30.0
2-Methylthiophene	Ave	0.7101	0.5727		1.61	2.00	-19.3	30.0
3-Methylthiophene	Ave	0.6812	0.5644		1.66	2.00	-17.2	30.0
2-Hexanone	Ave	0.2481	0.1819		1.47	2.00	-26.7	30.0
Octane	Ave	0.2789	0.2185		1.57	2.00	-21.7	30.0
Dibromochloromethane	Ave	0.5906	0.4847		1.64	2.00	-17.9	30.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.3408		1.51	2.00	-24.4	30.0
Tetrachloroethene	Ave	0.3991	0.3189		1.60	2.00	-20.1	30.0
2,3-Dimethylheptane	Ave	0.7942	0.6884		1.73	2.00	-13.3	30.0
Chlorobenzene	Ave	0.6404	0.5034		1.57	2.00	-21.4	30.0
Ethylbenzene	Ave	0.9714	0.7951		1.64	2.00	-18.1	30.0
2-Ethylthiophene	Ave	0.7342	0.5996		1.63	2.00	-18.3	30.0
m-Xylene & p-Xylene	Ave	0.7539	0.6327		3.36	4.00	-16.1	30.0
Nonane	Ave	0.5580	0.4741		1.70	2.00	-15.0	30.0
Bromoform	Ave	0.4442	0.3444		1.55	2.00	-22.5	30.0
Styrene	Ave	0.4637	0.3914		1.69	2.00	-15.6	30.0
o-Xylene	Ave	0.8099	0.6698		1.65	2.00	-17.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.3892		1.51	2.00	-24.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab Sample ID: CCVIS 140-6398/6 Calibration Date: 08/25/2016 12:56

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG25A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1180		1.61	2.00	-19.3	30.0
Isopropylbenzene	Ave	1.019	0.8947		1.76	2.00	-12.2	30.0
Propylbenzene	Ave	0.2557	0.2198		1.72	2.00	-14.0	30.0
2-Chlorotoluene	Ave	0.2699	0.2160		1.60	2.00	-20.0	30.0
4-Ethyltoluene	Ave	0.8665	0.7271		1.68	2.00	-16.1	30.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.3762		1.64	2.00	-18.0	30.0
Alpha Methyl Styrene	Ave	0.3179	0.2568		1.62	2.00	-19.2	30.0
Decane	Ave	0.5704	0.4945		1.73	2.00	-13.3	30.0
tert-Butylbenzene	Ave	0.9118	0.7798		1.71	2.00	-14.5	30.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.6682		1.72	2.00	-13.9	30.0
sec-Butylbenzene	Ave	1.131	0.9839		1.74	2.00	-13.0	30.0
1,3-Dichlorobenzene	Ave	0.3965	0.2920		1.47	2.00	-26.4	30.0
Benzyl chloride	Ave	0.3894	0.3015		1.55	2.00	-22.6	30.0
1,4-Dichlorobenzene	Ave	0.3393	0.2500		1.47	2.00	-26.3	30.0
4-Isopropyltoluene	Ave	0.9296	0.7793		1.68	2.00	-16.2	30.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5353		1.74	2.00	-13.2	30.0
Butylcyclohexane	Ave	0.6728	0.4981		1.48	2.00	-26.0	30.0
Indane	Ave	0.6488	0.4758		1.47	2.00	-26.7	30.0
1,2-Dichlorobenzene	Ave	0.4035	0.2887		1.43	2.00	-28.4	30.0
Butylbenzene	Ave	0.7177	0.5977		1.67	2.00	-16.7	30.0
Indene	Ave	0.3721	0.3532		1.90	2.00	-5.1	30.0
Undecane	Ave	0.5442	0.4347		1.60	2.00	-20.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.5564		1.84	2.00	-7.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0554		0.835	2.00	-58.3*	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.5775		1.56	2.00	-21.9	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.3659		1.54	2.00	-23.3	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.4245		1.44	2.00	-27.8	30.0
Dodecane	Ave	0.4840	0.3973		1.64	2.00	-17.9	30.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.0744		1.39	2.00	-30.5*	30.0
Naphthalene	Ave	0.2839	0.1873		1.32	2.00	-34.0*	30.0
Benzo(b)thiophene	Ave	0.0997	0.0820		1.65	2.00	-17.7	30.0
Hexachlorobutadiene	Ave	0.4264	0.2907		1.36	2.00	-31.8*	30.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.0806		1.37	2.00	-31.4*	30.0
2-Methylnaphthalene	Ave	0.0185	0.0124		4.20	6.25	-32.9	50.0
1-Methylnaphthalene	Ave	0.0195	0.0123		3.97	6.25	-36.6	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6646		4.50	4.00	12.5	30.0

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: EMB500G25.D Lab Sample ID: MB 140-6406/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 08/25/2016 13:15

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6406/1002	ECCVH25-LCS.d	08/25/2016 10:29
SV-015-A-21	140-5670-14	EG25P101.D	08/25/2016 15:15
SV-118-A-21	140-5670-15	EG25P102.D	08/25/2016 15:59
IA-078-A-21	140-5670-1	EG25P103.D	08/25/2016 16:45
IA-136-A-21	140-5670-2	EG25P104.D	08/25/2016 17:29
IA-076-A-21	140-5670-3	EG25P105.D	08/25/2016 18:16
IA-021-A-21	140-5670-4	EG25P106.D	08/25/2016 19:00
IA-075-A-21	140-5670-5	EG25P107.D	08/25/2016 19:45
IA-095-A-21	140-5670-6	EG25P108.D	08/25/2016 20:29
IA-033-B-21	140-5670-7	EG25P109.D	08/25/2016 21:14
IA-101-B-21	140-5670-8	EG25P110.D	08/25/2016 21:59
IA-100-B-21	140-5670-9	EG25P111.D	08/25/2016 22:44
SV-093-A-21	140-5670-10	EG25P112.D	08/25/2016 23:27
SV-138-A-21	140-5670-11	EG25P113.D	08/26/2016 00:12
SV-116-A-21	140-5670-12	EG25P114.D	08/26/2016 00:56
SV-DUP03-A-21	140-5670-13	EG25P115D.D	08/26/2016 02:26

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6406/4

Matrix: Air Lab File ID: EMB500G25.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/25/2016 13:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6406/4

Matrix: Air | Lab File ID: EMB500G25.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 08/25/2016 13:15

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVH25-LCS.d

Lab ID: LCS 140-6406/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.29	114	70-130	
Carbon tetrachloride	2.00	2.33	116	70-130	
Chlorodifluoromethane	2.00	2.47	123	60-140	
Chloroform	2.00	2.28	114	70-130	
cis-1,2-Dichloroethene	2.00	2.32	116	70-130	
Dichlorodifluoromethane	2.00	2.45	123	60-140	
1,1-Dichloroethane	2.00	2.30	115	70-130	
1,2-Dichloroethane	2.00	2.33	116	70-130	
1,1-Dichloroethene	2.00	2.18	109	70-130	
Ethylbenzene	2.00	2.32	116	70-130	
Methylene Chloride	2.00	2.20	110	70-130	
Methyl tert-butyl ether	2.00	2.20	110	60-140	
Naphthalene	2.00	2.48	124	60-140	
Tetrachloroethene	2.00	2.29	114	70-130	
Toluene	2.00	2.33	117	70-130	
trans-1,2-Dichloroethene	2.00	2.25	113	70-130	
1,2,4-Trichlorobenzene	2.00	2.45	122	60-140	
1,1,1-Trichloroethane	2.00	2.25	112	70-130	
1,1,2-Trichloroethane	2.00	2.27	114	70-130	
Trichloroethene	2.00	2.28	114	70-130	
1,2,3-Trimethylbenzene	2.00	2.51	125	70-130	
1,2,4-Trimethylbenzene	2.00	2.36	118	70-130	
1,3,5-Trimethylbenzene	2.00	2.36	118	70-130	
Vinyl chloride	2.00	2.50	125	70-130	
Xylenes, Total	6.00	7.00	117	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: EMB500H26.D Lab Sample ID: MB 140-6407/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 08/26/2016 12:59

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6407/1006	ECCVH26A-LCS.d	08/26/2016 10:40
SV-136-A-21 DL	140-5670-21 DL	EH26P113.D	08/26/2016 23:19
SV-095-A-21	140-5670-24	EH26P114.D	08/27/2016 00:03
SV-100-B-21	140-5670-26	EH26P115.D	08/27/2016 00:46

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6407/8

Matrix: Air Lab File ID: EMB500H26.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/26/2016 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6407/8

Matrix: Air Lab File ID: EMB500H26.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/26/2016 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6407 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVH26A-LCS.d

Lab ID: LCS 140-6407/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.27	113	70-130	
Carbon tetrachloride	2.00	2.28	114	70-130	
Chlorodifluoromethane	2.00	2.33	116	60-140	
Chloroform	2.00	2.27	114	70-130	
cis-1,2-Dichloroethene	2.00	2.25	113	70-130	
Dichlorodifluoromethane	2.00	2.42	121	60-140	
1,1-Dichloroethane	2.00	2.29	115	70-130	
1,2-Dichloroethane	2.00	2.32	116	70-130	
1,1-Dichloroethene	2.00	2.16	108	70-130	
Ethylbenzene	2.00	2.34	117	70-130	
Methylene Chloride	2.00	2.17	108	70-130	
Methyl tert-butyl ether	2.00	2.27	114	60-140	
Naphthalene	2.00	2.75	138	60-140	
Tetrachloroethene	2.00	2.29	114	70-130	
Toluene	2.00	2.28	114	70-130	
trans-1,2-Dichloroethene	2.00	2.28	114	70-130	
1,2,4-Trichlorobenzene	2.00	2.59	130	60-140	
1,1,1-Trichloroethane	2.00	2.25	112	70-130	
1,1,2-Trichloroethane	2.00	2.30	115	70-130	
Trichloroethene	2.00	2.28	114	70-130	
1,2,3-Trimethylbenzene	2.00	2.39	119	70-130	
1,2,4-Trimethylbenzene	2.00	2.39	119	70-130	
1,3,5-Trimethylbenzene	2.00	2.35	118	70-130	
Vinyl chloride	2.00	2.42	121	70-130	
Xylenes, Total	6.00	7.06	118	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Lab File ID: J500BG25.D Lab Sample ID: MB 140-6398/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 08/25/2016 15:28

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6398/1006	JCCVG25A-LCS.d	08/25/2016 12:56
SV-139-A-21	140-5670-17	JG25P102.D	08/25/2016 17:15
SV-DUP04-A-21	140-5670-18	JG25P103.D	08/25/2016 18:08
SV-079-A-21	140-5670-19	JG25P104.D	08/25/2016 19:01
SV-078-A-21	140-5670-20	JG25P105.D	08/25/2016 19:54
SV-136-A-21	140-5670-21	JG25P106.D	08/25/2016 20:47
SV-076-A-21	140-5670-22	JG25P107.D	08/25/2016 21:41
SV-075-A-21	140-5670-23	JG25P108.D	08/25/2016 22:34
SV-101-B-21	140-5670-25	JG25P110.D	08/26/2016 00:21
BCK-1-21	140-5670-27	JG25P112.D	08/26/2016 02:09
BCK-2-21	140-5670-28	JG25P113.D	08/26/2016 03:03
BCK-3-21	140-5670-29	JG25P114.D	08/26/2016 03:56
BCK-4-21	140-5670-30	JG25P115.D	08/26/2016 04:50
SV-081-A-21	140-5670-16	JG25P101DL.D	08/26/2016 06:37

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6398/8

Matrix: Air Lab File ID: J500BG25.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/25/2016 15:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6398 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6398/8

Matrix: Air | Lab File ID: J500BG25.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 08/25/2016 15:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6398 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVG25A-LCS.d

Lab ID: LCS 140-6398/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.81	91	70-130	
Carbon tetrachloride	2.00	2.27	113	70-130	
Chlorodifluoromethane	2.00	2.10	105	60-140	
Chloroform	2.00	2.08	104	70-130	
cis-1,2-Dichloroethene	2.00	1.82	91	70-130	
Dichlorodifluoromethane	2.00	2.09	105	60-140	
1,1-Dichloroethane	2.00	1.96	98	70-130	
1,2-Dichloroethane	2.00	2.10	105	70-130	
1,1-Dichloroethene	2.00	1.68	84	70-130	
Ethylbenzene	2.00	1.64	82	70-130	
Methylene Chloride	2.00	1.65	82	70-130	
Methyl tert-butyl ether	2.00	1.84	92	60-140	
Naphthalene	2.00	1.32	66	60-140	
Tetrachloroethene	2.00	1.60	80	70-130	
Toluene	2.00	1.55	78	70-130	
trans-1,2-Dichloroethene	2.00	1.74	87	70-130	
1,2,4-Trichlorobenzene	2.00	1.39	70	60-140	
1,1,1-Trichloroethane	2.00	2.23	112	70-130	
1,1,2-Trichloroethane	2.00	1.47	73	70-130	
Trichloroethene	2.00	1.80	90	70-130	
1,2,3-Trimethylbenzene	2.00	1.74	87	70-130	
1,2,4-Trimethylbenzene	2.00	1.72	86	70-130	
1,3,5-Trimethylbenzene	2.00	1.64	82	70-130	
Vinyl chloride	2.00	1.98	99	70-130	
Xylenes, Total	6.00	5.01	83	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
IA-078-A-21	140-5670-1	105
IA-136-A-21	140-5670-2	102
IA-076-A-21	140-5670-3	102
IA-021-A-21	140-5670-4	104
IA-075-A-21	140-5670-5	101
IA-095-A-21	140-5670-6	103
IA-033-B-21	140-5670-7	102
IA-101-B-21	140-5670-8	104
IA-100-B-21	140-5670-9	102
SV-093-A-21	140-5670-10	102
SV-138-A-21	140-5670-11	105
SV-116-A-21	140-5670-12	103
SV-DUP03-A-21	140-5670-13	103
SV-015-A-21	140-5670-14	103
SV-118-A-21	140-5670-15	106
SV-081-A-21	140-5670-16	109
SV-139-A-21	140-5670-17	101
SV-DUP04-A-21	140-5670-18	105
SV-079-A-21	140-5670-19	107
SV-078-A-21	140-5670-20	98
SV-136-A-21	140-5670-21	102
SV-136-A-21 DL	140-5670-21 DL	99
SV-076-A-21	140-5670-22	107
SV-075-A-21	140-5670-23	110
SV-095-A-21	140-5670-24	105
SV-101-B-21	140-5670-25	102
SV-100-B-21	140-5670-26	101
BCK-1-21	140-5670-27	106
BCK-2-21	140-5670-28	101
BCK-3-21	140-5670-29	104
BCK-4-21	140-5670-30	104
	MB 140-6398/8	106
	MB 140-6406/4	99
	MB 140-6407/8	102

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
	LCS 140-6398/1006	113
	LCS 140-6406/1002	102
	LCS 140-6407/1006	102

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Sample No.: ICIS 140-6379/8 Date Analyzed: 08/23/2016 20:46

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): EH23IC06.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		269675	7.57	1287098	9.82	1211436	14.82
UPPER LIMIT		377545	7.90	1801937	10.15	1696010	15.15
LOWER LIMIT		161805	7.24	772259	9.49	726862	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-6379/13		255853	7.57	1211654	9.82	1126201	14.82

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Sample No.: CCVIS 140-6406/2 Date Analyzed: 08/25/2016 10:29

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVH25.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		240867	7.58	1122974	9.82	1067669	14.82
UPPER LIMIT		337214	7.91	1572164	10.15	1494737	15.15
LOWER LIMIT		144520	7.25	673784	9.49	640601	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6406/1002		240867	7.58	1122974	9.82	1067669	14.82
MB 140-6406/4		233819	7.57	1104195	9.81	1017945	14.81
140-5670-14	SV-015-A-21	189626	7.61	878089	9.83	823646	14.82
140-5670-15	SV-118-A-21	209540	7.57	954729	9.81	873843	14.82
140-5670-1	IA-078-A-21	202939	7.57	904765	9.82	883024	14.82
140-5670-2	IA-136-A-21	208302	7.57	956969	9.82	890709	14.82
140-5670-3	IA-076-A-21	216723	7.57	1032012	9.82	981257	14.82
140-5670-4	IA-021-A-21	197802	7.57	917774	9.82	906581	14.82
140-5670-5	IA-075-A-21	217563	7.58	1007306	9.82	929604	14.82
140-5670-6	IA-095-A-21	229790	7.57	1074891	9.81	1015364	14.82
140-5670-7	IA-033-B-21	230257	7.57	1077888	9.82	1021994	14.82
140-5670-8	IA-101-B-21	229016	7.57	1101361	9.82	1041531	14.82
140-5670-9	IA-100-B-21	230723	7.57	1103850	9.82	1029641	14.82
140-5670-10	SV-093-A-21	232277	7.57	1097588	9.81	1032900	14.81
140-5670-11	SV-138-A-21	222095	7.57	1043439	9.82	1005603	14.82
140-5670-12	SV-116-A-21	240644	7.57	1150924	9.81	1073811	14.81
140-5670-13	SV-DUP03-A-21	239865	7.57	1140611	9.81	1062650	14.82

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Sample No.: CCVIS 140-6407/6 Date Analyzed: 08/26/2016 10:40

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVH26A.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		249766	7.57	1157324	9.82	1098063	14.82
UPPER LIMIT		349672	7.90	1620254	10.15	1537288	15.15
LOWER LIMIT		149860	7.24	694394	9.49	658838	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6407/1006		249766	7.57	1157324	9.82	1098063	14.82
MB 140-6407/8		223568	7.57	1063467	9.81	982500	14.82
140-5670-21 DL	SV-136-A-21 DL	240023	7.57	1162347	9.82	1062551	14.82
140-5670-24	SV-095-A-21	215331	7.57	906485	9.81	884015	14.82
140-5670-26	SV-100-B-21	251326	7.57	1209273	9.81	1105934	14.82

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Sample No.: ICIS 140-5523/7 Date Analyzed: 06/22/2016 20:20

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JF22IC06.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		295193	9.39	1295936	11.55	1130543	16.23
UPPER LIMIT		413270	9.72	1814310	11.88	1582760	16.56
LOWER LIMIT		177116	9.06	777562	11.22	678326	15.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5523/17		332894	9.39	1464991	11.55	1301938	16.23

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Sample No.: CCVIS 140-6398/6 Date Analyzed: 08/25/2016 12:56

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVG25A.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		198161	9.34	916126	11.50	872760	16.19
UPPER LIMIT		277425	9.67	1282576	11.83	1221864	16.52
LOWER LIMIT		118897	9.01	549676	11.17	523656	15.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6398/1006		198161	9.34	916126	11.50	872760	16.19
MB 140-6398/8		210124	9.34	973464	11.50	844525	16.19
140-5670-17	SV-139-A-21	201319	9.34	951646	11.51	857562	16.19
140-5670-18	SV-DUP04-A-21	178030	9.33	825901	11.50	745521	16.19
140-5670-19	SV-079-A-21	186376	9.34	845624	11.50	771132	16.19
140-5670-20	SV-078-A-21	202364	9.34	968599	11.50	862136	16.19
140-5670-21	SV-136-A-21	194272	9.34	932188	11.50	845957	16.19
140-5670-22	SV-076-A-21	165920	9.34	736142	11.51	699966	16.19
140-5670-23	SV-075-A-21	173703	9.34	786911	11.50	722752	16.18
140-5670-25	SV-101-B-21	189416	9.34	875550	11.50	790491	16.19
140-5670-27	BCK-1-21	159865	9.34	719201	11.50	658769	16.18
140-5670-28	BCK-2-21	152802	9.35	696035	11.51	650221	16.19
140-5670-29	BCK-3-21	174178	9.34	807042	11.50	739091	16.19
140-5670-30	BCK-4-21	173542	9.34	796031	11.51	722575	16.19
140-5670-16	SV-081-A-21	155716	9.34	717724	11.50	650114	16.19

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1

SDG No.:

Client Sample ID: IA-078-A-21 Lab Sample ID: 140-5670-1

Matrix: Air Lab File ID: EG25P103.D

Analysis Method: TO 15 LL Date Collected: 08/17/2016 15:50

Sample wt/vol: 100(mL) Date Analyzed: 08/25/2016 16:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6406 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.078	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.42		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.54		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	ND		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.7		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.088	J	0.40	0.080
108-88-3	Toluene	92.14	1.1		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.12	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.27	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5670-1
SDG No.:
Client Sample ID: IA-078-A-21 | Lab Sample ID: 140-5670-1
Matrix: Air | Lab File ID: EG25P103.D
Analysis Method: TO 15 LL | Date Collected: 08/17/2016 15:50
Sample wt/vol: 100 (mL) | Date Analyzed: 08/25/2016 16:45
Soil Aliquot Vol: | Dilution Factor: 1
Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32 (mm)
% Moisture: | Level: (low/med) Low
Analysis Batch No.: 6406 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.49	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	ND		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	5.9		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.60	J	2.7	0.54
108-88-3	Toluene	92.14	4.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	ND		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.67	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.2	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

Sample Calculation - Page 3

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160824-3352.b\EG25P103.D				
Lims ID:	140-5670-A-1				
Client ID:	IA-078-A-21				
Sample Type:	Client				
Inject. Date:	25-Aug-2016 16:45:30	ALS Bottle#:	3	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003352-008				
Misc. Info.:	140-5670-a-1				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160824-3352.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	25-Aug-2016 17:31:54	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: barlozhetskayaa		Date:	25-Aug-2016 17:31:54		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.573	7.578	-0.005	72	202939	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.822	-0.006	95	904765	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.815	0.000	91	883024	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.487	16.492	-0.005	86	761341	4.21	
6 Chlorodifluoromethane	67	2.903	2.898	0.005	93	1999	0.0830	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	23248	0.1089	
31 Methylene Chloride	84	5.109	5.114	-0.005	80	21724	0.3413	
52 Carbon tetrachloride	117	9.218	9.228	-0.010	69	2810	0.0157	
59 Trichloroethene	130	10.582	10.587	-0.005	87	2010	0.0248	
68 Toluene	91	12.782	12.782	0.000	93	45648	0.2155	
76 Tetrachloroethene	129	13.958	13.968	-0.010	33	1454	0.0176	
81 m-Xylene & p-Xylene	91	15.333	15.338	-0.005	97	11948	0.0539	
S 126 Xylenes, Total	100				0		0.0539	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Concentration = (2010 / 904765) x (4.00 ppbv / 0.3584) = 0.02479

(0.0248 ppbv x 500 mL x 131.39) / (24.45 (gas constant) x 100 mL) = 0.6664 ug/m3

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5670-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3831 0.3496	0.3612 0.3524	0.3506 0.3716	0.3507 0.3526	0.3534	Ave		0.3584				3.2		30.0			
Dibromomethane	0.3895 0.3488	0.3548 0.3502	0.3437 0.3760	0.3493 0.3515	0.3537	Ave		0.3575				4.2		30.0			
Bromodichloromethane	0.6876 0.7092	0.6820 0.7181	0.6338 0.7599	0.6565 0.7102	0.7003	Ave		0.6953				5.2		30.0			
1,4-Dioxane	0.1134 0.1167	0.1165 0.1135	0.1068 0.1182	0.1121 0.1128	0.1124	Ave		0.1136				2.9		30.0			
Methyl methacrylate	0.2349 0.2258	0.2152 0.2091	0.1911 0.2310	0.2016 0.2387	0.2192	Ave		0.2185				7.3		30.0			
Methylcyclohexane	0.6839 0.6057	0.6462 0.6082	0.6222 0.6398	0.6089 0.5919	0.6149	Ave		0.6246				4.5		30.0			
4-Methyl-2-pentanone (MIBK)	0.3053 0.3355	0.3361 0.3148	0.3293 0.3281	0.3077 0.3265	0.3094	Ave		0.3214				3.8		30.0			
cis-1,3-Dichloropropene	0.4998 0.5003	0.5023 0.4903	0.4561 0.5342	0.4739 0.5081	0.4988	Ave		0.4960				4.4		30.0			
trans-1,3-Dichloropropene	0.4914 0.5214	0.4748 0.5218	0.4611 0.5383	0.4890 0.5321	0.5226	Ave		0.5058				5.4		30.0			
Toluene	0.9766 0.9594	1.0176 0.9449	0.9476 0.9460	0.9583 0.9034	0.9806	Ave		0.9594				3.3		30.0			
Toluene Range	+++++ 2.1610	+++++ 2.1067	+++++ 2.2258	2.1476 2.1474	2.1929	Ave		2.1636				1.9		30.0			
1,1,2-Trichloroethane	0.3300 0.2929	0.2767 0.2924	0.2838 0.2957	0.2910 0.2893	0.2994	Ave		0.2946				5.0		30.0			
2-Methylthiophene	0.7657 0.8226	0.8196 0.8088	0.7388 0.8146	0.8029 0.7812	0.8212	Ave		0.7973				3.7		30.0			
3-Methylthiophene	0.8030 0.8012	0.7780 0.7876	0.7275 0.7914	0.7862 0.7560	0.8049	Ave		0.7817				3.2		30.0			
2-Hexanone	0.1595 0.2019	0.1745 0.1941	0.1753 0.2038	0.1822 0.2005	0.1889	Ave		0.1867				8.1		30.0			
C8 Range	+++++ 2.1384	+++++ 2.1481	+++++ 2.3006	2.1075 2.1399	2.1652	Ave		2.1666				3.2		30.0			
Octane	0.3310 0.3331	0.3114 0.3369	0.3283 0.3417	0.3189 0.3245	0.3362	Ave		0.3291				2.9		30.0			
Dibromochloromethane	0.5712 0.6639	0.5458 0.6857	0.5338 0.6997	0.5697 0.6658	0.6418	Ave		0.6197				10.4		30.0			
1,2-Dibromoethane (EDB)	0.4965 0.5469	0.5070 0.5479	0.4793 0.5615	0.5003 0.5495	0.5463	Ave		0.5261				5.7		30.0			
Tetrachloroethene	0.4066 0.3677	0.3888 0.3723	0.3618 0.3736	0.3587 0.3543	0.3750	Ave		0.3732				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

APPENDIX E—*REMEDIAL ACTION PROGRESS REPORT #28: APRIL 1, 2016 THROUGH SEPTEMBER 30, 2016, SUB-SLAB-DEPRESSURIZATION SYSTEMS, BUILDINGS A AND C, LOCKHEED MARTIN MIDDLE RIVER COMPLEX*

Remedial Action Progress Report #28
April 1—September 30, 2016
Sub-Slab Depressurization Systems
Buildings A and C
Lockheed Martin Middle River Complex
2323 Eastern Boulevard
Middle River, Maryland

Prepared for:

Lockheed Martin Corporation

Prepared by:

Tetra Tech, Inc.

October 14, 2016



Michael Martin, P.G.
Regional Manager



Peter Rich, P.E.
Project Manager

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Table 5: Building C Mid-GAC Concentrations ($\mu g/m^3$)

Table 6: Building C Effluent Concentrations ($\mu g/m^3$)

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ACRONYMS

%	percent
°F	degrees Fahrenheit
µg/m^3	micrograms per cubic meter
GAC	granular activated-carbon
HEPA	high-efficiency particulate air
lbs/day	pounds per day
MDE	Maryland Department of the Environment
OM&M	operation, maintenance, and monitoring
PPZ	potassium permanganate-impregnated zeolite
SCFM	standard cubic feet per minute
SSD	sub-slab depressurization
TestAmerica	TestAmerica Laboratories, Inc.
TO-15	Toxic Organic Method 15
TCE	trichloroethene
VMP	vapor monitoring point
VOC	volatile organic compound
WC	water column

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Section 1
Introduction

1.1 SITE LOCATION AND BACKGROUND INFORMATION

This report documents the monitoring activities completed from April 1 to September 30, 2016 [the 33rd and 34th quarters of operation] for the sub-slab depressurization systems operating in the Building A lay-up room (former plating shop), eastern area, and basement, and the Building C basement of the Lockheed Martin Corporation Middle River Complex in Middle River, Maryland. The locations of the SSD systems are shown on Figure 1. These remedial systems control (by creating a vacuum) and remove volatile organic compounds from sub-slab vapor, thus preventing their migration into indoor air. The systems are operated in accordance with the operation, maintenance, and monitoring manuals for the Building A and Building C systems (Tetra Tech, Inc., 2016a and 2014, respectively).

1.2 DESCRIPTION OF SUB-SLAB DEPRESSURIZATION SYSTEMS

1.2.1 Building A System

The sub-slab depressurization system in Building A includes horizontal and vertical soil vapor extraction points: two horizontal soil vapor extraction laterals in the lay-up room ("North" and "South") and two laterals in the basement ("Basement North" and "Basement South"), and five vertical soil vapor extraction points ("SSD-34-A," SSD-35-A," SSD-36-A," SSD-37-A," and SSD-38-A; see Figure 2).

The soil vapor extraction points serve as conduits for drawing vapor from beneath the building slab, thus mitigating vapor intrusion into indoor air. Sub-slab vapors are pulled through the extraction points using a single 10-horsepower regenerative blower that is mounted on a skid along with a moisture separator, heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the "blower skid"). Following extraction, the vapors enter the moisture separator where entrained condensate droplets are removed to reduce potential

fouling of vapor lines and saturation of the vapor-phase carbon. The extracted vapors are cooled as they are pushed through the heat exchanger and are then filtered to remove volatile organic compounds using two 400-pound granular activated-carbon drums, in-series. Vapors are discharged to the atmosphere via an exhaust stack that extends above the roof of the building. Figure 3 shows the process and instrumentation diagram for the Building A sub-slab depressurization system.

The Building A system is also equipped with three pipe sumps (PS-1-A [near SSD-37-A], PS-2-A [near SSD-34-A], and PS-3-A [in the basement]) and one exhaust stack sump. The sumps are installed at low points to allow drainage of condensation in the pipe.

Three IQAir® GC™ Series-GC VOC indoor-air filters also operate in the basement of Building A near vapor monitoring points (VMPs) 093-A, 093 A-X, and 138-A in response to elevated trichloroethene (TCE) concentrations in the indoor air. The filters were installed south of the sub-slab depressurization system extraction laterals on January 9, 2015, and are continuously operated to filter 300 standard cubic feet per minute (SCFM) of air. Each filter consists of a high-efficiency particulate air pre-filter, a granular activated-carbon filter, and a post-filter sleeve (collectively referred to as "filter elements"). The pre-filter (GC™ HyperHEPA® Pre-Filter H11 [S]) weighs three pounds; it removes coarse, fine, and ultra-fine dust particles and protects subsequent filters. The granular activated-carbon filter (GC VOC filter cartridge set) removes volatile organic compounds from indoor air; it is comprised of four granular activated-carbon cartridges, collectively weighing nine pounds. The post-filter sleeve (GC™ post-filter sleeve set) is placed over the granular activated-carbon cartridges, and removes any remaining fine and ultra-fine particulate matter.

1.2.2 Building C System

The sub-slab depressurization system in the Building C basement consists of 11 vertical soil vapor extraction points: two in the southern-basement area (SSD-21-C and SSD-23-C) and nine in the mid-basement area (SSD-26-C, SSD-27-C, SSD-28-C, SSD-29-C, SSD-30-C, SSD-31-C, SSD-32-C, SSD-33-C, and SSD-34-C; see Figure 4). These extraction points serve as conduits for drawing vapor from beneath the building slab, thus creating a vacuum under the floor slab preventing vapor intrusion into indoor air. The vapors are pulled through the extraction points

using a single 7.5-horsepower regenerative blower that is mounted on a skid along with a moisture separator, heat exchanger, filters, and vacuum, pressure, temperature, and flow gauges (collectively referred to as the "blower skid"). Following extraction, the vapors enter the first moisture separator (MS-1) where entrained condensate droplets are removed to reduce fouling of the vapor lines and saturation of the granular activated-carbon. The extracted vapors are cooled as they are pushed through the heat exchanger; any remaining extracted condensate droplets are removed via a second moisture separator (MS-2) [separate from the blower skid] before being treated. The vapors are treated by passing through two 400-pound granular activated-carbon drums and one 600-pound potassium permanganate-impregnated zeolite drum (to remove residual vinyl chloride), in-series, before being discharged to the atmosphere via an exhaust stack that extends above the roof of the building (Figure 5).

The Building C system is also equipped with one drain for each granular activated-carbon and potassium permanganate-impregnated zeolite drum, five pipe sumps (PS-1 [near SSD-25-C and column N26], PS-2 [near SSD-30-C and column N26], PS-3 [near SSD-27-C and column O20], PS-4 [near SSD-32-C and column R19], and PS-5 [near SSD-29-C and column V12]), and one exhaust stack sump. The sumps are installed at low points to allow drainage of condensation in the pipe.

Sound generated by the blower and heat exchanger is controlled by a sound-deadening enclosure that surrounds the blower skid. This enclosure has overlapping soundproof curtains supported on a wooden frame; its plywood roof is lined with one-inch-thick foam board. A vent on the side of the enclosure and a duct extending from the heat exchanger to the ceiling of the enclosure facilitate airflow and prevent the system from overheating.

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Section 2
Site Activities

2.1 BIWEEKLY SYSTEM CHECKS

Biweekly system checks were conducted to monitor the performance of the sub-slab depressurization (SSD) systems and to make necessary adjustments to optimize effectiveness. System checks were conducted between April 1 and June 30, 2016 (the 33rd quarter of operation) on the following dates. System checks in addition to the biweekly system checks were conducted between April and May 2016 as part of the startup of the Building A system expansion. The Building A system expansion is detailed in the *Construction Report, Sub-Slab Depressurization-System Second-Phase Expansion – Building A* prepared by Tetra Tech in May 2016 (Tetra Tech, 2016b).

- April 4 and 7, 2016
- April 13, 2016 (Building A only)
- April 14, 2016 (Building A only)
- April 19, 2016
- April 27, 2016 (Building A only)
- May 4, 2016
- May 12, 2016 (Building A only)
- May 17, 2016
- June 2, 2016
- June 16, 2016
- June 30, 2016

Biweekly system checks were conducted between July 1 and September 30, 2016 (the 34th quarter of operation) on the following dates:

- July 14, 2016
- July 25, 2016
- August 12, 2016
- August 23, 2016
- September 7, 2016
- September 19, 2016

Biweekly system checks were conducted in accordance with the latest operation, maintenance, and monitoring (OM&M) manuals (Tetra Tech, Inc. [Tetra Tech], 2016a and 2014), and

included general system monitoring, vacuum influence monitoring, and any necessary adjustments to extraction laterals and wells. Biweekly system checks forms are in Appendix A.

2.1.1 General System Monitoring

Gauge readings on the blower skid were checked, and the vacuum and velocity at each extraction lateral/well were measured. The condition of system components was also checked, and moisture separators/sumps were emptied as necessary. The following specific tasks were performed:

1. Recorded:
    a. vacuum at pre-air filter
    b. vacuum at post-air filter
    c. pressure at post-blower
    d. temperature at post-blower
    e. temperature at post-heat exchanger
    f. system flow
    g. time counter display (Building C only)
    h. vacuum from each extraction lateral/well
    i. velocity from each extraction lateral/well
    j. vacuum from each vapor monitoring point (VMP)
2. Checked the following for damage, leaks, and/or signs of heat stress:
    a. system components
    b. granular activated-carbon (GAC) drums
    c. potassium permanganate-impregnated zeolite (PPZ) drum (Building C only)
    d. GAC and PPZ fittings and flexible hoses
3. Checked the following for condensate, and drained, as necessary:
    a. moisture separators
    b. pipe sumps
    c. exhaust stack sumps
    d. GAC and PPZ drains
4. Confirmed that zip-ties on the GAC- and PPZ-drum cam locks were present and secure
5. Confirmed that the ambient air valve was closed
6. Confirmed that the vacuum relief valve was closed
7. Noted any adjustments to extraction laterals/wells

8. Checked that flow, pressure, and vacuum gauges fell to zero, and that temperature gauges fell, when systems were turned off

9. Checked each of the three Building A IQAir® GC™ Series-GC indoor air filters to:
    a. verify filter was on
    b. verify fan was running
    c. check control panel for filter-life status
    d. document any signs of tampering

No water was drained from the Building A system during the reporting period. Approximately 0.02 gallons of water were drained from the Building C exhaust stack sump on April 19, 2016.

2.1.2 Vacuum Influence Monitoring

The objective for the SSD systems is to maintain a vacuum of at least 0.01 inches water column (WC) in the targeted areas. The vacuum influence (differential versus indoor air) at sub-slab VMPs was monitored using a dual[1]-port manometer (Fieldpiece Instruments, Inc. model SDMN5). This instrument was used to identify sub-slab-air short-circuiting or other problems (indicated by a significant drop in vacuum at one or more VMPs), and to determine each system's area of influence.

No short-circuiting was identified at the Building A SSD system during this reporting period except for a small hole on the concrete of the North extraction lateral in the lay-up room, which was observed on April 4, 2016. The hole was patched on April 12, 2016, using epoxy. During the reporting period, vacuum influence in the Building A lay-up room consistently[2] exceeded the vacuum influence objective (0.01 inches WC) in seven of eight VMPs (SSD-12-A-X, SSD-11-A-X, SSD-13-A-X, SSD-2-A-X, SSD-15-A-X, SSD-16-A-X, and SSD-3-A-X) with vacuums ranging from 0.18 to 10.57 inches WC. Negative vacuum (pressure) readings were measured at vapor monitoring point SSD-1-A on April 13, April 14, June 2, July 14, and September 7, 2016; pressure readings on these dates indicated higher pressure in the sub-slab than in the indoor air.

[1] Only one port is used for monitoring vacuum influence; the second port is used to measure static pressure.

[2] Exceeded vacuum monitoring objective of 0.01 inches water column at more than half of the biweekly system checks.

In the eastern area of Building A, nine of 14 VMPs (166-A, 167-A, 165-A, 117-A, 164-A, 136-A-S, 136-A, 161-A, and 160-A) consistently exceeded the vacuum influence objective (0.01 inches WC) during the reporting period with vacuums ranging from 0.00 to 3.11 inches WC. Negative vacuum (pressure) readings were measured at VMP 163-A during most biweekly system checks. Induced vacuum has not been observed at 119-A, 121-B, 162-A, or 136-A-N, possibly because of the distance to the nearest extraction point for 119-A and 121-B. The reason for the readings at 162-A, 136-A-N, and 163-A, is not clear but could be related to subsurface preferential pathways and heterogeneity. VPM 162-A was removed on July 14, 2016 after it was found to be loose; the vapor monitoring pin was reinstalled on July 25, 2016. However, during the subsequent system check on August 12, 2016, it was observed that new facility operations in the area made VMP 162-A permanently inaccessible. It will be replaced nearby during the next quarter.

In the Building A basement, two of four VMPs (SSD-21-A and SSD-22-A) consistently exceeded the vacuum influence objective (0.01 inches WC) during the reporting period, with vacuums ranging from 0.01 to 0.54 inches WC. Induced vacuum has not been consistent at the other VMPs (SSD-19-A and SSD-20-A), possibly because of high groundwater levels (typically one foot or less below the slab). Figures 6 and 7 show induced vacuum in Building A over time.

No short-circuiting was identified at the Building C SSD system during this reporting period. Vacuum influence at five of seven VMPs in the southern-basement area of Building C and 14 of 21 VMPs in the mid-basement area consistently exceeded the vacuum influence objective (0.01 inches WC). In the southern-basement area, vacuum influence ranged from 0.00 to 2.82 inches WC in VMPs 001-C, SSD-2-C, SSD-3-C, SSD-4-C, and SSD-24-C. In the mid-basement area, vacuum influence ranged from 0.00 to 3.69 inches WC in VMPs 159-C, 135-C, 113-C, 156-C, 151-C, 149-C, 127-C, 152-C, 060-C, 155-C, 133-C, 154-C, 158-C, and 153-C). Negative vacuum readings (pressure) were measured during some of the monitoring events at SSD-2-C, SSD-24-C, SSD-3-C, 149-C, and 158-C, indicating higher pressure in the sub-slab than in the indoor air. Figures 8 and 9 show induced vacuum in Building C over time.

Induced vacuum measurements indicate that the systems are performing as designed, except near SSD-136-A in the eastern area of Building A and near SSD-29-C and SSD-34-C in the northern end of the Building C mid-basement area. The sub-slab vapor extraction laterals in the

Building A lay-up room induce a vacuum influence over an approximately 3,800-square foot area, and consistently encompass five of six VMPs that had elevated volatile organic compound (VOC) concentrations before system start-up. The extraction laterals in the Building A basement induce a vacuum influence over an approximately 2,000-square foot area, and consistently encompass two of four VMPs that measure the system's induced vacuum in the basement (Figure 10). The vertical extraction points in the eastern area of Building A induce a vacuum influence over an approximately 6,100-square foot area, and consistently encompass nine of 14 VMPs (Figure 11).

In Building C, the sub-slab vapor extraction points in the southern-basement area induce a vacuum influence over an approximately 4,000-square foot area, with five of seven VMPs showing consistent influence (Figure 12). Extraction points in the mid-basement area induce a vacuum influence over an approximately 32,000-square foot area, with 14 of 21 VMPs showing consistent influence (Figure 13). Vacuum influence at the northern end of the mid-basement area has not been apparent during monitoring; possible reasons include high groundwater levels, subsurface preferential pathways, short-circuiting, and/or blockages. However, VOC concentrations at VMP 126-C have decreased by approximately 85 percent (%) since the system was expanded in May 2013.

2.1.3 Adjustments to Extraction Points

Sub-slab soil vapor extraction points were adjusted during the reporting period as follows:

- April 4, 2016: The horizontal sub-slab soil vapor extraction laterals in the Building A lay-up room and basement were adjusted to accommodate the larger blower skid associated with the second-phase expansion completed in May 2016 (Tetra Tech, 2016b).
- April 7, 2016: In Building C, extraction points SSD-30-C and SSD-26-C were each adjusted from 100% open to 25% open to more effectively balance the system.
- April 13-14, 2016: The new vertical extraction points on the eastern area of Building A were opened and adjusted to pull approximately 260 SCFM.
- April 19, 2016: To more effectively balance the expanded Building A system, flow from new extraction point SSD-37-A was reduced.
- May 12, 2016: To more effectively balance the expanded Building A system, flow from new extraction point SSD-36-A was increased.

2.2 VAPOR SAMPLING

Grab vapor samples were collected monthly at Building A and every other month at Building C during the reporting period. Samples were collected from each SSD system at the influent, mid-GAC, and effluent positions of the treatment drums. Samples were collected from the Building A SSD system on April 7, April 27 (per startup of the expanded system), May 12, June 2, July 14, August 4, and September 7, 2016. Samples were collected from the Building C SSD system on May 12, July 14, and September 7, 2016. Samples were collected directly from each sampling port using the following steps:

- A moisture filter was connected to the sampling port on one end, and a piece of Teflon® tubing was attached to the other end.
- A clean, one-liter Summa® canister under vacuum was connected to the tubing, and the canister valve was opened until the canister gauge reached zero or stopped falling (approximately one minute).

Samples were labeled A-INFLUENT, A-MID-GAC, A-EFFLUENT, C-INFLUENT, C-MID-GAC, and C-EFFLUENT and shipped to TestAmerica Laboratories, Inc. (TestAmerica) in Knoxville, Tennessee. TestAmerica is accredited through the National Environmental Laboratory Accreditation Program and United States Department of Defense Environmental Laboratory Accreditation Program for VOC analysis by United States Environmental Protection Agency Toxic Organic Method 15 (TO-15).

Laboratory results are summarized in Tables 1 through 6; analytical reports are in Appendix B. During this reporting period, total influent VOC concentrations in Building A ranged from 1,388 micrograms per cubic meter (µg/m^3) (September 2016) to 3,120 µg/m^3 (April 2016), while VOC influent concentrations in Building C ranged from 124 µg/m^3 (September 2016) to 195 µg/m^3 (July 2016). Average influent VOC concentrations in Building A were approximately 14% lower than those observed during the previous reporting period (October 1, 2015 through March 31, 2016), while average influent concentrations for the Building C system were approximately 71% lower.

2.3 QUARTERLY SYSTEM CHECKS

Quarterly system checks were completed on June 24 and September 8, 2016. Quarterly system checks included the following tasks:

1. Inspected the condition of the:
    a. system components
    b. system piping
    c. pre-blower air filter and intake (ambient) air filter; replacing filter(s) as necessary
    d. GAC and PPZ drums
    e. GAC and PPZ drum sample ports
    f. VMP well lids, bolts, and sample tubing
2. Checked that the Building A system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
    a. high temperature – post-blower
    b. high temperature – post-heat exchanger
    c. high-water level – moisture separator
    d. high pressure
    e. low vacuum
3. Checked that the Building C system shuts down, the control panel alarm lights illuminate, and the auto-dialer activates upon alarms for:
    a. high temperature – post-blower
    b. high temperature – post-heat exchanger
    c. high-water level – MS-1
    d. high-water level – MS-2
    e. high pressure
    f. low vacuum
4. Checked vacuum relief valves for proper operation
5. Recorded amperage draw on blowers
6. Checked that auto-dialers activate when power is turned off
7. Checked auto-dialer batteries and replaced, as necessary
8. Confirmed that a fire extinguisher is next to each system
9. Vacuumed the underside of the heat exchanger
10. Cleaned the systems and areas around the systems

No issues were identified for Building A or Building C during the quarterly system checks. Both systems are running within the normal operating parameters. Quarterly system checks forms are in Appendix A.

2.4 NON-ROUTINE SYSTEM MAINTENANCE

The following non-routine system maintenance was completed during the reporting period:

- April 12, 2016: As mentioned previously, a small hole in the concrete of the North extraction lateral was sealed with epoxy. Cracks observed in the concrete at extraction points SSD-37-A and SSD-38-A in the eastern area of the Building were also sealed with epoxy to prevent potential system short-circuiting.

- June 2 and June 11, 2016: The underside of the Building A heat exchanger was vacuumed to remove a build-up of dirt/dust, which was triggering the post-heat exchanger high temperature alarm.

- June 24, 2016: An approximately one-foot by one-foot wooden box was constructed and placed underneath the Building A heat exchanger to prevent excessive build-up of dirt/dust.

- July 14 and July 19, 2016: The Building A post-heat exchanger high temperature switch was adjusted after it triggered a high temperature alarm.

- July 20, 2016: The Building A system auto-dialer batteries were replaced after it was discovered that the auto-dialer could not be reached via telephone. The time stamps at both the Building A and Building C systems were corrected.

- July 25, 2016: As indicated previously, the vapor monitoring pin at VMP 162-A was reinstalled after it had come loose and initially could not be reinstalled properly.

- September 7, 2016: The front side of the secondary containment pad outside Building C was reattached after it had come loose and fallen over. This pad is adjacent to the Building C SSD system exhaust stack and is the designated storage area for drums holding spent indoor air filters and condensate drained from the moisture separators and sumps prior to proper off-site disposal.

2.5 GAC AND PPZ CHANGE-OUTS

GAC change-outs were conducted for Building A on April 21, June 2, and September 19, 2016, and on September 29, 2016 for Building C. Change-outs were conducted by removing the lead GAC drum (the spent drum) from the system, moving the lag GAC drum into the lead GAC position, and adding a new GAC drum to the lag GAC position. The Building C PPZ drum was

not changed out during the reporting period. The spent GAC will be returned to the vendor for regeneration.

2.6 SYSTEM SHUTDOWNS

2.6.1 Operator-Controlled Shutdowns

Both systems were briefly turned off during each biweekly system check to: (1) confirm that flow, pressure, and vacuum gauges fall to zero (thereby indicating proper operation), and (2) check and drain (as necessary) condensate accumulation in the moisture separators and sumps. Both systems were also briefly turned off during the quarterly system checks to test proper operation of the fail-safe alarms. In addition, the Building A and Building C SSD systems were shut down on the following days:

- April 12-13, 2016: The Building A system was shut down to fill a hole in the concrete of the North lateral in the layup room, with epoxy. Cracks in the concrete at extraction points SSD-37-A and SSD-38-A in the eastern area of the building were also filled with epoxy to prevent potential system short-circuiting. The system was left off overnight to allow the epoxy to dry. The system was shutdown for approximately 24.7 hours.

- May 11-12, 2016: The Building A system was shutdown for approximately 26.2 hours for a sub-slab sampling event in the basement.

- August 15-16, 2016: The Building C system was shutdown for approximately 31.9 hours for the semi-annual sub-slab vapor sampling event.

- August 16 -17, 2016: The Building A system was shutdown for approximately 32.4 hours for the semi-annual sub-slab vapor sampling event.

2.6.2 Alarms and Other Shutdowns

The following alarms and other shutdowns occurred during the reporting period:

- April 14, 2016: A power loss at the facility caused both the Building A and Building C systems to shutdown. The Building A system self-started[3] once power returned; it is estimated that the system was down for approximately two hours. The Building C

[3] The Building A SSD system only self-restarts after power outages.

system, which does not self-start, was restarted on April 15, 2016 after approximately 12.5 hours.

- May 28, 2016: A post-heat exchanger high temperature alarm caused the Building A system to shutdown for approximately 64.3 hours. Several unsuccessful restarts of the system were attempted on May 29, 2016. On May 31, 2016, the system was restarted successfully without incident. No signs of damage or necessary maintenance were observed.

- June 1, 2016: A post-heat exchanger high temperature alarm caused the Building A system to shutdown for approximately 19.2 hours. An excessive build-up of dirt/dust was observed on the underside of the heat exchanger. The dirt/dust was removed using a shop vacuum and the system was restarted on June 2, 2016.

- June 11, 2016: A post-heat exchanger high temperature alarm caused the Building A system to shutdown for approximately 6.0 hours. Dirt/dust was removed from the underside of the heat exchanger using a shop vacuum and the system was restarted.

- July 14, 2016: A post-heat exchanger high temperature alarm caused the Building A system to shutdown for approximately 1.9 hours. The underside of the heat exchanger was free of dirt/dust, as it had been vacuumed earlier in the day as part of the bi-weekly system checks. The temperature switch setting was observed to be set at 115 degrees Fahrenheit (°F) instead of the desired 140°F. The temperature switch was adjusted to approximately 140°F and the system was successfully restarted.

- July 16, 2016: A power loss at the facility caused both the Building A Building C systems to shutdown. Both systems were restarted on July 17, 2016 after 16.1 and 16.3 hours, respectively.

- July 18, 2016: A post-heat exchanger high temperature alarm alarm caused the Building A system to shutdown for approximately 16.6 hours. The underside of the heat exchanger was free of dirt/dust. The temperature switch was readjusted to 140°F and the system was successfully restarted on July 19, 2016.

- July 25, 2016: A power loss at Building C caused the Building C system to shutdown. The system was restarted after approximately 2.9 hours.

2.6.3 System Uptime

During this reporting period, the Building A and Building C SSD systems were operational for approximately 4,159 hours (95%) and 4,304 hours (99%), respectively. Downtime does not include the brief shutdown periods for biweekly and quarterly system checks.

2.7 REMEDIATION SUMMARY

2.7.1 Building A System

Continuous operation of the SSD system in the Building A lay-up room (former plating shop) began on March 31, 2008; the SSD system was expanded on October 22, 2010 to include the basement and on April 13, 2016 to include select areas on the eastern side of the building. The Building A extraction points are open to allow a combined airflow rate of approximately 260 standard cubic feet per minute (SCFM). Each extraction point operates at an airflow rate of 7–85 SCFM; the system vacuum and flows are adjusted to maintain a vacuum of 0.01 inches water column (WC) or greater at each vapor monitoring point within areas where elevated concentrations of volatile organic compounds (VOCs) are in sub-slab soil.

Since system startup on March 31, 2008, total influent VOC concentrations have decreased more than 98%, from 94,310 µg/m^3 to 1,388 µg/m^3. The addition of the basement extraction laterals in October 2010 did not appear to change influent concentrations. The system expansion in April 2016 including a higher-flow blower and five new vertical extraction points resulted in an increase in Building A influent system concentration for approximately one month. The two main chemicals of concern in Building A are 1,1,1-trichloroethane and trichloroethene (see Table 1). VOCs trends for the Building A system are shown in Tables 1 through 3 and on Figure 14.

VOC mass removal rates (based on influent concentrations) in Building A ranged from 0.032 to 0.081 pounds per day (lbs/day) during this reporting period. The total VOC mass removed was approximately 8.3 pounds; total VOC removal since system startup in March 2008 is approximately 141 pounds. VOC mass removal rates are lower than the levels (20 lbs/day VOCs) that require Maryland Department of Environment (MDE) permitting.

2.7.2 Building C System

Continuous operation of the SSD system in the southern-basement area of Building C began on March 31, 2008; the system was expanded to the mid-basement area in May 2013. Extraction points were installed at locations that maximized vacuum influence (based on startup tests). The total flow rate of the Building C system is approximately 180 SCFM. Extraction well SSD-23-C in the southern-basement area was shut off after the expansion to promote higher flow rates from

the new wells installed in the mid-basement area. Vacuum influence in the southern-basement area is maintained by the operation of well SSD-21-C only. Vacuum influence and flow rates in the mid-basement area have increased and stabilized since system expansion. On November 7, 2013, mid-basement wells SSD-27-C and SSD-32-C were reduced to promote higher flow rates from other extraction wells in the mid-basement area. In April 2016, flows at mid-basement extraction points SSD-26-C and SSD-30-C were also reduced to promote high flows from other extraction points. These efforts have been done in an attempt to improve vacuum influence and VOC mass removal in the northern extraction points.

From system startup on March 31, 2008 to April 8, 2013, and before the system expansion, total influent VOCs had decreased by 99%, from 31,170 µg/m^3 to 117 µg/m^3. VOC concentrations increased to 3,100 µg/m^3 after the system was expanded, but have since decreased to 124 µg/m^3 (a 96% decrease). Trichloroethene is the primary chemical of concern in Building C (see Table 4). VOCs trends for the Building C system are shown in Tables 4 through 6 and on Figure 15.

Mass removal rates for VOCs in Building C during this reporting period ranged from 0.002-0.003 pounds per day, for a total mass of approximately 0.45 pounds. Total VOC removal since system startup in March 2008 is 11 pounds. Building C VOC removal rates are lower than levels requiring MDE permitting (20 lbs/day VOCs, 20 pounds per year vinyl chloride).

2.7.3 Indoor Air Filters in Building A

Three IQAir® GC™ Series-GC indoor air filters operate in the basement of Building A near VMPs 093-A, 093-A-X, and 138-A (south of the SSD system extraction trenches). While in operation, the filters were inspected every two weeks. The high-efficiency particulate air (HEPA) pre-filters, GAC cartridges, and post-filter sleeves were replaced on June 16 and September 8, 2016. The spent filter elements were placed in a dedicated 55–gallon drum in the designated drum storage area adjacent to the Building C SSD system exhaust stack. This waste drum was inspected during the biweekly system checks to ensure it was properly labeled and in good condition. Results from GAC cartridge and post-filter sleeve sampling in June 2015 and HEPA pre-filter sampling in November 2015 indicate that all spent filters can be disposed of as non-hazardous waste.

Section 3
Conclusions and Recommendations

3.1 SYSTEM PERFORMANCE

Induced vacuum measurements indicate that the sub-slab depressurization systems are performing as designed, except near SSD-136-A in the eastern area of Building A and near SSD-29-C and SSD-34-C in the northern end of the Building C mid-basement area. Soil vapor extraction points in the Building A lay-up room induce a vacuum influence over an approximately 3,800-square foot area, and consistently encompass all five vapor monitoring points that had elevated volatile organic compound concentrations before system startup. The soil vapor extraction points in the Building A basement induce a vacuum influence over an approximately 2,000-square foot area that encompasses two of four vapor monitoring points installed to measure the system-induced vacuum in the basement (Figure 10). The soil vapor extraction points in the eastern area of Building A induce a vacuum influence over an approximately 6,100-square foot area, and consistently encompass nine of 14 VMPs used to measure the system-induced vacuum in that area (Figure 11). The soil vapor extraction points in the southern-basement area of Building C induce a vacuum influence over an approximately 4,000-square foot area, with five of seven vapor monitoring points showing influence (Figure 12). The soil vapor extraction points in the mid-basement area of Building C induce a vacuum influence over an estimated 32,000-square foot area, with 14 of 21 vapor monitoring points showing influence (Figure 13).

The sub-slab depressurization systems have removed volatile organic compound mass, and have treated emissions with granular activated-carbon (both buildings) and potassium permanganate-impregnated zeolite (Building C only). A summary of the granular activated-carbon drums used during the lifespan of each system follows:

	Number of granular-activated carbon drums used	
	200-pound drums	400-pound drums
Building A	23	10
Building C	17	4

The 600-pound potassium permanganate-impregnated zeolite drum in Building C has not been changed out since its installation in April 2013. The drum counts listed above do not include the two granular activated-carbon drums currently attached to each system, or the potassium permanganate-impregnated zeolite drum currently attached to the Building C system.

The Building A system has used approximately 61 pounds of granular activated-carbon per pound of volatiles removed, while the Building C system has used approximately 454 pounds of granular activated-carbon per pound of volatiles removed. Note that the removal efficiency of granular activated-carbon is reduced as vapor concentrations decrease. Although influent concentrations of volatile organic compound for both systems have decreased significantly since startup (March 31, 2008), concentration fluctuations have occurred over time (see Figures 14 and 15).

3.2 CONTINUED MONITORING

The Building A and Building C systems will continue to operate during the next semi-annual reporting period (October 1, 2016 through March 31, 2017) so that the vapor migration barrier in both buildings is maintained. Operation, maintenance, and monitoring activities conducted during the next reporting period will include biweekly system checks, quarterly system checks, system maintenance, monthly vapor sampling in Building A, and bimonthly (every other month) vapor sampling in Building C. Granular activated-carbon change-outs will occur when the concentration of the sample collected at the mid-point drum reaches 50 percent of the influent concentration, or as determined based on change-out history and laboratory result trends. Change-out of the potassium permanganate-impregnated zeolite drum is not expected during the next reporting period. The next remedial action progress report will be issued in April 2017.

3.3 FUTURE PLANS

We will continue to examine Building C system influence and sub-slab concentrations to target higher volatile organic compound levels while maintaining vacuum influence. Sampling in

August 2016 indicates significant volatile organic compound concentration reductions at vapor monitoring points in Building A near the new extraction points. We will continue to analyze vacuum influence and concentrations to optimize system operation.

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Section 4
References

1. Tetra Tech, Inc. (Tetra Tech), 2014. *Operation and Maintenance Manual: Sub-Slab Depressurization System—Building C, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. August

2. Tetra Tech, Inc. (Tetra Tech), 2016a. *Operation, Maintenance, and Monitoring Manual, Sub-Slab-Depressurization System Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. June.

3. Tetra Tech, Inc. (Tetra Tech), 2016b. *Construction Report Sub-Slab Depressurization-System Second-Phase Expansion—Building A, Lockheed Martin Middle River Complex, 2323 Eastern Boulevard, Middle River, Maryland*. May.

TABLES

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/2008	NA	ND	ND	N/A	ND	8,300	ND	2,100	ND	7,900	300	ND	ND	ND	330	ND	30,000	44,000	ND	ND	ND	ND	ND	N/A	1,100	280	94,310	1.190	3.570
4/2/2008	140	ND	ND	N/A	ND	3,800	ND	660	ND	4,500	ND	ND	ND	ND	ND	ND	16,000	34,000	ND	ND	ND	ND	ND	N/A	ND	ND	58,960	0.740	1.480
4/4/2008	140	ND	ND	N/A	ND	2,300	ND	460	ND	3,300	ND	ND	ND	ND	ND	ND	13,000	30,000	ND	ND	ND	ND	ND	N/A	ND	ND	49,060	0.620	4.340
4/11/2008	140	ND	ND	N/A	ND	1,100	ND	280	ND	1,500	ND	ND	ND	ND	120	ND	9,100	14,000	ND	ND	ND	ND	ND	N/A	ND	ND	26,100	0.330	1.980
4/17/2008	112	ND	ND	N/A	ND	2,000	ND	480	ND	2,200	ND	ND	ND	ND	120	ND	11,000	18,000	ND	ND	ND	ND	ND	N/A	110	ND	33,910	0.340	2.380
4/24/2008	84	ND	ND	N/A	ND	930	ND	260	ND	1,200	ND	ND	ND	ND	86	ND	6,500	8,600	ND	ND	ND	ND	ND	N/A	ND	ND	17,576	0.130	3.510
5/21/2008	84	ND	ND	N/A	ND	1,000	ND	320	ND	950	ND	ND	ND	ND	ND	ND	6,000	5,500	ND	ND	ND	ND	ND	N/A	ND	ND	13,770	0.100	3.100
6/19/2008	70	180	ND	N/A	ND	720	ND	180	ND	760	ND	ND	ND	ND	ND	ND	4,800	7,100	ND	ND	ND	ND	ND	N/A	ND	ND	13,740	0.090	2.700
7/18/2008	84	ND	ND	N/A	ND	350	ND	110	ND	430	ND	ND	ND	ND	ND	ND	3,200	3,700	ND	ND	ND	ND	ND	N/A	ND	ND	7,790	0.060	1.860
8/12/2008	56	ND	ND	N/A	ND	470	ND	150	ND	400	ND	ND	ND	ND	28	ND	2,900	3,400	ND	ND	ND	ND	ND	N/A	ND	ND	7,348	0.040	1.240
9/11/2008	80	ND	ND	N/A	ND	380	ND	130	ND	430	ND	17	ND	70	52	ND	1,900	2,700	32	ND	ND	ND	ND	N/A	ND	ND	5,711	0.040	2.440
11/18/2008	84	ND	ND	N/A	ND	1,300	ND	300	ND	1,100	ND	ND	ND	ND	72	ND	6,500	7,200	ND	ND	ND	ND	ND	N/A	ND	ND	16,472	0.105	3.142
12/18/2008	84	ND	ND	N/A	ND	420	ND	120	ND	380	ND	ND	ND	ND	ND	ND	2,300	4,100	ND	ND	ND	ND	ND	N/A	53	ND	7,373	0.056	1.724
1/22/2009	84	ND	ND	N/A	ND	380	ND	110	ND	380	ND	ND	ND	ND	ND	ND	2,100	2,100	ND	ND	ND	ND	ND	N/A	ND	ND	5,070	0.038	1.185
2/20/2009	84	ND	ND	N/A	ND	270	ND	78	ND	260	ND	ND	ND	ND	24	ND	1,600	1,600	ND	ND	ND	ND	ND	N/A	ND	ND	3,832	0.029	0.809
3/18/2009	28	ND	ND	N/A	ND	620	ND	470	ND	150	ND	ND	ND	ND	ND	ND	3,800	3,700	ND	ND	ND	ND	ND	N/A	ND	ND	8,740	0.063	1.946
4/17/2009	56	ND	ND	N/A	ND	360	ND	100	ND	220	ND	ND	ND	ND	ND	ND	1,900	2,400	ND	ND	ND	ND	ND	N/A	ND	ND	4,980	0.056	1.677
5/20/2009	NA	ND	ND	N/A	ND	200	ND	62	ND	140	ND	ND	ND	ND	32	ND	1,700	1,500	ND	ND	ND	ND	ND	N/A	ND	ND	3,634	0.041	1.264
6/23/2009	134	ND	ND	N/A	ND	280	ND	77	ND	200	ND	ND	ND	ND	19	ND	1,700	1,800	ND	ND	ND	ND	ND	N/A	ND	ND	4,076	0.049	1.471
7/23/2009	129	ND	ND	N/A	ND	250	ND	68	ND	180	ND	27	ND	ND	13	ND	1,400	1,700	14	ND	ND	ND	ND	N/A	ND	ND	3,652	0.044	1.352
8/28/2009	NA	ND	ND	N/A	ND	280	ND	79	ND	200	ND	ND	ND	ND	42	ND	1,900	1,900	ND	ND	ND	ND	ND	N/A	ND	ND	4,401	0.051	1.568
9/28/2009	125	ND	ND	N/A	ND	150	ND	40	ND	110	ND	ND	ND	ND	13	ND	870	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	2,183	0.025	0.735
10/27/2009	NA	ND	ND	N/A	ND	230	ND	64	ND	210	ND	ND	ND	ND	20	ND	1,500	1,400	ND	ND	ND	ND	ND	N/A	9.7	ND	3,434	0.026	0.803
11/24/2009	130	ND	ND	N/A	ND	180	ND	43	ND	180	ND	ND	ND	ND	14	ND	1,200	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,717	0.032	0.960
12/23/2009	132	ND	ND	N/A	ND	190	ND	48	ND	180	ND	ND	ND	ND	39	ND	1,100	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	2,857	0.035	1.074
1/19/2010	130	ND	ND	N/A	ND	240	ND	67	ND	180	ND	ND	ND	ND	16	ND	1,500	1,600	ND	ND	ND	ND	ND	N/A	ND	ND	3,603	0.042	1.304
2/17/2010	130	ND	ND	N/A	ND	140	ND	35	ND	120	ND	ND	ND	ND	24	ND	760	930	ND	ND	ND	ND	ND	N/A	ND	ND	2,009	0.023	0.657
3/17/2010	120	ND	ND	N/A	ND	250	ND	62	ND	190	ND	ND	ND	ND	21	ND	1,500	1,900	ND	ND	ND	ND	ND	N/A	ND	ND	3,923	0.042	1.302
4/16/2010	120	ND	ND	N/A	ND	160	ND	41	ND	160	ND	ND	ND	ND	ND	ND	1,100	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	2,461	0.027	0.796
5/13/2010	119	ND	ND	N/A	ND	170	ND	42	ND	170	19	ND	ND	ND	95	ND	960	1,100	ND	ND	18	ND	ND	N/A	75	23	2,672	0.029	0.886
6/18/2010	110	ND	ND	N/A	ND	96	ND	24	ND	110	12	ND	ND	ND	15	ND	630	600	12	ND	130	28	ND	N/A	50	26	1,733	0.017	0.514
7/19/2010	110	ND	ND	N/A	ND	220	ND	52	ND	180	ND	ND	ND	ND	ND	ND	1,500	1,500	ND	ND	24	ND	ND	N/A	ND	ND	3,476	0.034	1.066
8/19/2010	110	ND	ND	N/A	ND	200	ND	45	ND	170	ND	ND	ND	ND	12	ND	1,200	1,100	16	ND	ND	ND	ND	N/A	ND	ND	2,743	0.027	0.841
9/17/2010	108	ND	ND	N/A	ND	140	ND	35	ND	150	ND	ND	ND	ND	29	ND	860	1,100	20	ND	ND	ND	ND	N/A	ND	ND	2,334	0.023	0.680
10/12/2010	100	ND	ND	N/A	ND	170	ND	40	ND	140	ND	ND	ND	ND	940	ND	1,100	1,400	20	ND	ND	ND	ND	N/A	89	33	3,932	0.035	1.060
11/2/2010	138	ND	ND	N/A	ND	150	ND	34	ND	100	ND	ND	ND	ND	71	ND	920	1,200	53	ND	ND	ND	ND	N/A	14	ND	2,542	0.032	0.946
12/1/2010	138	ND	ND	N/A	ND	120	ND	28	ND	110	42	ND	ND	ND	54	ND	790	970	13	ND	ND	ND	ND	N/A	170	31	2,328	0.029	0.866
1/5/2011	133	ND	ND	N/A	ND	150	ND	34	ND	130	14	ND	ND	ND	13	ND	860	1,200	ND	ND	ND	ND	ND	N/A	47	10	2,458	0.029	0.882
2/7/2011	130	ND	ND	N/A	ND	130	ND	32	ND	160	ND	ND	ND	ND	23	ND	910	900	ND	ND	ND	ND	ND	N/A	29	ND	2,184	0.026	0.766
3/3/2011	130	ND	ND	N/A	ND	390	ND	98	ND	350	19	ND	ND	ND	23	ND	2,800	2,500	ND	ND	ND	ND	ND	N/A	61	ND	6,241	0.073	2.188
4/14/2011	125	ND	ND	N/A	ND	150	ND	36	ND	160	ND	30	ND	ND	10	ND	900	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,386	0.027	0.804
5/6/2011	130	ND	ND	N/A	ND	150	ND	39	ND	150	ND	ND	ND	ND	ND	ND	880	890	ND	ND	ND	ND	ND	N/A	ND	ND	2,109	0.025	0.764
6/9/2011	150	ND	ND	N/A	ND	240	ND	59	ND	190	ND	ND	ND	ND	35	ND	1,600	1,600	20	ND	ND	ND	ND	N/A	ND	ND	3,744	0.050	1.515
7/11/2011	128	ND	ND	N/A	ND	200	ND	51	ND	170	ND	40	ND	ND	81	ND	1,300	1,300	ND	ND	ND	ND	ND	N/A	26	ND	3,168	0.036	1.094
8/3/2011	160	ND	ND	N/A	ND	200	ND	44	ND	160	ND	ND	ND	ND	29	ND	1,200	1,400	ND	ND	ND	ND	ND	N/A	ND	ND	3,033	0.044	1.309
9/15/2011	160	12	ND	N/A	ND	130	ND	29	ND	130	ND	ND	ND	ND	11	ND	750	990	12	ND	ND	ND	ND	N/A	ND	ND	2,064	0.030	0.891
10/18/2011	160	8.3	ND	N/A	ND	120	ND	28	ND	93	ND	ND	ND	ND	51	ND	640	780	ND	ND	ND	ND	ND	N/A	ND	ND	1,720	0.025	0.767
11/8/2011	165	10	ND	N/A	ND	140	ND	34	ND	110	ND	ND	ND	ND	9.2	ND	730	930	ND	ND	ND	ND	ND	N/A	ND	ND	1,963	0.029	0.874
12/6/2011	160	7.3	ND	N/A	ND	130	ND	29	ND	110	ND	ND	ND	ND	46	ND	600	800	ND	ND	ND	ND	ND	N/A	ND	ND	1,722	0.025	0.768
1/3/2012	165	ND	ND	N/A	ND	130	ND	30	ND	140	ND	ND	ND	ND	16	ND	590	840	ND	ND	ND	ND	ND	N/A	ND	ND	1,746	0.026	0.803
2/16/2012	160	ND	ND	N/A	ND	140	ND	31	ND	110	ND	ND	ND	ND	ND	ND	760	980	ND	ND	ND	ND	ND	N/A	ND	ND	2,021	0.029	0.843
3/15/2012	160	ND	ND	N/A	ND	160	ND	36	ND	130	ND	ND	ND	ND	14	ND	880	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,320	0.033	1.034
4/16/2012	158	ND	ND	N/A	ND	170	ND	34	ND	140	ND	ND	ND	ND	ND	ND	880	1,300	ND	ND	ND	ND	ND	N/A	20	ND	2,544	0.036	1.084
5/9/2012	159	ND	ND	N/A	ND	290	ND	56	ND	200	ND	ND	ND	ND	32	ND	1,700	2,300	ND	ND	ND	ND	ND	N/A	ND	ND	4,578	0.065	2.029
6/4/2012	159	ND	ND	N/A	ND	320	ND	66	ND	200	ND	ND	ND	ND	ND	ND	1,700	2,100	ND	ND	ND	ND	ND	N/A	ND	ND	4,386	0.063	1.881
7/5/2012	162	ND	ND	N/A	ND	250	ND	50	ND	180	ND	ND	ND	ND	16	ND	1,300	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	3,096	0.045	1.398

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
8/15/2012	164	ND	ND	N/A	ND	150	ND	30	ND	130	ND	ND	ND	ND	22	ND	730	1,000	17	ND	ND	ND	ND	N/A	ND	ND	2,079	0.031	0.950
9/12/2012	165	ND	ND	N/A	ND	110	ND	23	ND	120	ND	ND	ND	ND	170	ND	560	720	ND	ND	ND	ND	ND	N/A	11	ND	1,714	0.025	0.763
10/18/2012	160	ND	ND	N/A	ND	190	ND	36	ND	180	ND	ND	ND	ND	ND	ND	1,000	1,400	ND	ND	ND	ND	ND	N/A	ND	ND	2,806	0.040	1.251
11/13/2012	161	ND	ND	N/A	ND	120	ND	23	ND	140	ND	ND	ND	ND	ND	ND	600	910	ND	ND	ND	ND	ND	N/A	ND	ND	1,793	0.026	0.779
12/6/2012	160	ND	ND	N/A	ND	130	ND	21	ND	120	ND	ND	ND	ND	8	ND	590	1,000	ND	ND	ND	ND	ND	N/A	ND	ND	1,869	0.027	0.833
1/4/2013	160	ND	ND	N/A	ND	130	ND	24	ND	190	ND	ND	ND	ND	ND	ND	630	950	ND	ND	ND	ND	ND	N/A	ND	ND	1,924	0.028	0.858
2/6/2013	160	ND	ND	N/A	ND	130	ND	26	ND	130	ND	ND	ND	ND	ND	ND	560	860	ND	ND	ND	ND	ND	N/A	ND	ND	1,706	0.025	0.687
3/7/2013	160	ND	ND	N/A	ND	140	ND	30	ND	94	ND	ND	ND	ND	10	ND	670	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,044	0.029	0.911
4/8/2013	150	ND	ND	N/A	ND	2,200	ND	290	ND	1,500	ND	ND	ND	ND	ND	ND	2,900	5,900	ND	ND	ND	ND	ND	N/A	ND	ND	12,790	0.172	5.174
5/10/2013	150	ND	ND	N/A	ND	140	11	29	ND	130	ND	ND	ND	ND	14	ND	730	1,200	17	ND	ND	ND	ND	N/A	ND	ND	2,271	0.031	0.949
6/5/2013	155	ND	ND	N/A	ND	100	ND	22	ND	110	ND	ND	ND	ND	ND	ND	530	790	ND	ND	ND	ND	ND	N/A	ND	ND	1,552	0.022	0.649
7/3/2013	159	ND	ND	N/A	ND	160	ND	33	ND	100	ND	ND	ND	ND	ND	ND	820	1,100	ND	ND	ND	ND	ND	N/A	ND	ND	2,213	0.032	0.981
8/14/2013	160	ND	ND	N/A	ND	180	ND	34	ND	120	ND	ND	ND	ND	15	ND	780	1,300	ND	ND	ND	ND	ND	N/A	ND	ND	2,429	0.035	1.083
9/9/2013	160	ND	ND	N/A	ND	100	ND	16	ND	90	ND	ND	ND	ND	ND	ND	410	630	ND	ND	ND	ND	ND	N/A	ND	ND	1,246	0.018	0.538
10/10/2013	160	ND	ND	N/A	ND	220	ND	39	ND	190	ND	ND	ND	ND	15	ND	810	1,400	16	ND	ND	ND	ND	N/A	ND	ND	2,690	0.039	1.199
11/7/2013	160	ND	ND	N/A	ND	200	ND	39	ND	170	ND	ND	ND	ND	11	ND	930	1,500	41	ND	ND	ND	ND	N/A	ND	ND	2,891	0.042	1.247
12/5/2013	160	0.94	ND	ND	21.2	165	ND	30.7	ND	132	ND	4.4	ND	ND	12.2	2.5	883	1,530	N/A	ND	ND	ND	ND	N/A	ND	ND	2,782	0.040	1.240
1/13/2014	160	ND	ND	6.5	11.6	173	2.2	29.3	ND	141	1.8	3.3	4.9	ND	9,820	ND	570	795	N/A	ND	1.9	ND	ND	N/A	4.3	1.7	11,567	0.166	5.157
2/14/2014	153	ND	ND	2.4	7.4	126	ND	21.2	ND	92.7	ND	2.1	ND	ND	15.3	ND	429	843	N/A	ND	ND	ND	ND	N/A	ND	ND	1,539	0.021	0.593
3/12/2014	160	ND	ND	2.4	ND	176	2.0	29.3	36.4	130	ND	ND	ND	3.6	9.1	ND	1,310	2,100	N/A	ND	ND	ND	ND	N/A	3.0	ND	3,802	0.055	1.695
4/10/2014	160	81.7	ND	ND	ND	194	ND	31.8	ND	131	120	ND	ND	ND	75.7	ND	646	1,490	N/A	ND	ND	ND	ND	N/A	387	109	3,266	0.047	1.361
5/5/2014	150	4.8	ND	8.8	3.9	44.7	4.1	6.7	ND	32.6	6.5	202	2.3 J	1.2	29.5	ND	142	292	N/A	2.8	11.5	3.0	ND	N/A	24.3	9.3	832	0.011	0.280
6/18/2014	155	1,040	ND	30.3	136	3,710	ND	565	ND	2,840	ND	138	34.9 J	ND	199	51.7	1,000 J	1,490	N/A	ND	17.6 J	ND	ND	N/A	25.6 J	ND	11,278	0.157	6.907
7/3/2014	158	45.1	ND	ND	8.4 J	189	ND	36.5	81.2	145	ND	ND	ND	ND	20.8 J	ND	871	1,250	N/A	ND	ND	ND	ND	N/A	ND	ND	2,647	0.038	0.563
9/16/2014	150	51.1	1.1	1.0 J	54.0	416	4.7	104	ND	323	ND	0.67 J	ND	2.3	8.8	8.1	1,290	3,250	N/A	ND	2.3	0.83 J	1.5	N/A	1.5 J	1.1 J	5,522	0.074	5.578
10/9/2014	152	46.6	ND	ND	ND	89.0	ND	16.1	ND	69.8	ND	17.3 J	ND	ND	ND	ND	480	819	N/A	ND	ND	ND	ND	N/A	ND	ND	1,538	0.021	0.483
11/6/2014	135	38.2	ND	ND	ND	92.4	ND	16.8 J	ND	71.0	ND	23.9 J	ND	59.4	14.3 J	ND	459	803	N/A	ND	ND	ND	ND	N/A	ND	ND	1,578	0.019	0.536
12/4/2014	120	34.3	ND	ND	11.8	77.6	ND	18.8	ND	68.6	ND	19.4 J	ND	ND	41.5 J	ND	428	741	N/A	ND	ND	ND	ND	N/A	ND	ND	1,441	0.016	0.435
1/15/2015	50	64.8	ND	ND	6.8	85.6	4.4	15.7	ND	81.0	ND	2.0 J	ND	2.0	1.7	1.3	404	695	N/A	ND	ND	ND	ND	N/A	0.90 J	ND	1,365	0.006	0.257
2/16/2015	50	1.5	ND	3.7	ND	8.5	ND	ND	ND	6.5	1.9 J	46.9	4.1 J	ND	13.5	ND	17.0	22.4	N/A	ND	ND	ND	ND	N/A	6.5	2.7 J	135	0.001	0.019
3/10/2015	110	0.54	2.9	1.4	2.4	183	1.6	28.3	ND	141	1.1 J	1.4 J	1.2 J	ND	1.7	ND	1,370	2,300	N/A	ND	ND	ND	ND	N/A	4.1	1.3 J	4,042	0.040	0.878
4/6/2015	115	0.73	0.78 J	2.1	7.1	147	2.2	22.7	ND	112	ND	3.5 J	2.7 J	0.87 J	2.7	ND	617	1,090	N/A	ND	1.3 J	ND	ND	N/A	2.7 J	0.99 J	2,016	0.021	0.562
5/8/2015	110	ND	ND	ND	ND	161	ND	23.0 J	ND	121	ND	ND	ND	ND	ND	ND	573	1,170	N/A	ND	ND	ND	ND	N/A	ND	ND	2,048	0.020	0.647
6/2/2015	125	ND	ND	ND	ND	143	ND	19.4 J	33.4	105	133	ND	ND	ND	ND	ND	536	1,110	N/A	ND	ND	ND	ND	N/A	582	142	2,804	0.031	0.787
7/1/2015	80	ND	ND	ND	ND	91	ND	14.0	ND	78	ND	ND	ND	ND	ND	ND	390	470	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,043	0.007	0.217
8/10/2015	140	12.0	ND	1.3 J	2.4 J	82	2.9 J	16.0	ND	63	ND	ND	ND	ND	12.0	1.4 J	400	590	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,183	0.015	0.595
9/11/2015	140	72	ND	2.7 J	1.8 J	130	ND	24	ND	86	ND	ND	ND	ND	ND	1.9 J	510	1,000	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,828	0.023	0.736
10/7/2015	145	78	ND	1.5 J	ND	130	ND	24	ND	91	ND	ND	ND	ND	ND	2.0 J	560	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,787	0.023	0.605
11/2/2015	145	43	ND	3.2 J	1.9 J	140	3.6 J	25	ND	110	ND	ND	ND	ND	ND	2.5 J	570	900	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,799	0.023	0.609
12/3/2015	145	34	ND	3.2 J	1.4 J	120	3.2 J	23	ND	83	ND	ND	ND	ND	ND	1.8 J	490	830	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,590	0.021	0.642
1/15/2016	140	9.2	ND	1.1 J	2.0	84	2.1	16	ND	80	ND	3.0 J	ND	ND	2.7	1.5 J	320	480 DL	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,002	0.013	0.541
2/12/2016	140	2.6	ND	1.0 J	1.0 J	100	2.4	20	0.60 J	82	ND	ND	ND	ND	ND	1.6	550 EB	840 E	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,601	0.020	0.564
3/9/2016	130	36	0.49 J	7.9	1.5 J	130	2.4	25	0.70 J	98	ND	2.8 J	ND	0.64 J	5.3	2.0	680 E	1,300 E	N/A	ND	ND	0.42 J	ND	N/A	N/A	N/A	2,293	0.027	0.696
4/7/2016	288	28	ND	ND	ND	230	ND	42	ND	180	ND	ND	ND	ND	ND	ND	940	1,700	N/A	ND	ND	ND	ND	ND	N/A	N/A	3,120	0.081	2.340
4/27/2016	250	ND	ND	ND	ND	90	ND	18	ND	68	ND	ND	ND	ND	ND	ND	490	950	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,616	0.036	0.726
5/12/2016	248	ND	ND	19	2.0 J	110	3.5 J	18	ND	120	ND	9.0	ND	ND	6.5	ND	600 B	910	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,798	0.040	0.601
6/2/2016	259	31	ND	63	ND	150	ND	26	ND	140	ND	ND	ND	ND	ND	3.6 J	670	1,100	N/A	ND	ND	ND	ND	ND	N/A	N/A	2,184	0.051	1.066
7/14/2016	252	65	ND	ND	ND	100	ND	17	ND	75	ND	36	ND	ND	15	ND	510	940	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,758	0.040	1.671
8/4/2016	260	20	ND	ND	ND	92	ND	17	ND	68	ND	ND	ND	ND	ND	ND	460	860	N/A	ND	8.2 J	ND	ND	ND	N/A	N/A	1,525	0.036	0.748
9/7/2016	260	38	ND	1.5 J	1.2 J	88	2.3 J	14	ND	66	ND	15	ND	ND	ND	1.8 J	400	760	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,388	0.032	1.102

ND - non-detect (below detection limit)

N/A - not applicable (samples not analyzed for compound)

lbs./day - pounds per day

lbs. - pounds

SSD - sub-slab depressurization

OM&M - operation, maintenance, and monitoring

VOCs - volatile organic compounds

scfm - standard cubic feet per minute

TABLE 1

Building A Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)

µg/m^3 - micrograms per cubic meter

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

E - results exceeded calibration range

B - compound was found in the blank and sample

DL - dilution analysis

EPA - Environmental Protection Agency

TO-15 - Toxic Organic Method 15

Completed first-phase system expansion (to Building A basement) on October 22, 2010.

Completed second-phase system expansion (to eastern area) on April 13, 2016.

Increase in concentrations following 19-day system shutdown due to blower failure. Blower was replaced on 4/8/13.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/2008	6.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.9	0.0000
4/24/2008	ND	ND	N/A	ND	810	ND	240	ND	2,200	ND	ND	ND	ND	ND	ND	2,100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5,350	0.0400
5/21/2008	ND	ND	N/A	ND	280	ND	100	ND	740	ND	ND	ND	ND	ND	ND	410	11	ND	ND	ND	ND	ND	N/A	ND	ND	1,541	0.0100
6/19/2008	110	ND	N/A	ND	2,300	ND	830	ND	2,200	ND	53	ND	ND	ND	ND	1,200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6,693	0.0400
7/18/2008	ND	ND	N/A	ND	60	ND	27	ND	270	ND	ND	ND	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	N/A	ND	ND	457	0.0030
8/12/2008	ND	ND	N/A	15	60	ND	130	ND	400	ND	ND	ND	ND	ND	ND	1,500	30	16	ND	ND	ND	ND	N/A	ND	ND	2,151	0.0100
9/11/2008	ND	ND	N/A	15	ND	ND	170	ND	520	ND	ND	ND	ND	ND	ND	890	53	30	ND	ND	ND	ND	N/A	ND	ND	1,678	0.0100
11/18/2008	ND	ND	N/A	ND	ND	ND	60	ND	97	ND	ND	ND	ND	ND	ND	150	180	ND	ND	ND	ND	ND	N/A	ND	ND	487	0.0031
12/18/2008	ND	ND	N/A	ND	98	ND	38	ND	330	ND	ND	ND	ND	ND	ND	51	18	ND	ND	ND	ND	ND	N/A	ND	ND	535	0.0040
1/22/2009	ND	ND	N/A	ND	42	ND	19	ND	490	ND	ND	ND	ND	ND	ND	25	12	11	ND	ND	ND	ND	N/A	ND	ND	599	0.0045
2/20/2009	ND	ND	N/A	ND	220	ND	91	ND	310	ND	ND	ND	ND	ND	ND	380	68	ND	ND	ND	ND	ND	N/A	ND	ND	1,069	0.0081
3/18/2009	ND	ND	N/A	ND	210	ND	69	ND	280	ND	ND	ND	ND	ND	ND	1,900	190	ND	ND	ND	ND	ND	N/A	ND	ND	2,649	0.0067
4/17/2009	ND	ND	N/A	ND	ND	ND	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	140	0.0016
5/20/2009	ND	ND	N/A	ND	110	ND	42	ND	140	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	492	0.0055
6/23/2009	ND	ND	N/A	ND	66	ND	130	ND	320	ND	ND	ND	ND	ND	ND	82	ND	18	ND	ND	ND	ND	N/A	ND	ND	616	0.0074
7/23/2009	ND	ND	N/A	ND	250	ND	88	ND	210	ND	ND	ND	ND	ND	ND	890	ND	12	ND	ND	ND	ND	N/A	ND	ND	1,450	0.0173
8/28/2009	ND	ND	N/A	ND	330	ND	130	ND	290	ND	ND	ND	ND	ND	ND	1,100	ND	14	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0214
9/28/2009	ND	ND	N/A	ND	130	ND	38	ND	110	ND	ND	ND	ND	ND	ND	580	ND	ND	ND	ND	ND	ND	N/A	ND	ND	858	0.0096
10/27/2009	ND	ND	N/A	ND	170	ND	94	ND	260	ND	ND	ND	ND	ND	ND	180	35	ND	ND	ND	ND	ND	N/A	ND	ND	739	0.0086
11/24/2009	ND	ND	N/A	ND	250	ND	84	ND	210	ND	ND	ND	ND	ND	ND	710	ND	ND	ND	ND	ND	ND	N/A	ND	ND	1,254	0.0150
12/23/2009	ND	ND	N/A	ND	28	ND	30	ND	180	ND	ND	ND	ND	ND	ND	19	29	ND	ND	ND	ND	ND	N/A	ND	ND	286	0.0035
1/19/2010	ND	ND	N/A	ND	190	ND	100	ND	260	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	566	0.0066
2/17/2010	ND	ND	N/A	ND	ND	ND	100	ND	110	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	ND	ND	ND	N/A	ND	ND	226	0.0026
3/17/2010	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.0000
4/16/2010	ND	ND	N/A	ND	260	ND	89	ND	200	ND	ND	ND	ND	ND	ND	600	14	ND	ND	ND	ND	ND	N/A	ND	ND	1,163	0.0125
5/13/2010	13	ND	N/A	ND	260	ND	61	ND	180	15	ND	ND	ND	67	ND	1,300	ND	13	ND	12	ND	ND	N/A	55	16	1,992	0.0213
6/18/2010	ND	ND	N/A	ND	20	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	18	ND	ND	ND	76	16	ND	N/A	25	14	188	0.0019
7/19/2010	ND	ND	N/A	ND	74	ND	24	ND	89	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	11	ND	ND	N/A	ND	ND	285	0.0028
8/19/2010	ND	ND	N/A	ND	210	ND	55	ND	210	ND	ND	ND	ND	ND	ND	720	ND	13	ND	ND	ND	ND	N/A	ND	ND	1,208	0.0120
9/17/2010	ND	ND	N/A	ND	330	ND	110	ND	310	ND	ND	ND	ND	ND	ND	430	ND	24	ND	ND	ND	ND	N/A	ND	ND	1,204	0.0119
10/12/2010	ND	ND	N/A	ND	400	ND	81	ND	170	ND	ND	ND	ND	32	ND	1,000	49	17	ND	ND	ND	ND	N/A	ND	ND	1,749	0.0173
11/2/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.0000
12/1/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	14	0.0001
1/5/2011	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	20	11	ND	ND	ND	ND	ND	N/A	ND	ND	55	0.0005
2/7/2011	ND	ND	N/A	ND	13	ND	9	ND	95	ND	ND	ND	ND	ND	ND	53	12	20	ND	ND	ND	ND	N/A	ND	ND	202	0.0020
3/3/2011	ND	ND	N/A	ND	15	ND	8	ND	120	ND	ND	ND	ND	66	ND	44	16	13	ND	ND	ND	ND	N/A	18	ND	300	0.0030
4/14/2011	ND	ND	N/A	ND	110	ND	40	ND	310	ND	25	ND	ND	ND	ND	48	ND	13	ND	ND	ND	ND	N/A	ND	ND	546	0.0054
5/6/2011	ND	ND	N/A	ND	150	ND	51	ND	240	ND	ND	ND	ND	ND	ND	70	34	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0054
6/9/2011	14	ND	N/A	23	760	ND	190	ND	340	ND	ND	ND	ND	26	ND	440	51	20	ND	ND	ND	ND	N/A	ND	ND	1,864	0.0184
7/11/2011	11	ND	N/A	ND	320	ND	92	ND	220	ND	21	ND	ND	67	ND	320	16	ND	ND	ND	ND	ND	N/A	29	10	1,106	0.0109
8/3/2011	ND	ND	N/A	ND	320	ND	60	ND	170	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	N/A	ND	ND	660	0.0065
9/15/2011	ND	ND	N/A	ND	170	ND	35	ND	140	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	545	0.0054
10/18/2011	ND	ND	N/A	ND	110	ND	27	ND	80	ND	ND	ND	ND	22	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	439	0.0043
11/8/2011	ND	ND	N/A	ND	130	ND	33	ND	110	ND	ND	ND	ND	ND	ND	330	ND	ND	ND	ND	ND	ND	N/A	ND	ND	603	0.0060
12/6/2011	ND	ND	N/A	ND	140	ND	36	ND	140	ND	ND	ND	ND	ND	ND	310	ND	ND	ND	ND	ND	ND	N/A	ND	ND	626	0.0062
1/3/2012	ND	ND	N/A	ND	71	ND	19	ND	82	ND	ND	ND	ND	ND	ND	200	ND	ND	ND	ND	ND	ND	N/A	ND	ND	372	0.0037
2/16/2012	ND	ND	N/A	ND	120	ND	26	ND	130	ND	ND	ND	ND	ND	ND	430	11	ND	ND	ND	ND	ND	N/A	ND	ND	717	0.0071
3/15/2012	ND	ND	N/A	ND	190	ND	37	ND	210	ND	ND	ND	ND	ND	ND	480	38	ND	ND	ND	ND	ND	N/A	ND	ND	955	0.0094
4/16/2012	ND	ND	N/A	ND	260	ND	48	ND	200	ND	ND	ND	ND	ND	ND	640	34	ND	ND	ND	ND	ND	N/A	ND	ND	1,182	0.0117
5/9/2012	ND	ND	N/A	ND	140	ND	26	ND	140	ND	ND	ND	ND	ND	ND	76	14	ND	ND	ND	ND	ND	N/A	ND	ND	396	0.0039

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
6/4/2012	ND	ND	N/A	ND	170	ND	35	ND	170	ND	ND	ND	ND	ND	ND	120	63	ND	ND	ND	ND	ND	N/A	ND	ND	558	0.0055
7/5/2012	ND	ND	N/A	ND	320	ND	74	ND	260	ND	19	ND	ND	ND	ND	210	26	12	ND	ND	ND	ND	N/A	ND	ND	921	0.0091
8/15/2012	ND	ND	N/A	ND	240	ND	40	ND	130	ND	ND	ND	ND	10	ND	420	20	13	ND	ND	ND	ND	N/A	ND	ND	873	0.0086
9/12/2012	ND	ND	N/A	ND	180	ND	43	ND	140	ND	ND	ND	ND	14	ND	34	13	13	ND	ND	ND	ND	N/A	ND	ND	437	0.0043
10/18/2012	ND	ND	N/A	ND	160	ND	29	ND	95	ND	ND	ND	ND	ND	ND	25	28	ND	ND	ND	ND	ND	N/A	ND	ND	337	0.0033
11/13/2012	ND	ND	N/A	ND	89	ND	16	ND	94	ND	ND	ND	ND	ND	ND	20	21	ND	ND	ND	ND	ND	N/A	ND	ND	240	0.0024
12/6/2012	ND	ND	N/A	ND	86	ND	14	ND	92	ND	ND	ND	ND	ND	ND	26	20	ND	ND	ND	ND	ND	N/A	ND	ND	238	0.0024
1/4/2013	ND	ND	N/A	ND	97	ND	21	ND	130	ND	ND	ND	ND	ND	ND	88	15	ND	ND	ND	ND	ND	N/A	ND	ND	351	0.0035
2/6/2013	ND	ND	N/A	ND	120	ND	32	ND	120	ND	ND	ND	ND	ND	ND	180	19	ND	ND	ND	ND	ND	N/A	ND	ND	471	0.0047
3/7/2013	ND	ND	N/A	ND	180	ND	46	ND	150	ND	ND	ND	ND	ND	ND	150	37	ND	ND	ND	ND	ND	N/A	ND	ND	563	0.0056
4/8/2013	ND	ND	N/A	ND	66	ND	15	ND	46	ND	ND	ND	ND	ND	ND	43	92	ND	ND	ND	ND	ND	N/A	ND	ND	262	0.0026
5/10/2013	ND	ND	N/A	ND	380	ND	73	ND	210	ND	ND	ND	ND	ND	ND	170	31	16	ND	ND	ND	ND	N/A	ND	ND	880	0.0087
6/5/2013	ND	ND	N/A	ND	210	ND	33	ND	160	ND	ND	ND	23	ND	ND	460	15	ND	ND	ND	ND	ND	N/A	ND	ND	901	0.0089
7/3/2013	21	ND	N/A	ND	330	ND	78	ND	200	ND	ND	ND	ND	ND	ND	38	42	ND	ND	ND	ND	ND	N/A	ND	ND	709	0.0070
8/14/2013	50	ND	N/A	ND	390	ND	59	ND	120	ND	20	ND	ND	7.3	ND	63	66	11	ND	ND	ND	ND	N/A	ND	ND	786	0.0078
9/9/2013	17	ND	N/A	ND	180	ND	23	ND	110	ND	ND	ND	ND	ND	ND	50	21	ND	ND	ND	ND	ND	N/A	ND	ND	401	0.0040
10/10/2013	29	ND	N/A	ND	190	ND	33	ND	120	ND	ND	ND	ND	9.9	ND	170	32	ND	ND	ND	ND	ND	N/A	ND	ND	584	0.0058
11/7/2013	38	ND	N/A	ND	260	ND	48	ND	95	ND	ND	ND	ND	ND	ND	38	39	ND	ND	ND	ND	ND	N/A	ND	ND	518	0.0051
12/5/2013	31.8	ND	ND	ND	107	2.9	18.8	ND	51.6	ND	6.0	5.9	ND	4.7	ND	34.1	43.5	N/A	ND	3.2	ND	ND	N/A	ND	ND	310	0.0031
1/13/2014	ND	ND	3.9	1.6	162	2.2	22.4	ND	113.0	1.9	2.3	4.7	42.1	64.0	ND	19.3	4.9	N/A	ND	3.7	1.7	ND	N/A	7.4	2.5	460	0.0045
2/14/2014	55.1	ND	3.1	3.1	189	2.8	31.0	ND	166	ND	ND	ND	ND	ND	2.5	64.8	54.9	N/A	ND	ND	ND	ND	N/A	ND	ND	572	0.0057
3/12/2014	24.5	ND	4.5	ND	154	2.2	24.5	ND	134	ND	28.1	ND	ND	3.4	ND	38.5	47.5	N/A	ND	ND	ND	ND	N/A	ND	ND	461	0.0046
4/10/2014	40.8	ND	ND	ND	270	ND	51.4	ND	267	66.2	ND	ND	ND	45.2	ND	65.6	74.8	N/A	ND	ND	ND	ND	N/A	215	59.5	1,156	0.0114
5/5/2014	53.4	ND	1.4	10.5	406	3.1	63.8	ND	253	ND	0.96 J	3.6 J	ND	3.0	5.7	47.8	48.9	N/A	ND	ND	ND	ND	N/A	0.94 J	ND	902	0.0089
6/5/2014	2.3	ND	9.6	ND	113	3.0	14.3	ND	165	ND	167	1.8 J	23.1	60.4	ND	63.5	24.5	N/A	ND	1.9	ND	ND	N/A	1.8 J	1.9	653	0.0065
7/3/2014	7.6 J	ND	ND	ND	286	ND	47.4	16.8	344	ND	ND	ND	ND	11.7 J	ND	178	25.4	N/A	ND	ND	ND	ND	N/A	ND	ND	917	0.0091
9/16/2014	ND	ND	1.9	3.6	294	3.0	53.9	ND	179	0.40 J	ND	ND	0.88 J	4.6	ND	76	43.6	N/A	ND	2.4	0.71 J	ND	N/A	1.2 J	ND	665	0.0066
10/9/2014	ND	ND	ND	10.4	361	ND	57.5	ND	157	ND	ND	ND	ND	4.4 J	4.7 J	130	17.9	N/A	ND	ND	ND	ND	N/A	ND	ND	743	0.0073
11/6/2014	ND	ND	ND	ND	172	ND	25.7	ND	62.2	ND	9.7 J	ND	16.7	6.1 J	3.7 J	98.6	26.2	N/A	ND	ND	ND	ND	N/A	ND	ND	421	0.0042
12/4/2014	1.0	ND	ND	7.0	111	3.0	17.3	ND	45.7	ND	3.5 J	4.0 J	5.8	3.1	2.2 J	109.0	25.2	N/A	ND	ND	ND	ND	N/A	ND	ND	338	0.0033
1/15/2015	5.9	ND	ND	ND	7.7 J	30.6	ND	ND	5.2 J	ND	ND	ND	10.4	10.9	ND	54.3	49.0	N/A	ND	8.2 J	ND	ND	N/A	6.8 J	7.5 J	197	0.0019
2/9/2015	6.5	ND	ND	1.5	18.7	ND	3.1	ND	15.9	ND	ND	ND	ND	0.70 J	ND	17.1	2.6	N/A	ND	ND	ND	ND	N/A	ND	ND	66	0.0007
3/10/2015	21.5	ND	2.8	6.9	73.5	2.3	13.1	ND	70.1	ND	ND	3.1 J	ND	2.0	0.79 J	97.3	87.9	N/A	ND	ND	ND	ND	N/A	1.8 J	ND	383	0.0038
4/6/2015	29.7	ND	3.1	14.1	173	3.0	27.5	ND	194	ND	ND	3.3 J	ND	4.6	ND	133	102	N/A	ND	1.3 J	ND	0.41 J	N/A	ND	ND	689	0.0068
5/8/2015	13.4	ND	ND	17.0	216	ND	37.5	ND	193	ND	ND	ND	ND	ND	ND	96.2	63.3	N/A	ND	ND	ND	ND	N/A	ND	ND	636	0.0063
6/2/2015	44.7	ND	3.0	15.9	238	ND	36.1	10.4	128	7.4	3.9 J	4.6	ND	2.7	3.9	179	74.1	N/A	ND	0.99 J	ND	ND	N/A	32.9	8.5	794	0.0079
7/1/2015	3.9	ND	1.5	7.7	140	ND	21.0	ND	74	ND	ND	ND	ND	3.0	2.1	260	43.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	556	0.0055
8/10/2015	3.7	ND	ND	7.3	150	2.4	28.0	ND	90	ND	ND	ND	ND	8.4	2.8	180	54.0	N/A	ND	ND	ND	ND	ND	N/A	N/A	527	0.0052
9/11/2015	2.2	ND	1.9	10	300	2.8	41	0.66 J	140	ND	5.2	ND	ND	3.3	5.1	390	120	N/A	ND	1.3 J	ND	0.48 J	1.3 J	N/A	N/A	1,025	0.0101
10/7/2015	1.5	ND	1.8	8.6	220	2.0	33	ND	98	ND	2.8 J	ND	ND	3.6	3.5	310	71	N/A	ND	ND	3.3	ND	ND	N/A	N/A	759	0.0075
11/2/2015	0.58 J	ND	3.0	8.4	210	3.3	33	ND	98	ND	2.9 J	ND	ND	ND	3.0	330	30	N/A	ND	ND	ND	0.45 J	ND	N/A	N/A	723	0.0071
12/3/2015	ND	ND	1.5	4.8	110	2.2	20	ND	65	ND	2.3 J	ND	ND	ND	1.4 J	97	4.5	N/A	ND	ND	ND	ND	ND	N/A	N/A	309	0.0031
1/15/2016	0.58 J	ND	1.9	4.1	110	2.1	25	ND	95	ND	4.0	ND	ND	3.8	1.6	180	31	N/A	ND	ND	ND	ND	ND	N/A	N/A	459	0.0045
2/12/2016	ND	ND	2.5	2.2	62	2.6	15	ND	58	ND	3.6	ND	ND	ND	1.0 J	160 B	28	N/A	ND	ND	ND	ND	ND	N/A	N/A	335	0.0033
3/9/2016	0.61 J	ND	6.5	3.0	130	2.0	25	ND	100	ND	2.5 J	ND	ND	4.0	1.9	120	3.8	N/A	ND	ND	ND	ND	ND	N/A	N/A	399	0.0039
4/7/2016	ND	ND	ND	ND	650	ND	90	ND	290	ND	ND	ND	ND	ND	ND	2,700	530	N/A	ND	ND	ND	ND	ND	N/A	N/A	4,260	0.0421
4/27/2016	14	ND	1.8	4.2	210	2.8	17	0.64 J	71	ND	ND	ND	ND	4.9	2.8	250	17	N/A	ND	ND	ND	0.50 J	ND	N/A	N/A	597	0.0059
5/12/2016	13	ND	13	4.4 J	190	ND	17	ND	130	ND	17 J	ND	ND	ND	3.8 J	690 B	20	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,098	0.0109
6/2/2016	2.6	ND	85	1.1 J	64	2.4	5.6	ND	29	ND	2.2 J	ND	ND	3.1	1.0 J	34	1.6	N/A	ND	ND	ND	0.39 J	1.8 J	N/A	N/A	234	0.0023
7/14/2016	3.5	ND	2.5	2.6	170	2.7	18	0.41 J	88	ND	47	ND	ND	5.1	2.8	170	1.7	N/A	ND	1.4 J	ND	ND	2.5 J	N/A	N/A	518	0.0051
8/4/2016	2.1	ND	1.5	2.6	160	2.3	25	0.65 J	96	ND	2.3 J	ND	ND	ND	2.6	240	14	N/A	1.7 J	7.5	1.7 J	ND	1.8 J	N/A	N/A	562	0.0056

TABLE 2

Building A Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
9/7/2016	5.8	0.58 J	1.6	2.8	160	2.8	22	1.1 J	77	ND	3.6		1.7 J	ND	2.9	480 DL	1.1	N/A	ND	1.2 J	ND	0.40 J	1.8 J	N/A	N/A	766	0.0076

ND - non-detect (below detection limit)

N/A - not applicable (samples not analyzed for compound)

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B - compound was found in the blank and sample

DL - dilution analysis

SSD - sub-slab depressurization

OM&M - operation, maintenance, and monitoring

GAC - granular activated carbon

VOCs - volatile organic compounds

scfm - standard cubic feet per minute

µg/m^3 - micrograms per cubic meter

lbs./day - pounds per day

EPA - Environmental Protection Agency

TO-15 - Toxic Organic Method 15

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/2/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/4/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	110	N/A	ND	ND	110	0.001
4/11/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/17/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/24/2008	ND	ND	N/A	ND	30	ND	13	ND	470	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	513	0.004
5/21/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.00	0.000
6/19/2008	76	ND	N/A	ND	67	ND	65	ND	2,200	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	2,408	0.015
8/1/2008	ND	ND	N/A	ND	14	ND	15	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	329	0.005
8/12/2008	ND	ND	N/A	ND	55	ND	42	ND	310	ND	19	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	426	0.005
9/11/2008	ND	ND	N/A	ND	ND	ND	ND	ND	46	ND	18	ND	ND	ND	ND	11	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	75	0.001
11/18/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	61	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	61	0.000
12/18/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/22/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/20/2009	ND	ND	N/A	ND	10	ND	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.000
3/18/2009	ND	ND	N/A	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000
4/17/2009	ND	ND	N/A	ND	64	ND	20	ND	53	ND	ND	ND	ND	ND	ND	26	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	163	0.001
5/20/2009	ND	ND	N/A	ND	9.9	ND	ND	ND	46	ND	ND	ND	ND	ND	ND	38	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	94	0.000
6/23/2009	ND	ND	N/A	ND	11.0	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	44	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	55	0.000
7/23/2009	ND	ND	N/A	ND	ND	ND	21	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	211	0.002
8/28/2009	ND	ND	N/A	ND	52	ND	29	ND	46	ND	ND	ND	ND	7.7	ND	250	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	385	0.003
9/28/2009	ND	ND	N/A	ND	27	ND	19	ND	100	ND	ND	ND	ND	ND	ND	93	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	239	0.002
10/27/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	64	0.001
11/24/2009	ND	ND	N/A	ND	ND	ND	ND	ND	53	ND	ND	ND	ND	ND	ND	21	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	74	0.001
12/23/2009	ND	ND	N/A	ND	21	ND	10	ND	11	ND	ND	ND	ND	8.8	ND	190	16	ND	N/A	ND	ND	ND	N/A	ND	ND	257	0.003
1/19/2010	ND	ND	N/A	ND	27	ND	10	ND	18	ND	ND	ND	ND	ND	ND	200	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	255	0.003
2/17/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/2010	ND	ND	N/A	ND	11	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	17	11	ND	N/A	ND	ND	ND	N/A	ND	ND	59	0.001
4/16/2010	ND	ND	N/A	ND	12	ND	9.4	ND	330	ND	ND	ND	ND	ND	ND	27	31	ND	N/A	ND	ND	ND	N/A	ND	ND	409	0.004
5/13/2010	7.2	ND	N/A	ND	250	ND	57.0	ND	160	19	ND	ND	ND	58	ND	1,100	24	12	N/A	33	ND	ND	N/A	77	24	1,821	0.019
6/18/2010	ND	ND	N/A	ND	ND	ND	ND	ND	90	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	62	13	ND	N/A	16	9.3	190	0.002
7/19/2010	ND	ND	N/A	ND	8.7	ND	ND	ND	100	ND	ND	ND	ND	ND	ND	40	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.002
8/19/2010	ND	ND	N/A	ND	90	ND	47	ND	270	ND	ND	ND	ND	ND	ND	41	ND	15	N/A	ND	ND	ND	N/A	ND	ND	463	0.005
9/17/2010	ND	ND	N/A	ND	88	ND	39	ND	260	ND	ND	ND	ND	ND	ND	120	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	507	0.01
10/12/2010	ND	ND	N/A	ND	81	ND	10	ND	58	ND	ND	ND	ND	16	ND	360	30	17	N/A	ND	ND	ND	N/A	ND	ND	572	0.01
11/2/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	14.0	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	14	0.000
1/5/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/7/2011	ND	ND	N/A	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	14	21	N/A	ND	ND	ND	N/A	ND	ND	59	0.000
3/3/2011	120	ND	N/A	ND	ND	ND	ND	ND	25	ND	ND	ND	ND	58	ND	ND	ND	19	N/A	ND	ND	ND	N/A	23	ND	245	0.002
4/14/2011	ND	ND	N/A	ND	ND	ND	ND	ND	110	ND	23	ND	ND	55	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	199	0.002
5/6/2011	ND	ND	N/A	ND	8.8	ND	ND	ND	170	ND	ND	ND	ND	ND	ND	21	19	ND	N/A	ND	ND	ND	N/A	ND	ND	219	0.002
6/9/2011	ND	ND	N/A	ND	59.0	ND	91	ND	580	ND	ND	ND	ND	30	ND	34	ND	19	N/A	ND	ND	ND	N/A	ND	ND	813	0.008
7/11/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	13	21	ND	ND	100	ND	26	ND	ND	N/A	ND	ND	ND	N/A	43	17	220	0.002
8/3/2011	ND	ND	N/A	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	11	ND	20	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	50	0.001
9/15/2011	ND	ND	N/A	ND	100	ND	41	ND	150	ND	ND	ND	ND	ND	ND	12	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	303	0.003
10/18/2011	ND	ND	N/A	ND	130	ND	35	ND	77	ND	ND	ND	ND	25	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.003

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
11/8/2011	ND	ND	N/A	ND	150	ND	39	ND	95	ND	ND	ND	ND	ND	ND	15	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	299	0.003
12/6/2011	ND	ND	N/A	ND	150	ND	37	ND	110	ND	ND	ND	ND	ND	ND	16	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	313	0.003
1/3/2012	ND	ND	N/A	ND	56	ND	15	ND	67	ND	ND	ND	ND	ND	ND	20	11	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.002
2/16/2012	ND	ND	N/A	ND	85	ND	24	ND	100	ND	ND	ND	ND	ND	ND	52	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	261	0.003
3/15/2012	ND	ND	N/A	ND	82	ND	19	ND	100	ND	ND	ND	ND	ND	ND	45	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	246	0.002
4/16/2012	ND	ND	N/A	ND	180	ND	44	ND	240	ND	ND	ND	ND	ND	ND	140	12	ND	N/A	ND	ND	ND	N/A	ND	ND	616	0.006
5/9/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/4/2012	ND	ND	N/A	ND	ND	ND	ND	ND	12	9.6	ND	ND	ND	9.1	ND	ND	18	ND	N/A	ND	ND	ND	N/A	42	12	103	0.001
7/5/2012	ND	ND	N/A	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	26	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	113	0.001
8/15/2012	ND	ND	N/A	ND	130	ND	38	ND	210	ND	ND	ND	ND	8.7	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	387	0.004
9/12/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/18/2012	ND	ND	N/A	ND	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000
11/13/2012	ND	ND	N/A	ND	ND	ND	ND	ND	48	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	48	0.001
12/6/2012	ND	ND	N/A	ND	8.8	ND	ND	ND	63	ND	ND	ND	ND	ND	ND	ND	13	ND	N/A	ND	ND	ND	N/A	ND	ND	85	0.001
1/4/2013	ND	ND	N/A	ND	33	ND	12	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	145	0.001
2/6/2013	ND	ND	N/A	ND	77	ND	28	ND	150	ND	ND	ND	ND	ND	ND	ND	11	ND	N/A	ND	ND	ND	N/A	ND	ND	266	0.003
3/7/2013	ND	ND	N/A	ND	130	ND	40	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	310	0.003
4/8/2013	ND	ND	N/A	ND	56	ND	16	ND	55	ND	ND	ND	ND	ND	ND	ND	42	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.002
5/10/2013	ND	ND	N/A	ND	180	ND	38	ND	190	ND	ND	ND	ND	ND	ND	12	16	ND	N/A	ND	ND	ND	N/A	ND	ND	436	0.004
6/5/2013	ND	ND	N/A	ND	86	ND	21	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	217	0.002
7/3/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
8/14/2013	ND	ND	N/A	ND	8.2	ND	ND	ND	52	ND	17	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	93	0.001
9/9/2013	ND	ND	N/A	ND	15	ND	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	12	N/A	ND	ND	ND	N/A	ND	ND	207	0.002
10/10/2013	ND	ND	N/A	ND	270	ND	66	ND	190	ND	ND	ND	ND	11	ND	ND	13	15	N/A	ND	ND	ND	N/A	ND	ND	565	0.006
11/7/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/5/2013	0.97	ND	856	ND	1.9	ND	3.0	ND	14.8	ND	105	ND	1.6	3.0	ND	ND	1.8	N/A	12	ND	ND	ND	N/A	ND	ND	1,000	0.010
1/13/2014	1.7	ND	12.5	ND	6.4	2.3	5.9	ND	31.3	1.9	1.8	5.7	ND	22.2	ND	ND	ND	N/A	1.4	4.0	ND	ND	N/A	5.8	2.2	105	0.001
2/14/2014	0.65	ND	1.7	ND	42.6	2.1	26	ND	111	ND	ND	ND	ND	4.0	ND	2.4	10	N/A	ND	ND	ND	ND	N/A	ND	ND	200	0.002
3/12/2014	2.0	ND	13.3	ND	ND	2.3	ND	ND	ND	3.5	35.2	ND	2.6	36.5	ND	ND	1.2	N/A	ND	3.0	ND	ND	N/A	7.7	2.9	110	0.001
4/10/2014	2.8	ND	ND	ND	82.9	ND	15.1	ND	97	49.4	48.3	ND	ND	64.9	ND	ND	62.1	N/A	ND	7.2	ND	ND	N/A	154	45.1	629	0.006
5/5/2014	0.9	ND	1.4	ND	98.7	2.8	16.8	ND	139	ND	0.88 J	3.1 J	ND	2.5	1.8	1.4 J	ND	N/A	ND	ND	ND	ND	N/A	1.4 J	ND	271	0.003
6/5/2014	2.3	ND	3.2	ND	2.9	3.4	ND	ND	ND	ND	19.6	2.6 J	21.9	3.1	ND	6.1	7.1	N/A	ND	2.0	ND	ND	N/A	1.7 J	1.9	78	0.001
7/3/2014	5.0 J	ND J	3.5 J	ND	4.1 J	ND	ND	ND	8.6	6.8 J	ND	6.8 J	ND	7.2	ND	ND	ND	N/A	ND	7.3 J	6.5 J	ND	N/A	8.8 J	7.4 J	72	0.001
9/16/2014	0.42 J	ND	ND	ND	6.5	3.3	3.5	ND	209	ND	1.4 J	4.5	0.89 J	58.2	ND	8.7	19.4	N/A	0.79 J	2.0	0.75 J	ND	N/A	1.2 J	0.86 J	321	0.003
10/9/2014	1.7	ND	4.2	ND	75.9	ND	37.2	ND	409	ND	2.5 J	7.1 J	ND	4.4	2.6 J	8.5	7.2	N/A	ND	ND	ND	ND	N/A	ND	ND	560	0.006
11/6/2014	1.3	ND	ND	ND	177	2.0	44.2	ND	151	ND	6.0	5.7	4.1	3.4	3.7	6.3	7.8	N/A	ND	ND	ND	0.5	N/A	5.3 J	3.2 J	422	0.004
12/4/2014	1.2	ND	ND	ND	147	3.4	33.9	ND	71.1	ND	2.4 J	4.0 J	5.3 J	3.0	3.3	6.0	8.2	N/A	ND	ND	ND	ND	N/A	ND	3.5	292	0.003
1/15/2015	1.9	ND	ND	3.9	161	7.4	30.1	ND	55.3	ND	1.9 J	1.2 J	1.7	2.2	2.1	10.0	10.0	N/A	ND	0.91 J	ND	ND	N/A	1.5 J	ND	291	0.003
2/9/2015	1.0 J	ND	ND	3.8	123	ND	19.1	ND	47.8	ND	ND	ND	ND	0.93 J	1.8	5.9	ND	N/A	ND	ND	ND	ND	N/A	ND	ND	203	0.002
3/10/2015	0.59	ND	2.1	8.0	195	1.6 J	27.9	ND	79.2	ND	0.59 J	ND	ND	0.74 J	ND	31.6	11.4	N/A	ND	ND	ND	ND	N/A	ND	ND	359	0.004
4/6/2015	2.0	0.75 J	6.9	1.6	44.3	3.1	4.4	0.43 J	18.5	ND	161	ND	ND	19.5	ND	3.9	3.1	N/A	ND	1.2 J	ND	ND	N/A	2.1 J	0.96 J	274	0.003
5/8/2015	1.4	ND	2.5	4.3	139	2.7 J	12.6	ND	87.6	4.6 J	4.6 J	4.2 J	13.3	12.3	ND	9.9	10.3	N/A	11.3	16.3	5.9 J	ND	N/A	9.2 J	4.00 J	356	0.004
6/2/2015	4.5	ND	3.9	4.3	120	ND	12.6	0.77	130	3.7	5.1 J	4.4	ND	2.6	1.7	12.6	12.3	N/A	ND	1.0 J	ND	ND	N/A	16.1	4.40	340	0.003
7/1/2015	ND	ND	1.6	5.4	94	2.0	17.0	ND	120	ND	ND	ND	ND	ND	1.7	14.0	7.7	N/A	ND	ND	ND	ND	ND	N/A	N/A	263	0.003
8/24/2015	4.6	ND	2.0	ND	1.3 J	2.3	ND	ND	0.61 J	0.61 J	7.5	ND	0.66 J	3.7	ND	3.7	0.60 J	N/A	ND	0.80 J	ND	ND	2.8 J	N/A	N/A	31	0.000
9/11/2015	3.8	ND	2.0	0.40 J	11	2.3	1.1 J	ND	4.7	ND	4.3	ND	ND	ND	ND	21	19	N/A	ND	0.95 J	ND	ND	ND	N/A	N/A	71	0.001
10/7/2015	4.6	ND	2.1	ND	9.1	2.1	1.2 J	ND	30	ND	3.0 J	ND	ND	4.3	ND	18	16	N/A	ND	ND	3.7	ND	1.7 J	N/A	N/A	96	0.001

TABLE 3

Building A Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	trichlorofluoromethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
11/2/2015	2.2	ND	3.2	ND	2.3	3.2	3.0	ND	80	0.60 J	3.9	ND	ND	ND	ND	1.9 J	1.1	N/A	ND	ND	ND	0.38 J	2.3 J	N/A	N/A	104	0.001
12/3/2015	1.7	ND	4.9	0.43 J	12	2.3	6.2	ND	76	ND	5.0	ND	ND	2.6	ND	0.75 J	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	112	0.001
1/15/2016	2.2	ND	2.0	1.5 J	37	2.3	14	ND	73	ND	2.4 J	ND	ND	2.9	0.96 J	6.3	8.4	N/A	ND	ND	ND	ND	ND	N/A	N/A	153	0.002
2/12/2016	0.4 J	ND	1.6	3.5 J	74	3.9	24	ND	81	ND	ND	ND	ND	ND	1.8	10 B	15	N/A	ND	ND	1.0 J	ND	ND	N/A	N/A	216	0.002
3/9/2016	1.8	ND	5.1	8.9	200	2.0	45	ND	130	ND	2.6 J	ND	ND	4.4	3.3	2.5	0.50 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	406	0.004
4/7/2016	ND	ND	ND	41 J	670	ND	230	ND	530	ND	ND	ND	ND	ND	ND	4,000	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	5,471	0.054
4/27/2016	1.5	ND	1.9	ND	ND	2.5	0.40 J	ND	3.4	ND	ND	ND	0.64 J	ND	ND	3.7	0.45 J	N/A	ND	ND	ND	ND	ND	N/A	N/A	14	0.000
5/12/2016	1.5 J	ND	18	7.5	140	3.7 J	44	ND	210	ND	17	ND	ND	6.3	ND	780 B	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	1,228	0.012
6/2/2016	0.47 J	ND	13	0.61 J	46	ND	4.0	ND	8.1	0.66 J	ND	ND	ND	3.8	0.63 J	110	18	N/A	ND	ND	ND	ND	1.9 J	N/A	N/A	207	0.002
7/14/2016	1.1 J	ND	2.3	1.1 J	73	3.1	12	ND	120	0.59 J	37	ND	ND	6.4	1.4 J	110	18	N/A	ND	1.5 J	ND	0.44 J	2.3 J	N/A	N/A	390	0.004
8/4/2016	0.77 J	ND	1.8	2.3	150	3.4	23	ND	120	0.85 J	3.3 J	ND	3.2	2.9	2.7	95	22	N/A	4.1	18	3.8	ND	3.0 J	N/A	N/A	460	0.005
9/7/2016	0.68 J	ND	1.6	3.5	200	2.6	35	ND	110	ND	4.8	ND	ND	ND	3.5	100	9.1	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	472	0.005

ND - non-detect (below detection limit)

N/A - not applicable (samples not analyzed for compound)

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B - compound was found in the blank and sample

SSD - sub-slab depressurization

VOCs - volatile organic compounds

OM&M - operation, maintenance, and monitoring

µg/m^3 - micrograms per cubic meter

lbs./day - pounds per day

EPA - Environmental Protection Agency

TO-15 - Toxic Organic Method 15

The chlorodifluoromethane and 1,2,3-trimethylbenzene concentrations reported in the 12/5/2013 sample were reported as tentatively identified compounds and were converted from 238 ppbv and 2.3. ppbv, respectively.

Samples not collected in May 2014 and August 2014 as system was shut down due to firewater line break.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
3/31/2008	55	ND	ND	N/A	ND	ND	25,000	ND	ND	ND	ND	320	ND	ND	ND	ND	ND	ND	550	ND	N/A	990	740	2,100	N/A	1,100	370	31,170	0.1500	0.450
4/2/2008	57	ND	ND	N/A	ND	ND	2,700	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	84	ND	N/A	63	56	320	N/A	65	ND	3,288	0.0200	0.040
4/4/2008	60	ND	ND	N/A	ND	ND	6,600	ND	ND	ND	32	44	ND	ND	ND	ND	ND	ND	440	ND	N/A	180	170	690	N/A	180	68	8,404	0.0500	0.350
4/11/2008	65	ND	ND	N/A	ND	ND	4,100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	600	ND	N/A	73	61	370	N/A	48	ND	5,252	0.0300	0.180
4/17/2008	60	ND	ND	N/A	ND	ND	2,900	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	670	ND	N/A	69	55	190	N/A	34	ND	3,918	0.0200	0.140
4/24/2008	63	ND	ND	N/A	ND	ND	2,600	ND	ND	ND	ND	ND	ND	28	ND	ND	ND	ND	750	ND	N/A	85	70	130	N/A	32	17	3,712	0.0200	0.540
5/21/2008	60	ND	ND	N/A	ND	ND	1,600	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	650	ND	N/A	65	51	41	N/A	15	ND	2,439	0.0100	0.310
6/19/2008	60	7.4	ND	N/A	ND	ND	300	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	N/A	23	19	8	N/A	9	ND	476	0.0030	0.090
7/18/2008	54	ND	ND	N/A	ND	ND	1,300	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	440	ND	N/A	45	36	35	N/A	ND	ND	1,870	0.0090	0.279
8/13/2008	60	ND	ND	N/A	16	ND	410	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	13	N/A	ND	ND	497	0.0030	0.093
9/11/2008	60	ND	ND	N/A	ND	ND	730	ND	ND	ND	ND	ND	18	ND	ND	ND	ND	13	130	ND	N/A	ND	ND	20	N/A	ND	ND	911	0.0050	0.305
11/12/2008	62	ND	ND	N/A	ND	ND	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	N/A	ND	ND	17	N/A	ND	ND	517	0.0029	0.086
12/18/2008	66	ND	ND	N/A	ND	ND	420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	22	N/A	ND	ND	592	0.0035	0.105
1/22/2009	67	ND	ND	N/A	ND	ND	810	ND	ND	ND	ND	ND	ND	ND	170	ND	ND	ND	580	ND	N/A	37	29	38	N/A	17	14	1,695	0.0102	0.306
2/21/2009	65	ND	ND	N/A	ND	ND	630	ND	ND	ND	ND	ND	ND	ND	140	ND	ND	ND	270	ND	N/A	39	34	25	N/A	16	12	1,166	0.0068	0.204
3/18/2009	66	ND	ND	N/A	ND	ND	460	ND	ND	ND	ND	ND	ND	ND	160	ND	ND	ND	350	ND	N/A	62	51	16	N/A	14	13	1,126	0.0067	0.200
4/17/2009	66	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	46	ND	ND	ND	86	ND	N/A	19	16	6.1	N/A	ND	ND	373	0.0022	0.066
5/20/2009	64	ND	ND	N/A	ND	ND	210	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	79	ND	N/A	14	14	5.7	N/A	ND	ND	347	0.0020	0.060
6/23/2009	56	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	248	0.0012	0.037
7/23/2009	60	ND	ND	N/A	ND	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	55	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
8/28/2009	NA	ND	ND	N/A	ND	ND	720	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	160	ND	N/A	ND	ND	13	N/A	ND	ND	910	0.0049	0.147
9/28/2009	NA	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	165	0.0009	0.027
10/27/2009	60	ND	ND	N/A	ND	ND	200	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	64	ND	N/A	ND	ND	ND	N/A	ND	ND	264	0.0014	0.043
11/24/2009	60	ND	ND	N/A	ND	ND	190	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	75	ND	N/A	ND	ND	ND	N/A	ND	ND	265	0.0000	0.000
12/23/2009	65	ND	ND	N/A	ND	ND	96	ND	ND	ND	ND	ND	ND	ND	ND	26	ND	ND	45	ND	N/A	ND	ND	ND	N/A	8.7	ND	176	0.0010	0.031
1/19/2010	65	ND	ND	N/A	ND	ND	140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	N/A	ND	ND	ND	N/A	ND	ND	197	0.0012	0.035
2/17/2010	68	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	37	ND	N/A	ND	ND	ND	N/A	ND	ND	137	0.0008	0.025
3/17/2010	65	ND	ND	N/A	ND	ND	87	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	120	0.0007	0.021
4/16/2010	65	ND	ND	N/A	ND	ND	110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	39	ND	N/A	ND	ND	ND	N/A	ND	ND	149	0.0009	0.026
5/13/2010	68	58	ND	N/A	ND	ND	65	ND	ND	ND	ND	38	ND	ND	ND	220	ND	ND	22	ND	N/A	25	ND	ND	N/A	140	39	607	0.0037	0.111
6/18/2010	66	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	ND	N/A	83	17	ND	N/A	30	17	244	0.0014	0.043
7/19/2010	60	ND	ND	N/A	ND	ND	68	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	102	0.0006	0.017
8/19/2010	61	ND	ND	N/A	ND	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	31	ND	N/A	ND	ND	ND	N/A	ND	ND	131	0.0007	0.022
9/17/2010	63	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	33	ND	N/A	ND	ND	ND	N/A	ND	ND	103	0.0006	0.018
10/12/2010	60	10	ND	N/A	ND	ND	160	ND	ND	ND	ND	11	ND	ND	ND	130	ND	110.0	70	ND	N/A	ND	ND	ND	N/A	23	ND	514	0.0028	0.083
11/2/2010	65	ND	ND	N/A	ND	ND	65	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	ND	N/A	ND	ND	ND	N/A	ND	ND	100	0.0006	0.018
12/1/2010	65	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	89	ND	N/A	ND	ND	ND	N/A	ND	ND	228	0.0013	0.040
1/5/2011	68	ND	ND	N/A	ND	ND	160	ND	ND	ND	ND	ND	ND	ND	94	7.7	ND	ND	250	ND	N/A	ND	ND	9	N/A	ND	ND	520	0.0032	0.095
2/7/2011	70	ND	ND	N/A	ND	ND	180	ND	ND	ND	ND	ND	ND	ND	120	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	ND	ND	570	0.0036	0.108
3/3/2011	69	ND	ND	N/A	ND	ND	170	ND	ND	ND	ND	ND	ND	ND	110	34	ND	ND	180	ND	N/A	ND	ND	ND	N/A	ND	ND	494	0.0031	0.092
4/14/2011	65	ND	ND	N/A	ND	ND	130	ND	ND	ND	ND	ND	ND	ND	37	10	ND	ND	90	ND	N/A	ND	ND	ND	N/A	ND	ND	267	0.0016	0.047
5/6/2011	70	8	ND	N/A	ND	ND	100	ND	ND	ND	ND	16	ND	ND	19	ND	ND	ND	82	ND	N/A	ND	ND	ND	N/A	9	ND	234	0.0015	0.046
6/9/2011	55	26	ND	N/A	ND	ND	97	ND	ND	ND	ND	ND	ND	ND	ND	14	ND	ND	63	ND	N/A	ND	ND	ND	N/A	ND	ND	200	0.0010	0.030
7/11/2011	51	20	ND	N/A	ND	ND	74	ND	ND	ND	ND	ND	37	ND	ND	62	ND	ND	26	ND	N/A	ND	ND	ND	N/A	21	ND	240	0.0011	0.033
8/3/2011	50	14	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	ND	N/A	ND	ND	ND	N/A	ND	ND	124	0.0006	0.017
9/15/2011	48	10	ND	N/A	ND	ND	22	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	32	0.0001	0.004
10/25/2011	55	ND	ND	N/A	ND	ND	38	ND	ND	ND	ND	ND	27	ND	ND	20	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	96	0.0005	0.015
11/8/2011	55	12	ND	N/A	ND	ND	45	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	ND	N/A	ND	ND	ND	N/A	ND	ND	73	0.0004	0.011
12/6/2011	55	ND	ND	N/A	ND	ND	62	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	83	0.0004	0.013
1/3/2012	50	ND	ND	N/A	ND	ND	55	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	N/A	ND	ND	ND	N/A	ND	ND	76	0.0003	0.011
2/16/2012	54	ND	ND	N/A	ND	ND	76	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	43	ND	N/A	ND	ND	ND	N/A	ND	ND	119	0.0006	0.017
3/15/2012	55	ND	ND	N/A	ND	ND	93	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	58	ND	N/A	ND	ND	ND	N/A	ND	ND	167	0.0008	0.026
4/16/2012	54	ND	ND	N/A	ND	ND	64	ND	ND	ND	ND	ND	ND	ND	16	ND	ND	ND	56	ND	N/A	ND	ND	ND	N/A	ND	ND	136	0.0007	0.020
5/9/2012	51	ND	ND	N/A	ND	ND	72	ND	ND	ND	ND	ND	ND	ND	20	9.8	ND	ND	65	ND	N/A	ND	ND	ND	N/A	ND	ND	167	0.0008	0.024
6/4/2012	52	ND	ND	N/A	ND	ND	71	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	50	ND	N/A	ND	ND	ND	N/A	ND	ND	138	0.0006	0.003
8/16/2012	49	ND	ND	N/A	ND	ND	39	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	N/A	ND	ND	ND	N/A	ND	ND	58	0.0003	0.008
9/12/2012	30	ND	ND	N/A	ND	ND	41	ND	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	22	ND	N/A	ND	ND	ND	N/A	ND	ND	86	0.0002	0.007

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
10/18/2012	65	ND	ND	N/A	ND	ND	95	ND e	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	45	ND	N/A	ND	ND	ND	N/A	ND	ND	140	0.0008	0.025
11/13/2012	61	ND	ND	N/A	ND	ND	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	270	ND	N/A	ND	ND	ND	N/A	31	16	335	0.0018	0.055
12/6/2012	62	ND	ND	N/A	ND	ND	70	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	91	ND	N/A	ND	ND	5.3	N/A	ND	ND	188	0.0010	0.033
1/4/2013	56	ND	ND	N/A	ND	ND	66	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	ND	110	ND	N/A	ND	ND	ND	N/A	ND	ND	218	0.0011	0.034
2/6/2013	60	ND	ND	N/A	ND	ND	49	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	91	ND	N/A	ND	ND	ND	N/A	ND	ND	169	0.0009	0.026
3/7/2013	57	ND	ND	N/A	ND	ND	60	ND	ND	ND	ND	ND	ND	ND	45	ND	ND	ND	100	ND	N/A	ND	ND	ND	N/A	ND	ND	205	0.0011	0.033
4/8/2013	57	ND	ND	N/A	ND	ND	44	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	52	ND	N/A	ND	ND	ND	N/A	ND	ND	117	0.0006	0.018
5/10/2013	112	ND	ND	N/A	ND	ND	120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2,900	ND	N/A	ND	ND	ND	N/A	80	ND	3,100	0.0312	0.968
6/5/2013	161	ND	ND	N/A	ND	ND	10	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	460	50	N/A	ND	ND	ND	N/A	31	15	566	0.0082	0.246
7/3/2013	182	12	ND	N/A	ND	12	ND	ND	ND	ND	ND	9.4	ND	ND	ND	ND	ND	ND	290	16	N/A	11	ND	ND	N/A	43	23	416	0.0068	0.211
8/14/2013	180	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	210	18	N/A	ND	ND	ND	N/A	20	11	279	0.0045	0.140
9/9/2013	182	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	150	ND	N/A	ND	ND	ND	N/A	ND	ND	150	0.0025	0.074
10/10/2013	190	14	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	200	16	N/A	ND	ND	ND	N/A	20	10	260	0.0044	0.138
11/7/2013	160	13	ND	N/A	ND	ND	18	ND	ND	ND	ND	9.8	ND	ND	ND	ND	ND	ND	280	ND	N/A	ND	ND	ND	N/A	45	24	390	0.0056	0.168
12/5/2013	154	6.3	ND	ND	ND	N/A	13	6.6	ND	ND	ND	7.3	4.1	33.9	5.4	4.0	ND	ND	228	N/A	ND	4.8	2.4	ND	N/A	30.4	16.1	362	0.0050	0.155
1/13/2014	175	13.7	ND	4.7	ND	N/A	5.7	ND	ND	ND	ND	10.3	3.4	22.6	5.6	49.6	ND	ND	298	N/A	5.5	17.8	ND	ND	N/A	49.1	19.3	505	0.0079	0.246
2/14/2014	168	1.8	ND	4.5	ND	N/A	2.3	2.2	ND	ND	ND	2.1	ND	5.3	2.2	2.7	ND	ND	157	N/A	ND	2.8	ND	ND	N/A	8.9	4.7	197	0.0030	0.083
3/12/2014	175	9.1	ND	3.0	3.2	N/A	4.9	2.2	ND	ND	ND	5.9	ND	11.5	3.3	6.0	ND	ND	261.0	N/A	1.6	6.0	3.0	ND	N/A	25.3	12.3	358	0.0056	0.175
4/10/2014	168	10	ND	7.1	ND	N/A	7.0	ND	ND	ND	ND	67	ND	12.1	5.1	50.7	ND	6.6	266	N/A	ND	6.9	ND	ND	N/A	218	67.4	724	0.0109	0.317
5/5/2014	182	11.8	1.2	5.8	1.5 J	N/A	7.6	2.9	ND	ND	ND	4.7	1.2 J	12.7	3.6	30.6	ND	ND	236	N/A	2.1	6.8	3.5	ND	N/A	20.9	11.3	364	0.0060	0.149
6/5/2014	180	12.8	ND	ND	2.7	N/A	2.7	2.1	ND	ND	ND	4.1	24.5	13.1	23.1	11.6	ND	ND	154	N/A	6.1	18	6.1	ND	N/A	27	12.1	320	0.0052	0.160
7/3/2014	182	14.4	0.77 J	11.2	5.6	N/A	4.1	1.4 J	ND	ND	0.88 J	6.3	147	16.9	7.1	5.7	0.81 J	ND	183	N/A	2.8	7.3	4.7	ND	N/A	19.4	9.8	449	0.0073	0.206
8/13/2014	166	10.8	1.7	N/A	66.2	1.5	4.7	ND	7.6	ND	4.8	7.5	ND	20.6	7.0	5.0	ND	33.6	289	N/A	N/A	7.8	3.9	ND	N/A	30.2	16.0	518	0.0077	0.317
9/12/2014	175	8.0	1.1	5.6	ND	N/A	5.3	2.9	7.0	ND	ND	2.9	0.76 J	31.2	2.1	3.4	ND	37.9	124	N/A	2.1	5.4	2.1	ND	N/A	17.2	10.8	270	0.0042	0.127
10/9/2014	174	6.6	1.2	10.1	0.98	N/A	6.6	2.0	6.1	2.7	3.0	3.2	2.1 J	13.3	2.7	5.1	0.71 J	38.6	137	N/A	2.6	4.7	2.0	ND	N/A	15.8	9.5	277	0.0043	0.117
11/5/2014	175	5.2	ND	7.5	ND	N/A	5.7	2.3	3.5	ND	ND	3.2 J	6.0	10.5	5.4	4.3	ND	22.6	111	N/A	3.5 J	5.4	3.2 J	ND	N/A	11.0 J	6.4	217	0.0034	0.092
12/4/2014	168	5.3	ND	8.1	1.3	N/A	7.0	2.8	1.9	ND	ND	3.2 J	3.3 J	8.7	7.8	5.0	1.6 J	9.1	106	N/A	3.6 J	4.7	3.7 J	ND	N/A	8.6	5.8	198	0.0030	0.086
1/15/2015	175	6.2	ND	8.3	1.7	N/A	5.9	3.1	ND	ND	ND	1.2 J	2.5 J	3.1 J	2.8	3.1	ND	3.0	87.5	N/A	1.2 J	5.5	2.0	ND	N/A	4.8	2.9	145	0.0023	0.096
2/9/2015	170	5.6	ND	3.8	0.94	N/A	4.6	ND	ND	ND	ND	1.3 J	0.61 J	2.3 J	1.7	3.7	ND	ND	75.3	N/A	ND	3.8	1.7	ND	N/A	5.3	3.2	114	0.0017	0.043
3/10/2015	182	5.0	2.8	4.0	0.82	N/A	3.7	1.5 J	ND	ND	ND	1.3 J	0.62 J	3.0 J	2.1	2.5	ND	0.94 J	80.5	N/A	0.97 J	4.0	1.7	ND	N/A	4.4	2.9	123	0.0020	0.058
4/6/2015	175	6.5	1.1	4.6	1.2	N/A	3.6	1.8	2.0	ND	1.1 J	2.0	ND	6.1	2.3	2.3	ND	14.6	107	N/A	1.5 J	5.8	2.4	ND	N/A	8.0	4.3	178	0.0028	0.076
5/8/2015	175	6.1	ND	10.4	ND	N/A	2.6	2.3 J	1.7 J	ND	ND	5.3 J	4.0 J	7.8 J	2.1 J	5.2	ND	14	128	N/A	5.1 J	10	5.3 J	ND	N/A	13.3 J	6.5 J	230	0.0036	0.116
6/2/2015	170	7.4	1.2	8.3	1.0	N/A	4.0	ND	4.9	ND	ND	2.5	6.3	14.4	3.2	4.3	ND	32.1	132	N/A	3.7	11.1	4.9	ND	N/A	11.4	7.1	260	0.0040	0.099
7/1/2015	175	3.2	ND	6.6	4.9	N/A	ND	ND	3.2	ND	ND	ND	ND	ND	2.5	ND	ND	22	20	N/A	ND	ND	ND	ND	N/A	N/A	N/A	62	0.0010	0.028
8/10/2015	175	5.1	2.1 J	15	0.74 J	N/A	2.7	2.4	5.9	ND	2.0	1.3 J	ND	ND	1.1 J	15.0	ND	45	41	N/A	ND	2.0	0.84 J	ND	7.5	N/A	N/A	150	0.0024	0.094
9/11/2015	175	8.0	1.3 J	12	1.1 J	N/A	2.4	2.3	7.7	ND	2.8	2.0	8.7	ND	1.2 J	6.2	ND	58	73	N/A	1.1 J	3.5	1.3 J	ND	11	N/A	N/A	204	0.0032	0.102
10/7/2015	175	5.5	ND	3.3	ND	N/A	0.68 J	2.1	2.0	ND	1.0 J	0.60 J	3.4 J	ND	ND	8.7	ND	18	14	N/A	ND	1.2 J	ND	ND	2.6 J	N/A	N/A	63	0.0010	0.026
11/2/2015	182	5.1	0.73 J	8.6	0.93 J	N/A	2.3	3.2	3.7	ND	1.4 J	1.2 J	3.4 J	ND	3.5	3.0	ND	32	50	N/A	ND	2.1	0.94 J	ND	5.6	N/A	N/A	128	0.0021	0.054
12/3/2015	182	4.5	0.59 J	14	0.51 J	N/A	2.1	2.4	1.5 J	ND	0.54 J	0.61 J	2.4 J	ND	0.94 J	3.9	ND	14	43	N/A	ND	1.9 J	ND	ND	3.2 J	N/A	N/A	96	0.0016	0.049
1/15/2016	188	4.4	ND	4.8	0.43 J	N/A	0.81 J	2.0	0.27 J	ND	ND	ND	2.4 J	ND	0.95 J	5.0	ND	2.4	30	N/A	ND	1.3 J	ND	ND	2.1 J	N/A	N/A	57	0.0010	0.041
3/9/2016	182	6.4	0.64 J	12	0.88 J	N/A	1.9	2.3	0.69 J	ND	0.31 J	0.80 J	3.3 J	ND	0.91 J	10	ND	11	41	N/A	ND	2.6	0.86 J	ND	3.8	N/A	N/A	99	0.0016	0.088
5/12/2016	182	2.9	0.50 J	6.6	1.0 J	N/A	1.6	2.9	0.44 J	ND	0.48 J	1.1 J	2.8 J	ND	0.72 J	73	ND	5.4 B	31	N/A	ND	1.6 J	ND	ND	5.2	N/A	N/A	137	0.0022	0.144
7/14/2016	180	8.0	1.2 J	13	2.4	N/A	2.5	2.7	11	ND	5.5	1.3 J	4.2	ND	1.1 J	6.2	ND	76 B	46	N/A	1.2 J	4.4	1.5 J	ND	6.5	N/A	N/A	195	0.0031	0.198
9/7/2016	182	8.6	0.52 J	4.0	2.5	N/A	2.5	2.4	4.2	ND	1.9	1.4 J	5.3	ND	1.0 J	3.2	ND	29	45	N/A	0.93 J	3.5	1.5 J	ND	6.2	N/A	N/A	124	0.0020	0.111

ND - non-detect (below detection limit)

N/A - not applicable (samples not analyzed for compound)

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an app

B - compound was found in the blank and sample

SSD - sub-slab depressurization

OM&M - operation, maintenance, and monitoring

VOCs - volatile organic compounds

µg/m^3 - micrograms per cubic meter

lbs./day - pounds per day

lbs. - pounds

scfm - standard cubic feet per minute

EPA - Environmental Protection Agency

TO-15 - Toxic Organic Method 15

TABLE 4

Building C Influent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	FLOW (scfm)	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	chloromethane	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-Dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,1,1-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)	Mass (lbs. removed in period)
Sampling not conducted in July 2012 due to system shutdown test.																													
Completed first-phase system expansion on October 31, 2012.																													
Completed second-phase system expansion on May 10, 2013.																													
Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.																													
Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.																													

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
4/2/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	720	N/A	ND	ND	720	0.004
4/24/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	230	N/A	ND	ND	230	0.001
5/21/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	50	N/A	ND	ND	50	0.000
6/19/2008	28	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	51	N/A	ND	ND	79	0.000
7/18/2008	ND	ND	N/A	ND	150	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	40	N/A	ND	ND	190	0.001
8/13/2008	ND	ND	N/A	ND	750	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	765	0.004
9/11/2008	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	N/A	ND	ND	23	0.000
11/12/2008	ND	ND	N/A	ND	160	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	N/A	ND	ND	227	0.001
12/18/2008	ND	ND	N/A	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	205	0.001
1/22/2009	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	35	N/A	ND	ND	48	0.000
2/20/2009	ND	ND	N/A	ND	14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	29	0.000
3/18/2009	ND	ND	N/A	ND	100	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	N/A	ND	ND	119	0.001
4/17/2009	ND	ND	N/A	ND	340	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1	N/A	ND	ND	347	0.002
5/20/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/23/2009	ND	ND	N/A	ND	70	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2	N/A	ND	ND	75	0.000
7/23/2009	ND	ND	N/A	ND	360	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	381	0.002
8/28/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	20	0.000
9/28/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/27/2009	ND	ND	N/A	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	13	0.000
11/24/2009	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	23	0.000
12/23/2009	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	36	0.000
1/19/2010	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000
2/17/2010	ND	ND	N/A	ND	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	23	0.000
3/17/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/13/2010	15	ND	N/A	ND	9.6	ND	ND	ND	ND	9.8	ND	ND	ND	51	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	36	10	131	0.001
6/18/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	79	16	ND	N/A	26	15	136	0.001
7/19/2010	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
8/19/2010	ND	ND	N/A	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	15	0.000
9/17/2010	35	ND	N/A	ND	26	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	61	0.000
10/12/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	24	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	36	0.000
11/2/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	ND	ND	N/A	ND	ND	12	0.000
12/1/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/5/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	9	N/A	ND	ND	9.0	0.000
2/7/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/3/2011	ND	ND	N/A	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	20	0.000
4/14/2011	ND	ND	N/A	ND	180	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	180	0.000
5/6/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
6/9/2011	32	ND	N/A	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	62	0.000
7/11/2011	29	ND	N/A	ND	160	ND	ND	ND	ND	ND	28	ND	ND	74	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	24	8.9	324	0.000
8/3/2011	25	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	25	0.000
9/15/2011	22	ND	N/A	ND	12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	34	0.000
10/25/2011	16	ND	N/A	ND	19	ND	ND	ND	ND	ND	24	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	13	ND	92	0.000
11/8/2011	16	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	0.000
12/6/2011	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.4	0.000
1/3/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
2/16/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
3/15/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
4/16/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
5/9/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.00	0.000
6/4/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	8.7	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.7	0.000

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
8/15/2012	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	28	0.000
9/12/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
10/18/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/13/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/2012	ND	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	57	ND	ND	ND	ND	ND	N/A	ND	ND	66	0.001
1/4/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	21	0.000
2/6/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	ND	ND	ND	N/A	ND	ND	24	0.000
3/7/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
4/8/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	ND	N/A	ND	ND	19	0.000
5/10/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	87	ND	ND	ND	ND	ND	N/A	ND	ND	87	0.001
6/5/2013	ND	ND	N/A	ND	28	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	19	ND	ND	ND	ND	N/A	ND	ND	47	0.000
7/3/2013	ND	ND	N/A	ND	34	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	14	ND	ND	ND	ND	ND	N/A	ND	ND	69	0.001
8/14/2013	9.9	ND	N/A	ND	17	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	12	ND	ND	ND	ND	ND	N/A	ND	ND	56	0.001
9/9/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/10/2013	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	11	0.000
11/7/2013	11	ND	N/A	ND	9.3	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	11	ND	ND	N/A	ND	ND	31	0.000
12/5/2013	10.9	ND	N/A	ND	7.4	8.6	ND	ND	ND	ND	6.4	ND	ND	2.5	ND	ND	ND	10.7	N/A	ND	ND	ND	ND	N/A	ND	ND	47	0.000
1/13/2014	8.3	ND	4.2	ND	11.0	2.2	ND	ND	ND	1.7	2.4	4.8	ND	21.3	ND	ND	3.0	124	N/A	ND	2.7	ND	ND	N/A	5.8	2.4	194	0.002
2/14/2014	5.8	ND	6.1	ND	5.7	2.0	ND	ND	ND	ND	ND	2.5	ND	ND	ND	ND	ND	256	N/A	ND	ND	ND	ND	N/A	ND	ND	278	0.003
3/12/2014	13.5	ND	3.7	ND	10.5	2.4	ND	ND	ND	3.7	ND	ND	18.2	12.5	ND	ND	ND	5.6	N/A	5.9	15.3	4.4	ND	N/A	17.1	7.6	120	0.001
4/10/2014	7.8	ND	8.2	ND	14.6	ND	ND	ND	ND	84.3	ND	ND	ND	64.8	ND	ND	9.6	18.6	N/A	ND	ND	ND	ND	N/A	263	73.6	545	0.005
5/5/2014	9.6	ND	6.1	1.3 J	11.7	2.9	ND	ND	ND	ND	1.4 J	3.4 J	ND	1.6	0.90 J	ND	ND	0.86 J	N/A	ND	0.88 J	ND	ND	N/A	0.85 J	ND	41	0.000
6/5/2014	8.5	ND	2.6	ND	5.9	2.6	ND	ND	ND	ND	20.6	2.3 J	9.6	1.3 J	ND	ND	ND	ND	N/A	2.0	2.6	ND	ND	N/A	1.9 J	2.2	62	0.001
7/3/2014	10.2	0.64 J	12.3	5.1	5.8	1.8	ND	ND	ND	1.4 J	9.7	4.1 J	ND	1.4	0.79 J	ND	ND	3.4	N/A	ND	1.6 J	1.5 J	ND	N/A	1.9 J	1.6	63	0.001
8/13/2014	11.4	1.8	N/A	60.1	5.8	1.6 J	5.1	0.69 J	ND	6.0	1.3 J	5.0 J	2.6	10.8	ND	5.4	4.4	20.1	N/A	N/A	14.4	6.3	ND	N/A	18.7	6.4	188	0.002
9/12/2014	7.4	2.1	5.9	31.4	5.4	2.4	9.4	ND	ND	0.41 J	1.1 J	ND	0.62 J	1.3	ND	ND	25.3	50.2	N/A	ND	ND	ND	ND	N/A	0.96 J	ND	144	0.001
10/9/2014	10.8	ND	11.9	0.90	ND	2.2	1.2 J	ND	ND	ND	1.4 J	4.0 J	ND	1.5	ND	ND	ND	2.2	N/A	ND	ND	ND	ND	N/A	0.87 J	ND	37	0.000
11/5/2014	4.9	1.1	8.5	7.3	6.0	2.3	4.7	ND	ND	ND	5.9	5.4	4.2	1.3	ND	ND	15.7	2.8	N/A	ND	ND	ND	ND	N/A	ND	ND	70	0.001
12/4/2014	4.9	1.2	7.4	4.9	6.2	3.0	2.9	ND	ND	ND	4.4J	4.0 J	6.0	2.9 J	ND	ND	19.3	ND	N/A	ND	3.1 J	ND	ND	N/A	ND	ND	66	0.001
1/15/2015	8.1	ND	8.4	1.8	5.9	3.8	ND	ND	ND	0.74 J	1.7 J	1.0 J	1.7	2.2	ND	ND	9.4	2.9	N/A	ND	0.95 J	ND	ND	N/A	2.4 J	0.80 J	52	0.001
2/9/2015	5.9	ND	3.8	1.1	5.7	ND	ND	ND	ND	ND	ND	ND	ND	1.0 J	ND	ND	5.5	6.5	N/A	ND	0.87 J	ND	ND	N/A	1.1 J	ND	31	0.000
3/10/2015	1.9	2.7	4.2	ND	3.9	1.9	ND	ND	ND	ND	ND	1.1 J	ND	0.84 J	ND	ND	3.1	4.6	N/A	ND	0.80 J	ND	ND	N/A	0.71 J	ND	26	0.000
4/6/2015	2.0	1.1	4.6	1.5	6.0	2.3	1.8	0.71	0.95 J	0.70 J	4.7 J	2.1 J	ND	3.8	ND	ND	9.8	10.6	N/A	ND	1.4 J	0.60 J	ND	N/A	2.6 J	1.2 J	58	0.001
5/8/2015	4.2	ND	11.3	ND	3.8	1.7 J	1.5 J	ND	ND	ND	2.1 J	1.8 J	ND	0.79 J	ND	ND	9.2	12.5	N/A	ND	1.4 J	ND	ND	N/A	ND	ND	50	0.000
6/2/2015	5.8	ND	6.8	0.82	2.8	2.8	1.6	ND	ND	0.76 J	4.2 J	5.6	ND	1.9	ND	ND	6.0	10.6	N/A	1.1 J	2.5	1.1 J	ND	N/A	2.1 J	1.1 J	58	0.001
7/1/2015	ND	ND	7.9	7.9	2.1	ND	9.2	ND	3.5	ND	5.5	ND	ND	ND	ND	ND	13.0	7.4	N/A	ND	ND	ND	ND	ND	N/A	N/A	57	0.001
8/10/2015	5.2	ND	17	2.4	1.7	2.8	3.9	ND	1.6	ND	8.2	ND	ND	9.1	ND	ND	5.2	2.9	N/A	ND	ND	ND	ND	1.2 J	N/A	N/A	61	0.001
9/11/2015	10	0.74 J	11	3.6	3.9	2.5	8.6	ND	3.2	0.62 J	11	ND	ND	2.8	ND	ND	16	5.9	N/A	ND	1.5 J	ND	ND	3.0 J	N/A	N/A	84	0.001
10/7/2015	9.5	1.2 J	5.0	1.9 J	2.3	2.2	7.1	ND	2.7	ND	5.1	ND	ND	3.5	ND	ND	33	0.79 J	N/A	ND	ND	1.8 J	ND	ND	N/A	N/A	76	0.001
11/2/2015	5.2	2.2 J	8.5	1.9	3.1	3.1	7.5	ND	2.6	0.83 J	3.8	ND	ND	ND	ND	ND	69	ND	N/A	ND	ND	ND	ND	2.7 J	N/A	N/A	110	0.001
12/3/2015	5.8	0.50 J	18	0.71 J	1.6	2.6	2.0	ND	0.76 J	ND	3.0 J	ND	ND	ND	ND	ND	18	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	53	0.001
1/15/2016	2.0	ND	5.4	ND	1.0 J	2.1	0.60 J	ND	0.32 J	ND	2.4 J	ND	ND	ND	ND	ND	7.7	1.0 J	N/A	ND	ND	0.83 J	ND	ND	N/A	N/A	23	0.000
3/9/2016	4.8	ND	11	0.38 J	1.2 J	2.4	0.46 J	ND	ND	ND	3.5 J	ND	ND	3.8	ND	ND	7.0	ND	N/A	ND	ND	ND	ND	ND	N/A	N/A	35	0.000
5/12/2016	3.6	ND	6.8	0.44 J	1.2 J	3.5	0.46 J	ND	0.51 J	ND	ND	ND	0.54 J	3.9	ND	ND	6.0 B	ND	N/A	ND	0.81 J	ND	ND	ND	N/A	N/A	28	0.000
7/14/2016	9.3	0.55 J	9.9	1.4 J	3.4	2.7	3.3	ND	2.7	ND	6.3	ND	1.4 J	ND	ND	ND	11 B	ND	N/A	ND	1.6 J	ND	ND	0.52 J	N/A	N/A	54	0.001
9/7/2016	12	0.65 J	3.5	1.5 J	2.7	2.0	7.0	ND	2.7	ND	4.7	ND	1.1 J	ND	ND	ND	16	3.2	N/A	ND	1.1 J	ND	ND	ND	N/A	N/A	58	0.001

ND - non-detect (below detection limit)

N/A - not applicable (samples not analyzed for compound)

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B - compound was found in the blank and sample

SSD - sub-slab depressurization

TABLE 5

Building C Mid-GAC Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-Trichlorobenzene	1,1,1,-trichloroethane	trichloroethene	1,1,2-trichloro-1,2,2-trifluoroethane	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)

OM&M - operation, maintenance, and monitoring

GAC - granular activated carbon

VOCs - volatile organic compounds

µg/m^3 - micrograms per cubic meter

lbs./day - pounds per day

EPA - Environmental Protection Agency

TO-15 - Toxic Organic Method 15

Sampling not conducted in July 2012 due to shutdown test.

November 2012 sample collected while four new extraction wells installed in October 2012 were operating (November 5-26, 2012). Wells temporarily closed until May 16, 2013.

Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/31/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0	0.000
4/2/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	170	N/A	ND	ND	170	0.002
4/4/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	360	N/A	ND	ND	360	0.004
4/11/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	25	N/A	ND	ND	550	N/A	ND	ND	575	0.006
4/17/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	100	N/A	ND	ND	100	0.001
4/24/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	260	N/A	ND	ND	260	0.003
5/23/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	52	N/A	ND	ND	52	0.001
6/19/2008	51	ND	N/A	ND	ND	ND	ND	ND	ND	ND	50	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	54	N/A	ND	ND	155	0.002
7/18/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
8/13/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	10	ND	16	N/A	ND	ND	26	0.000
9/11/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	63	ND	ND	ND	28	ND	ND	ND	ND	ND	N/A	ND	ND	6.1	N/A	ND	ND	97	0.001
11/12/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	47	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	16	N/A	ND	ND	63	0.001
12/18/2008	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	31	N/A	ND	ND	31	0.000
2/4/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	29	N/A	ND	ND	29	0.000
2/20/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	6.8	N/A	ND	ND	6.8	0.000
3/18/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	26	N/A	ND	ND	26	0.000
4/17/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	8.9	N/A	ND	ND	8.9	0.000
5/20/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/23/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.5	N/A	9.4	ND	15	0.000
7/23/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	29	0.000
8/28/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/28/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/27/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/24/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/23/2009	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	10	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
1/19/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/17/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
3/17/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/13/2010	36	ND	N/A	ND	ND	ND	ND	ND	ND	24	31	ND	ND	ND	140	ND	ND	ND	ND	ND	N/A	17	ND	ND	N/A	89	25	362	0.004
6/18/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	68	16	ND	N/A	28	16	128	0.001
7/19/2010	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	10	0.000
8/19/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/17/2010	13	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
10/12/2010	ND	ND	N/A	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	42	ND	ND	110	ND	25	N/A	ND	ND	ND	N/A	ND	ND	198	0.002
11/2/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/1/2010	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	24	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	24	0.000
1/5/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	12	N/A	ND	ND	12	0.000
2/7/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5	N/A	ND	ND	5.3	0.000
3/3/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/14/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	13	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	13	0.000
5/6/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	11	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	N/A	ND	ND	ND	N/A	ND	ND	26	0.000
6/9/2011	8.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.9	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	17	0.000
7/11/2011	9.5	ND	N/A	ND	ND	ND	ND	ND	ND	ND	75	ND	ND	ND	61	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	21	ND	167	0.002
8/3/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	21	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	21	0.000
9/15/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/25/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	23	ND	ND	ND	21	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	11	ND	55	0.001
11/8/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/2011	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/3/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/16/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1-trichloroethane	1,1,2-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)
3/15/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/16/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/9/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
6/4/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	8.4	ND	23	0.000
8/15/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
9/12/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	22	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	22	0.000
10/18/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
11/13/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
12/6/2012	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
1/4/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
2/6/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	5.3	N/A	ND	ND	5.3	0.000
3/7/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
4/8/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
5/10/2013	9.9	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	34	N/A	ND	ND	ND	N/A	ND	ND	44	0.000
6/5/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
7/3/2013	6.4	ND	N/A	ND	ND	ND	ND	ND	ND	ND	29	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	35	0.000
8/14/2013	5.8	ND	N/A	ND	ND	ND	ND	ND	ND	ND	17	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	23	0.000
9/9/2013	ND	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	0.0	0.000
10/10/2013	11	ND	N/A	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	11	0.000
11/7/2013	10	ND	N/A	ND	ND	ND	ND	ND	ND	ND	20	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	ND	ND	ND	N/A	ND	ND	30	0.000
12/5/2013	9.3	ND	ND	ND	2.1	9.2	ND	ND	ND	ND	13.9	ND	ND	ND	3.5	ND	ND	ND	ND	3.7	ND	4.9	2.3	ND	N/A	ND	ND	49	0.000
1/13/2014	4.8	ND	4.3	1.6	8.2	ND	ND	ND	ND	ND	2.3	ND	4.8	ND	26.3	ND	ND	ND	ND	3.8	1.7	7.3	ND	ND	N/A	3.6	ND	69	0.001
2/14/2014	6.6	3.3	10.6	3.8	7.0	4.5	2.5	2.4	2.4	2.9	1.3	2.1	3.0	4.5	4.0	2.3	3.3	3.6	3.1	5.7	8.7	6.1	4.3	ND	N/A	3.4	2.8	104	0.001
3/12/2014	6.9	ND	2.5	ND	ND	2.2	ND	ND	ND	ND	13.7	ND	ND	ND	3.2	ND	ND	ND	ND	1.9	0.94	5.1	2.3	ND	N/A	ND	ND	39	0.000
4/10/2014	6.2	ND	ND	ND	ND	ND	ND	ND	ND	110	ND	ND	ND	ND	95.4	ND	ND	ND	ND	ND	ND	ND	ND	ND	N/A	330	91.7	633	0.006
5/5/2014	6.0	ND	6.8	ND	2.3	3.2	ND	ND	ND	ND	1.4 J	ND	4.0 J	ND	3.4	ND	ND	ND	ND	ND	1.4 J	7.2	3.5	ND	N/A	1.2 J	ND	40	0.000
6/5/2014	5.7	ND	2.9	ND	2.5	2.9	ND	ND	ND	ND	20	ND	2.3 J	21.1	2.3	ND	ND	ND	ND	ND	3.1	7.5	3.5	ND	N/A	1.5 J	1.8	77	0.001
7/3/2014	10.6	ND	10.6	1.6	4.2	1.1 J	ND	ND	ND	4.3	5.8 J	ND	2.4 J	20.5	4.2	ND	ND	ND	ND	1.6	1.9	9.7	5.4	ND	N/A	7.4	1.8	93	0.001
8/13/2014	6.1	ND	N/A	31.1	4.5	ND	2.1 J	ND	ND	ND	ND	ND	1.8 J	ND	3.0	ND	ND	ND	ND	ND	N/A	8.3	4.4	ND	N/A	3.4 J	2.0 J	67	0.001
9/12/2014	4.0	0.89 J	5.9	59.4	3.8	3.6	7.3	ND	3.9	ND	0.80 J	ND	1.6 J	0.62 J	2.2	ND	ND	3.9	ND	6.7	1.4 J	8.0	ND	ND	N/A	0.95 J	ND	115	0.001
10/9/2014	6.2	ND	10.9	2.1	ND	ND	2.0	ND	ND	ND	2.3 J	ND	4.0 J	ND	2.3	ND	ND	ND	ND	ND	2.1	6.3	2.9	ND	N/A	ND	ND	41	0.000
11/5/2014	4.2	ND	9.0	9.0	2.2	2.6	4.7	ND	ND	ND	6.4	ND	5.9	4.5	2.2	ND	ND	2.1	ND	1.9	3.6 J	6.1	3.9 J	ND	N/A	ND	3.2 J	72	0.001
12/4/2014	3.8	ND	7.8	8.0	3.0 J	3.1	3.7	ND	ND	ND	5.9	ND	4.3	5.7	3.3	ND	ND	7.3	ND	ND	3.7 J	5.8	4.2	ND	N/A	ND	ND	70	0.001
1/15/2015	11.5	ND	8.4	4.3	4.2	2.9	1.2 J	ND	ND	ND	4.2 J	ND	1.0 J	1.9	4.0	ND	ND	13.0	ND	0.93	1.5 J	8.4	4.0	ND	N/A	1.5 J	ND	73	0.001
2/9/2015	7.4	ND	3.2	1.8	2.0 J	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.1	ND	ND	6.3	ND	ND	1.1 J	6.7	3.0	ND	N/A	ND	ND	34	0.000
3/10/2015	2.9	2.8	3.7	0.86	1.1 J	1.7 J	ND	ND	ND	ND	ND	ND	0.99 J	ND	2.1	ND	ND	2.8	ND	ND	1.0 J	4.5	2.1	ND	N/A	0.94 J	ND	27	0.000
4/6/2015	10.7	0.79 J	5.1	2.10	3.6	2.7	1.0 J	ND	ND	0.79 J	8.1	ND	ND	ND	2.8	ND	ND	7.8	ND	0.87 J	1.8	8.2	3.9	ND	N/A	1.6 J	ND	62	0.001
5/8/2015	5.4	ND	17.9	ND	1.4 J	ND	0.68 J	ND	ND	ND	ND	ND	ND	ND	1.4 J	ND	ND	3.4	ND	ND J	ND	5.2	2.4 J	ND	N/A	ND	ND	38	0.000
6/2/2015	13.6	ND	6.1	0.99	1.7	ND	1.1 J	ND	ND	ND	6.4	ND	5.4	ND	3.5	ND	ND	4.4	ND	1.10	2.2	10.2	5.9	ND	N/A	ND	ND	63	0.001
7/1/2015	ND	ND	9.7	ND	ND	ND	2.0	ND	2.0	ND	ND	ND	ND	ND	2.5	ND	ND	5.2	ND	ND	ND	ND	ND	ND	ND	N/A	N/A	21	0.000
8/10/2015	7.2	ND	15.0	ND	ND	2.4	ND	ND	ND	ND	8.1	ND	ND	ND	15.0	ND	ND	1.4 J	ND	2.4	ND	3.0	1.3 J	ND	ND	N/A	N/A	56	0.001
9/11/2015	11	ND	9.0	ND	ND	2.6	0.98 J	ND	1.4 J	ND	6.4	ND	ND	ND	4.1	ND	ND	1.5 J	ND	2.6	1.6 J	5.9	2.5	ND	2.0 J	N/A	N/A	52	0.001
10/7/2015	11	ND	3.8	0.90 J	ND	2.1	3.9	ND	1.1 J	ND	4.2	ND	ND	ND	6.2	ND	ND	1.2 J	ND	1.4	ND	2.4	1.1 J	ND	1.2 J	N/A	N/A	41	0.000
11/2/2015	9.7	0.48 J	10	4.0	1.5 J	3.6	12	ND	3.2	0.63 J	3.8	ND	ND	2.2 J	2.9	ND	ND	15	ND	ND	ND	2.7	1.3 J	ND	ND	N/A	N/A	73	0.001
12/3/2015	5.9	ND	19	1.4 J	0.68 J	2.5	3.3	ND	0.88 J	ND	2.5 J	ND	ND	ND	3.2	ND	ND	9.4	ND	ND	ND	3.0	1.0 J	ND	ND	N/A	N/A	53	0.001
1/15/2016	9.4	ND	5.5	0.54 J	ND	2.3	1.2 J	ND	0.48 J	ND	2.7 J	ND	ND	ND	5.0	ND	ND	6.7	ND	ND	1.1 J	4.3	1.7 J	ND	ND	N/A	N/A	41	0.000
3/9/2016	5.6	ND	11	0.57 J	0.59 J	2.1	0.97 J	ND	ND	ND	5.4	ND	ND	ND	6.1	ND	ND	7.3	ND	ND	ND	3.3	1.2 J	ND	ND	N/A	N/A	44	0.000
5/12/2016	3.9	ND	6.8	0.46 J	0.49 J	3.5	0.51 J	ND	ND	ND	4.0	ND	ND	ND	8.3	ND	ND	7.2 B	ND	ND	ND	2.9	1.1 J	ND	ND	N/A	N/A	39	0.000
7/14/2016	10	ND	11	1.1 J	1.2 J	3.3	1.4 J	ND	1.0 J	0.90 J	7.4	ND	ND	ND	5.8	ND	ND	13 B	ND	ND	1.7 J	6.7	2.4	ND	2.4 J	N/A	N/A	69	0.001
9/7/2016	7.5	ND	3.5	1.2 J	2.3	2.1	6.1	ND	2.5	ND	4.3	ND	ND	ND	2.7	ND	ND	13	ND	6.9	1.2 J	4.7	1.8 J	ND	ND	N/A	N/A	60	0.001

ND - non-detect (below detection limit)

TABLE 6

Building C Effluent Concentrations (µg/m^3)

LABORATORY DATA SUMMARY

SSD System OM&M, Middle River Complex, Middle River, Maryland

Samples analyzed by EPA Method TO-15

Date	benzene	carbon tetrachloride	chlorodifluoromethane	chloroform	cis-1,2-dichloroethene	dichlorodifluoromethane	1,1-dichloroethane	1,2-dichloroethane	1,1-dichloroethene	ethylbenzene	methylene chloride	methyl-tert-butyl ether	naphthalene	tetrachloroethene	toluene	trans-1,2-dichloroethene	1,2,4-trichlorobenzene	1,1,1,-trichloroethane	1,1,2,-trichloroethane	trichloroethene	1,2,3-trimethylbenzene	1,2,4-trimethylbenzene	1,3,5-trimethylbenzene	vinyl chloride	total xylenes	m-xylene & p-xylene	o-xylene	Total VOCs	Mass (lbs./day)

N/A - not applicable (samples not analyzed for compound)

J - result is less than the reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B - compound was found in the blank and sample

SSD - sub-slab depressurization

OM&M - operation, maintenance, and monitoring

VOCs - volatile organic compounds

µg/m^3 - micrograms per cubic meter

lbs./day - pounds per day

EPA - Environmental Protection Agency

TO-15 - Toxic Organic Method 15

Sampling not conducted in July 2012 due to system shutdown test.

November 2012 sample collected after the potassium permanganate zeolite (PPZ) unit. PPZ unit was taken offline prior to the December 2012 sample.

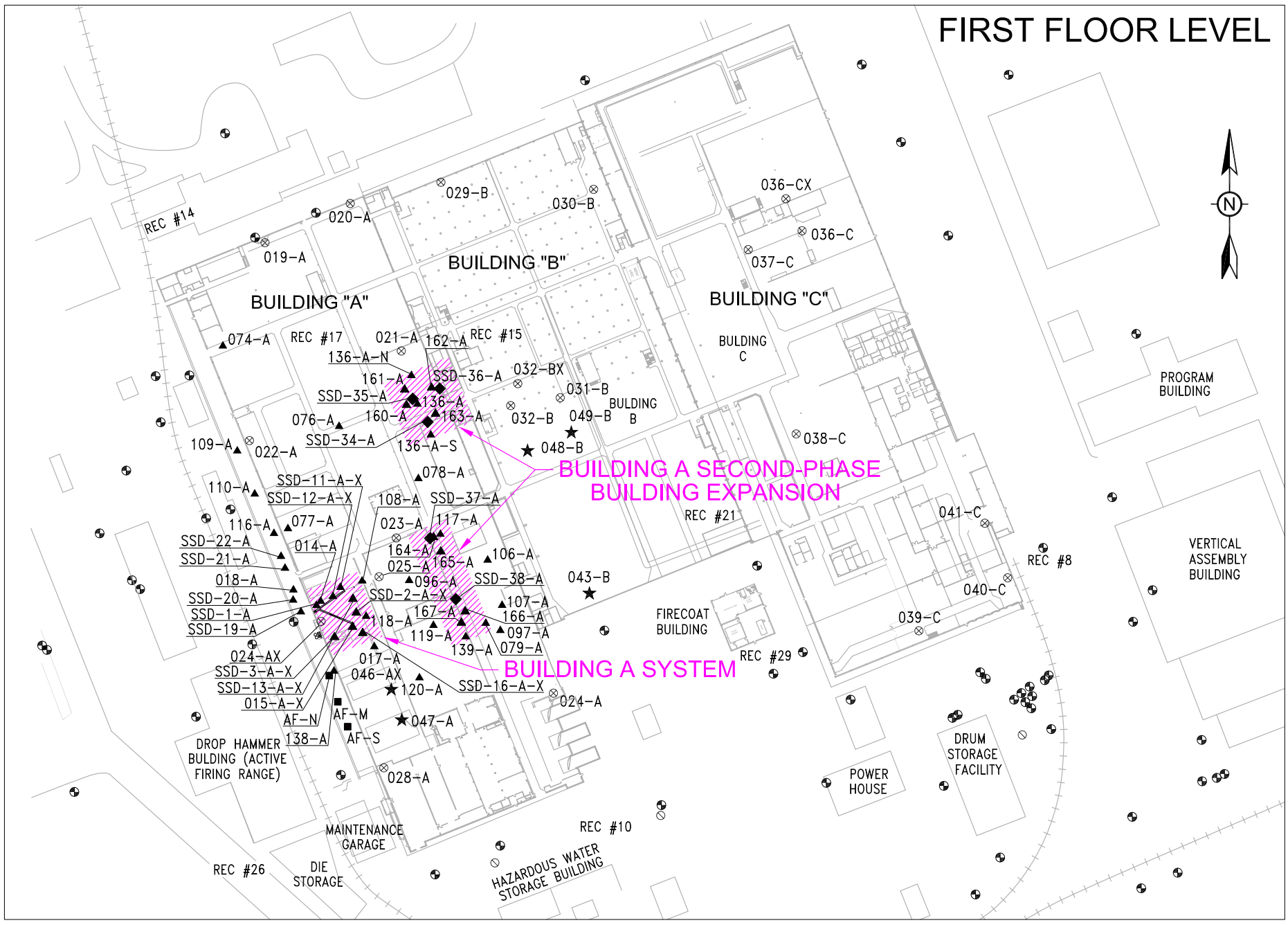
Samples analyzed from 4/2/08 to 11/7/13 and from 7/1/15 to present analyzed by TestAmerica, Inc. of Knoxville, TN.

Samples analyzed from 12/5/13 to 6/2/15 analyzed by Pace Analytical Services, Inc. of Minneapolis, MN.

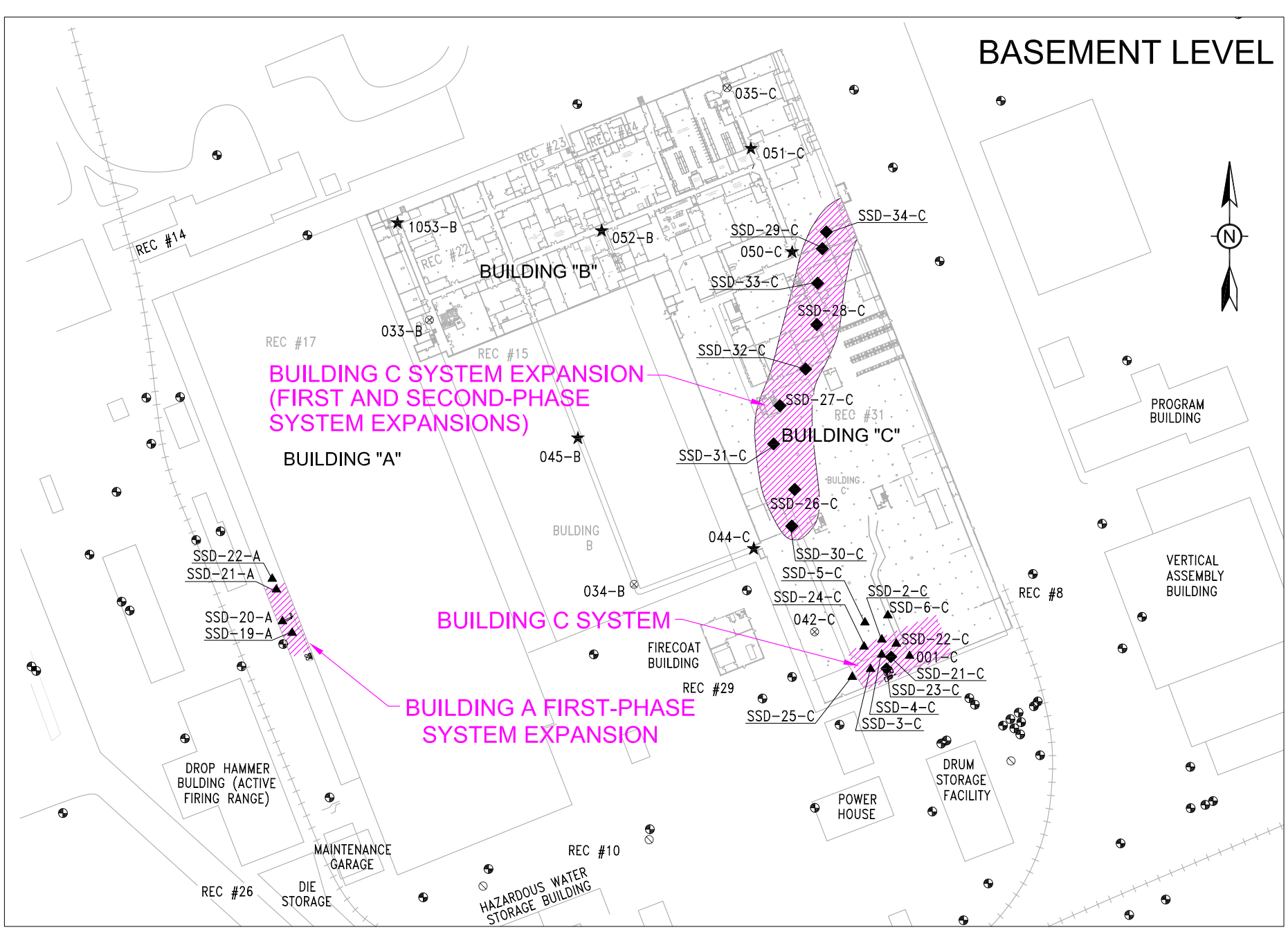
FIGURES

P:\ACAD\0512-124-MRIV\0512124037A.DWG

FIRST FLOOR LEVEL



BASEMENT LEVEL



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- TARGET OF OPPORTUNITY
- INDOOR AIR SAMPLE
- ABANDONED WELL BORING
- SOIL VAPOR EXTRACTION POINT
- INDOOR AIR FILTER
- SSD SUB-SLAB DEPRESSURIZATION
- APPROXIMATE AREA OF SSD SYSTEM INFLUENCE

0 200 400

SCALE IN FEET

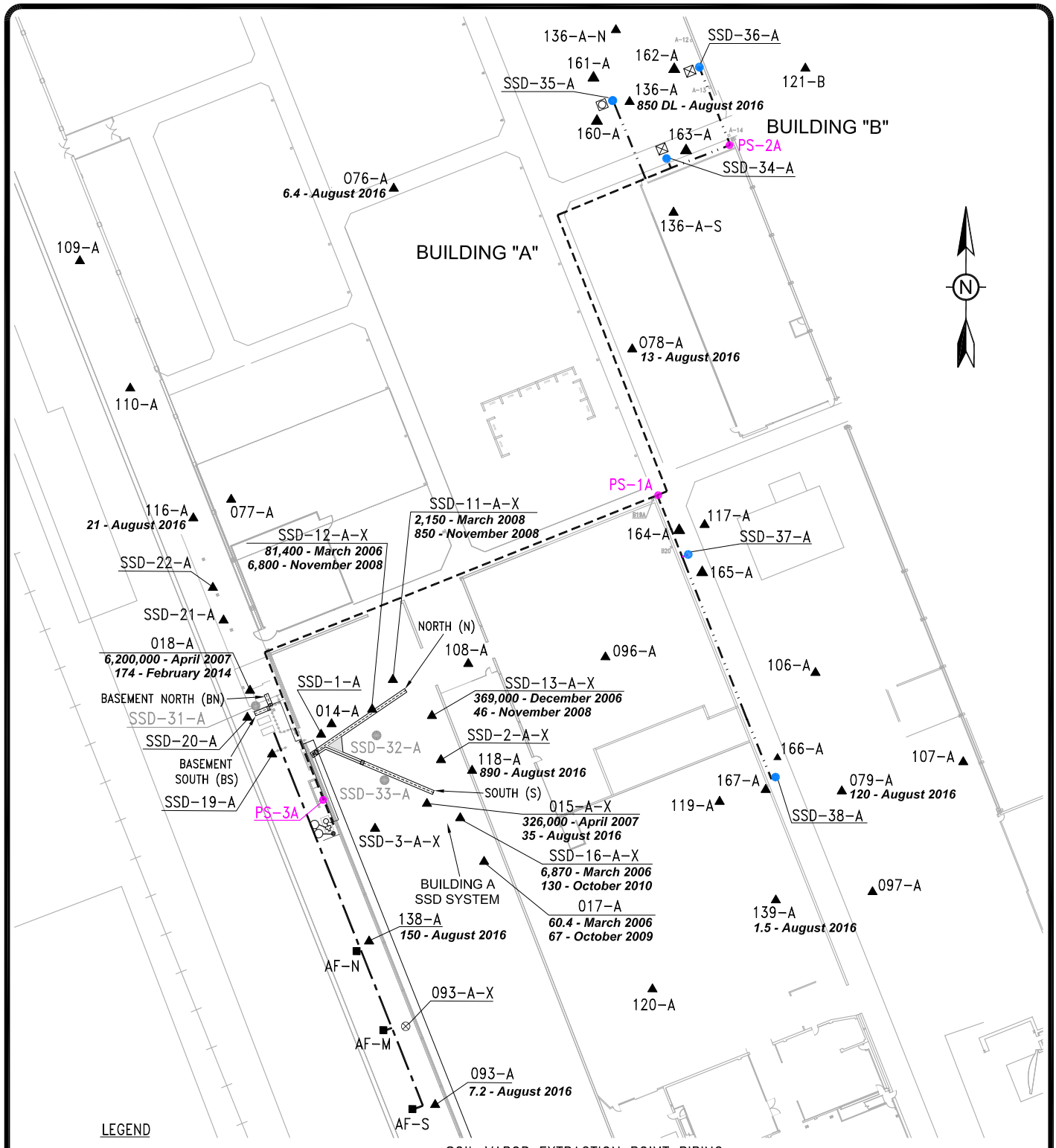
TITLE: **SSD SYSTEM LOCATIONS**

LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	9-28-16

FIGURE 1



LEGEND

- PIPE SUMP
- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- VERTICAL VAPOR EXTRACTION POINT
- HORIZONTAL SOIL VAPOR EXTRACTION POINT
- **326,000** HIGHEST TCE CONCENTRATION ($\mu g/mg$) PRE-SSD SYSTEM AND MOST RECENT CONCENTRATION POST-SSD SYSTEM OPERATION
- **DL** DILUTION ANALYSIS
- SOIL VAPOR EXTRACTION POINT PIPING (2" DIA. SCH 40)
- HEADER PIPE (6" DIA. SCH 40)
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)

0 70 140

SCALE IN FEET

TITLE: **BUILDING A SSD SYSTEM LAYOUT**

LOCATION: **Middle River, Maryland**

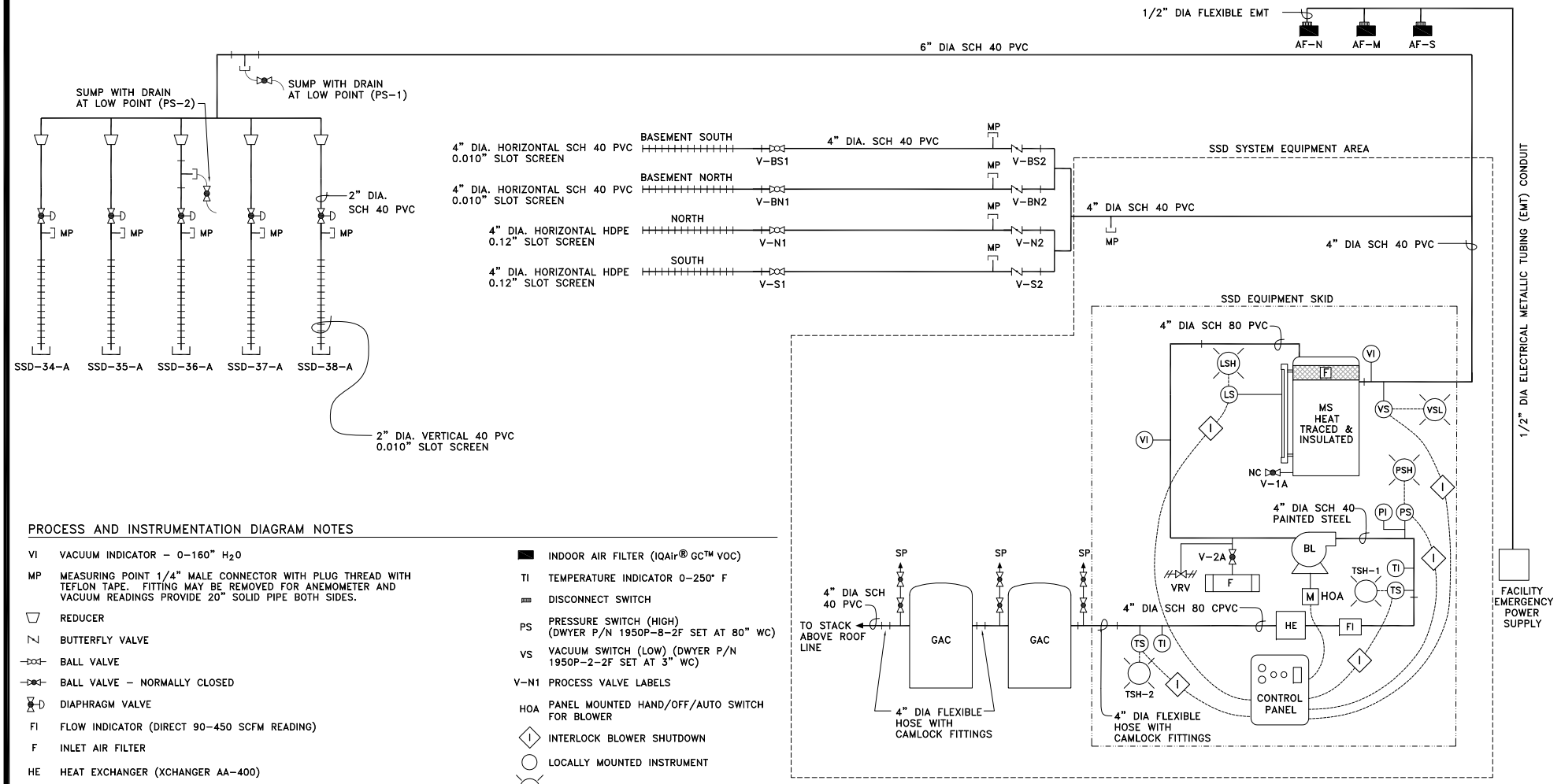
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	10-4-16

FIGURE **2**

P:\ACAD\0512-124-MRIV\0512124039A.DWG

P:\ACAD\0512-124-MRIV\0512124040A.DWG



PROCESS AND INSTRUMENTATION DIAGRAM NOTES

VI	VACUUM INDICATOR – 0–160" H_2O
MP	MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
	REDUCER
	BUTTERFLY VALVE
	BALL VALVE
	BALL VALVE – NORMALLY CLOSED
	DIAPHRAGM VALVE
FI	FLOW INDICATOR (DIRECT 90–450 SCFM READING)
F	INLET AIR FILTER
HE	HEAT EXCHANGER (XCHANGER AA–400)
MS	MOISTURE SEPARATOR (GASHO GX–100DL) WITH 40 GALLON CAPACITY, SLIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
LS	LEVEL SWITCH
VRV	VACUUM RELIEF VALVE – 2" (SET AT 81.6" WC)
SP	SAMPLE PORT 1/4" DIAMETER
BL	AMETEK®, ROTRON® 909BB72W 10 HP MOTOR, 300 SCFM @ 75" H_2O
PI	PRESSURE INDICATOR 0–160" H_2O
TS	TEMPERATURE SWITCH (ASHCROFT P/N T424–T05–030–XFS–150–260; TSH–1 SET AT 220° F AND TSH–2 SET AT 115° F)
GAC	GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT SCRUB® VSC400, VOCARB® 48C)
	INDOOR AIR FILTER (IQAir® GC™ VOC)
TI	TEMPERATURE INDICATOR 0–250° F
	DISCONNECT SWITCH
PS	PRESSURE SWITCH (HIGH) (DWYER P/N 1950P–8–2F SET AT 80" WC)
VS	VACUUM SWITCH (LOW) (DWYER P/N 1950P–2–2F SET AT 3" WC)
V–N1	PROCESS VALVE LABELS
HOA	PANEL MOUNTED HAND/OFF/AUTO SWITCH FOR BLOWER
I	INTERLOCK BLOWER SHUTDOWN
	LOCALLY MOUNTED INSTRUMENT
	PANEL ALARM LIGHT
H	HIGH
L	LOW
SSD	SUB–SLAB DEPRESSUIZATION
M	MOTOR
EMT	ELECTRICAL METALLIC TUBING

TITLE:

BUILDING A SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

LOCATION:

Middle River, Maryland

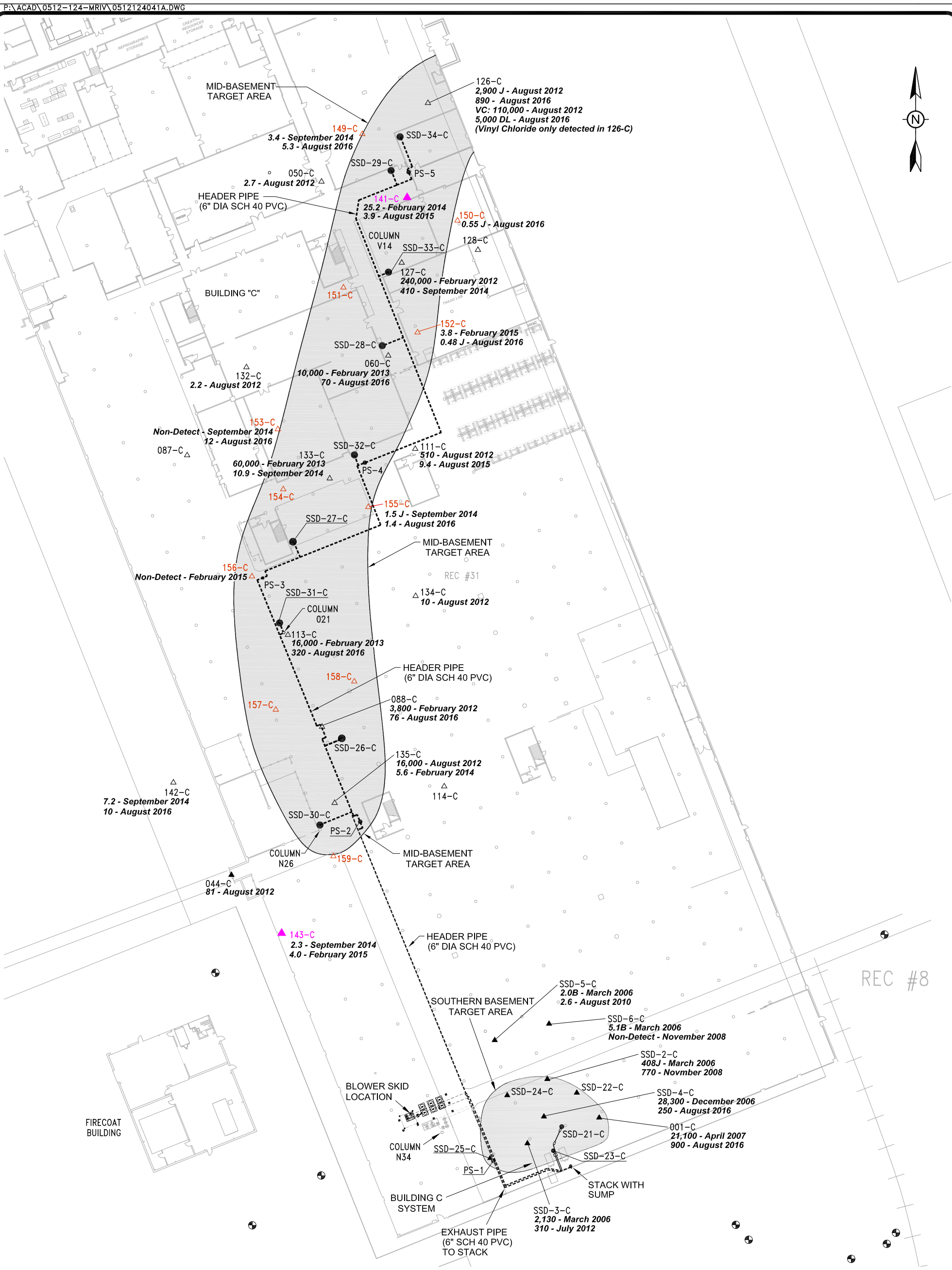
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117–0512124
DATE	9–28–16

FIGURE

3

P:\ACAD\0512-124-MRIV\0512124041A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

21,100 HIGHEST TCE CONCENTRATION ($\mu g/m^3$) PRE-SSD SYSTEM AND MOST RECENT TCE CONCENTRATION POST-SSD SYSTEM OPERATION

---- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)

SSD SUB-SLAB DEPRESSURIZATION

J ESTIMATED CONCENTRATION

B DETECTED IN LAB BLANK

TCE TRICHLOROETHENE

VC VINYL CHLORIDE

DL DILUTION ANALYSIS

TITLE: **BUILDING C SSD SYSTEM LAYOUT**

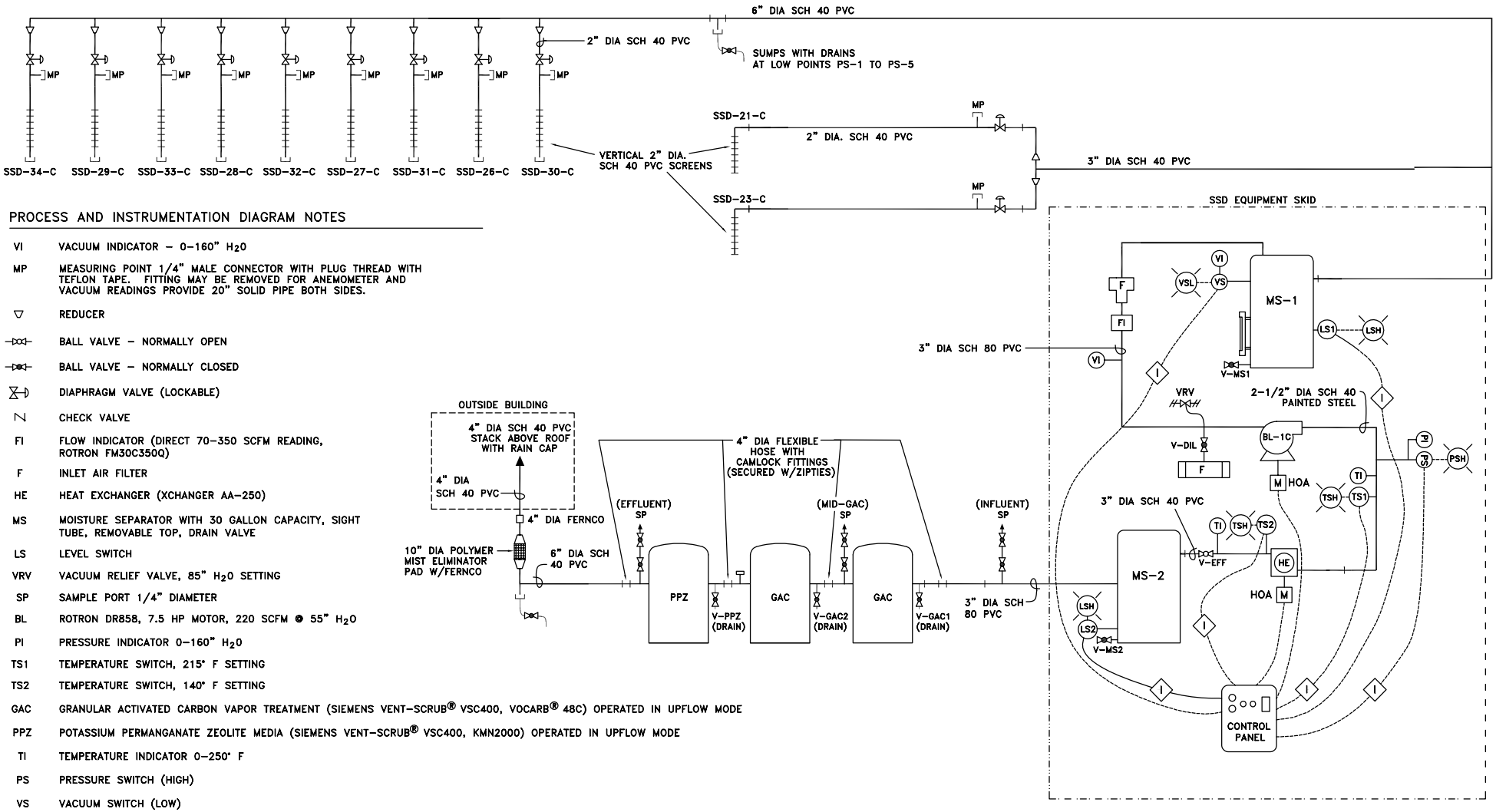
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	10-4-16

FIGURE **4**

P:\ACAD\0507-599-MRIV\0507599015A.DWG



PROCESS AND INSTRUMENTATION DIAGRAM NOTES

VI	VACUUM INDICATOR – 0–160" H_2O
MP	MEASURING POINT 1/4" MALE CONNECTOR WITH PLUG THREAD WITH TEFLON TAPE. FITTING MAY BE REMOVED FOR ANEMOMETER AND VACUUM READINGS PROVIDE 20" SOLID PIPE BOTH SIDES.
▽	REDUCER
—⋈—	BALL VALVE – NORMALLY OPEN
—⋈—	BALL VALVE – NORMALLY CLOSED
⧖	DIAPHRAGM VALVE (LOCKABLE)
⩘	CHECK VALVE
FI	FLOW INDICATOR (DIRECT 70–350 SCFM READING, ROTRON FM30C350Q)
F	INLET AIR FILTER
HE	HEAT EXCHANGER (XCHANGER AA-250)
MS	MOISTURE SEPARATOR WITH 30 GALLON CAPACITY, SIGHT TUBE, REMOVABLE TOP, DRAIN VALVE
LS	LEVEL SWITCH
VRV	VACUUM RELIEF VALVE, 85" H_2O SETTING
SP	SAMPLE PORT 1/4" DIAMETER
BL	ROTRON DR858, 7.5 HP MOTOR, 220 SCFM @ 55" H_2O
PI	PRESSURE INDICATOR 0–160" H_2O
TS1	TEMPERATURE SWITCH, 215° F SETTING
TS2	TEMPERATURE SWITCH, 140° F SETTING
GAC	GRANULAR ACTIVATED CARBON VAPOR TREATMENT (SIEMENS VENT-SCRUB® VSC400, VOCARB® 48C) OPERATED IN UPFLOW MODE
PPZ	POTASSIUM PERMANGANATE ZEOLITE MEDIA (SIEMENS VENT-SCRUB® VSC400, KMN2000) OPERATED IN UPFLOW MODE
TI	TEMPERATURE INDICATOR 0–250° F
PS	PRESSURE SWITCH (HIGH)
VS	VACUUM SWITCH (LOW)
V-MS1	PROCESS VALVE LABELS
HOA	PANEL MOUNTED HAND/OFF/AUTO SWITCH
◇ I	INTERLOCK BLOWER SHUTDOWN
○	LOCALLY MOUNTED INSTRUMENT
⊙	PANEL ALARM LIGHT
H	HIGH
L	LOW
M	MOTOR
⊤	TAP PLUG
SSD	SUB-SLAB DEPRESSURIZATION

TITLE:

BUILDING C SSD SYSTEM PROCESS AND INSTRUMENTATION DIAGRAM

LOCATION:

Middle River, Maryland

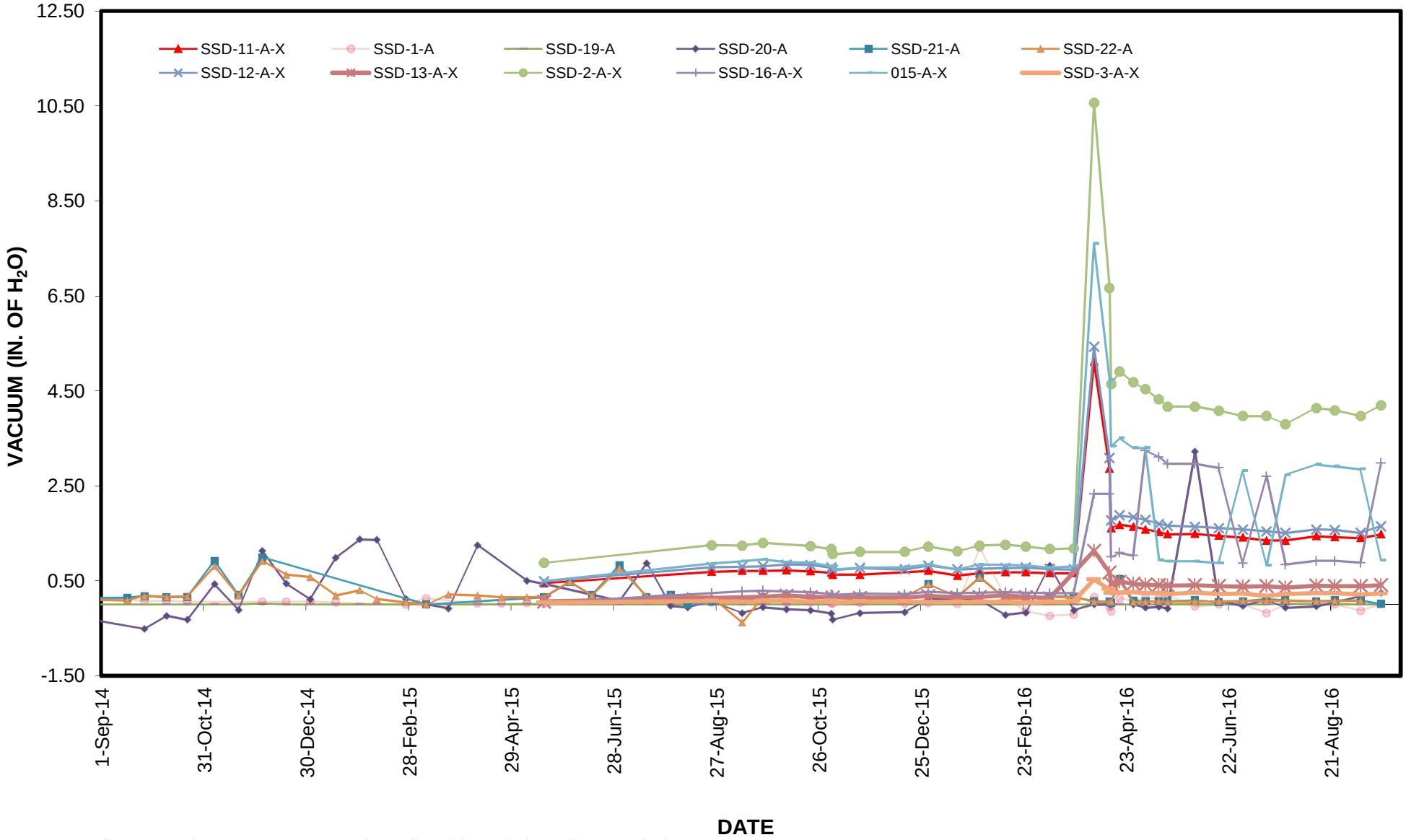
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0507533
DATE	9-8-14

FIGURE

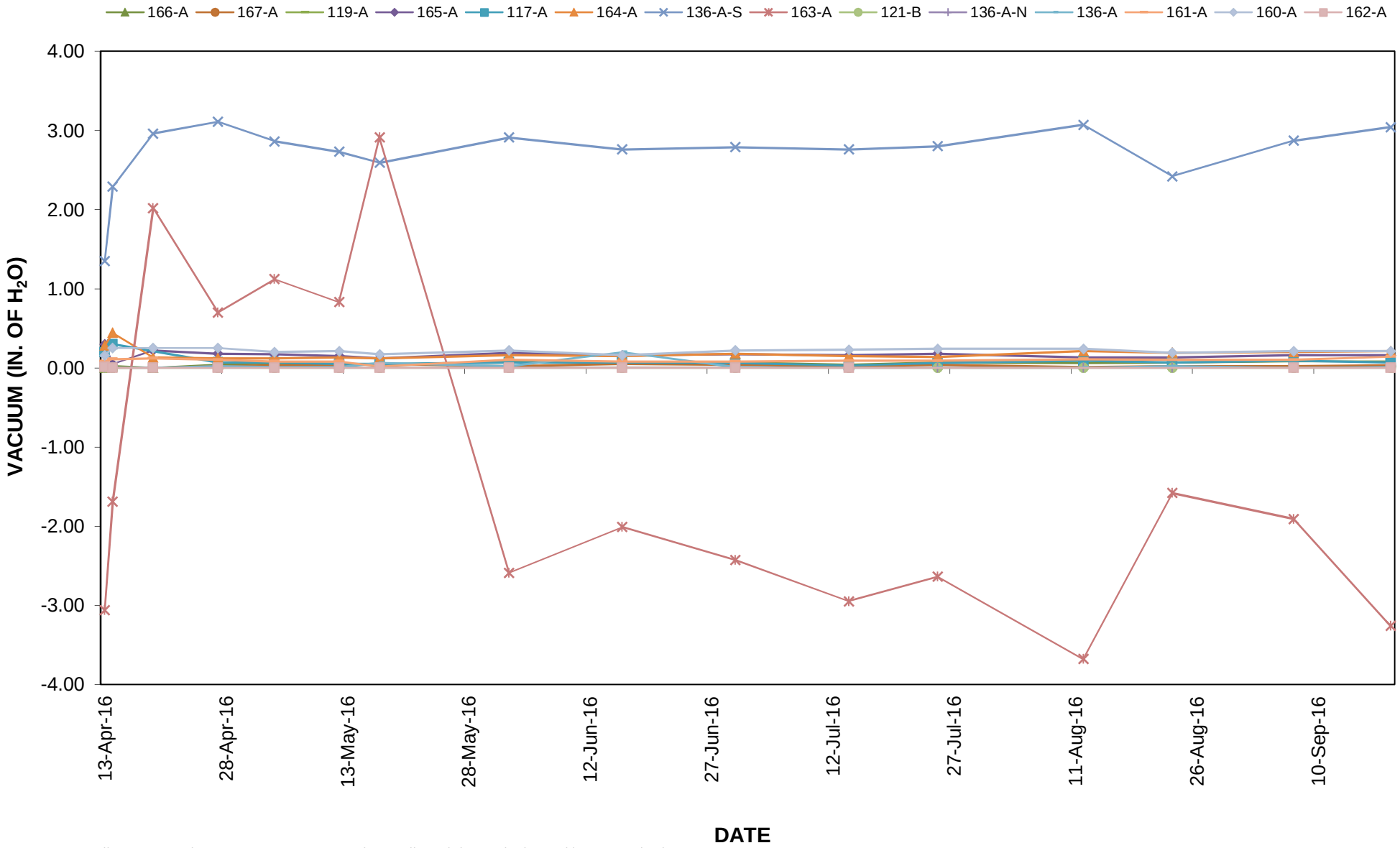
5

FIGURE 6
INDUCED VACUUM
SEPTEMBER 2014 TO SEPTEMBER 2016
BUILDING A SSD SYSTEM - LAY-UP ROOM AND BASEMENT



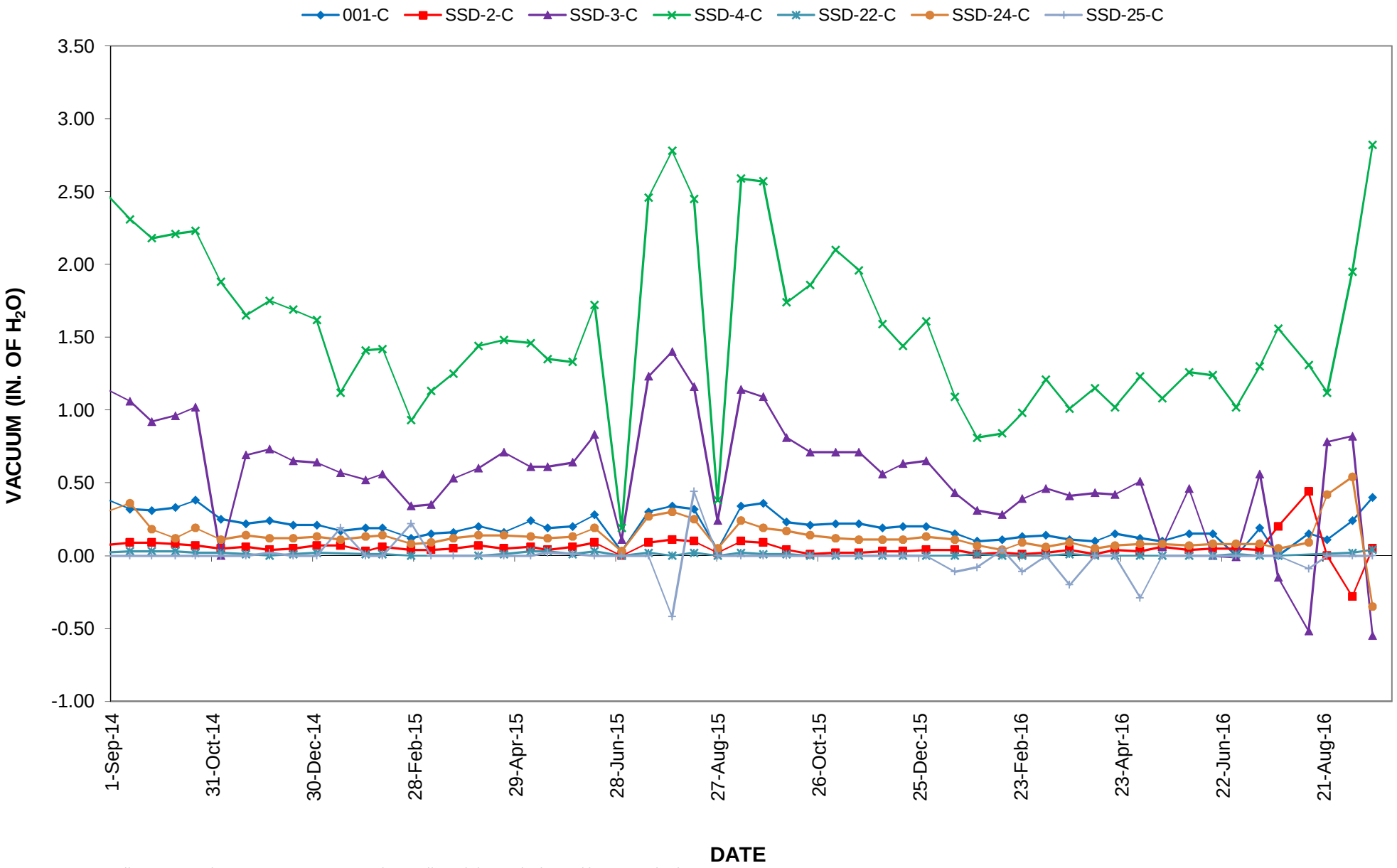
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.
Increase in vacuum influence beginning April 4, 2016 a result of the installation and operation of the larger blower skid associated with the second-phase expansion.
** NOTE: As of May 18, 2015, all vacuum readings for SSD-11-A, SSD-12-A, SSD-13-A, 015-A, SSD-16-A, SSD-2-A, and SSD-3-A were taken from the SSD-11-A-X, SSD-12-A-X, SSD-13-A-

FIGURE 7
INDUCED VACUUM
APRIL 2016 TO SEPTEMBER 2016
BUILDING A SSD SYSTEM - EASTERN AREA



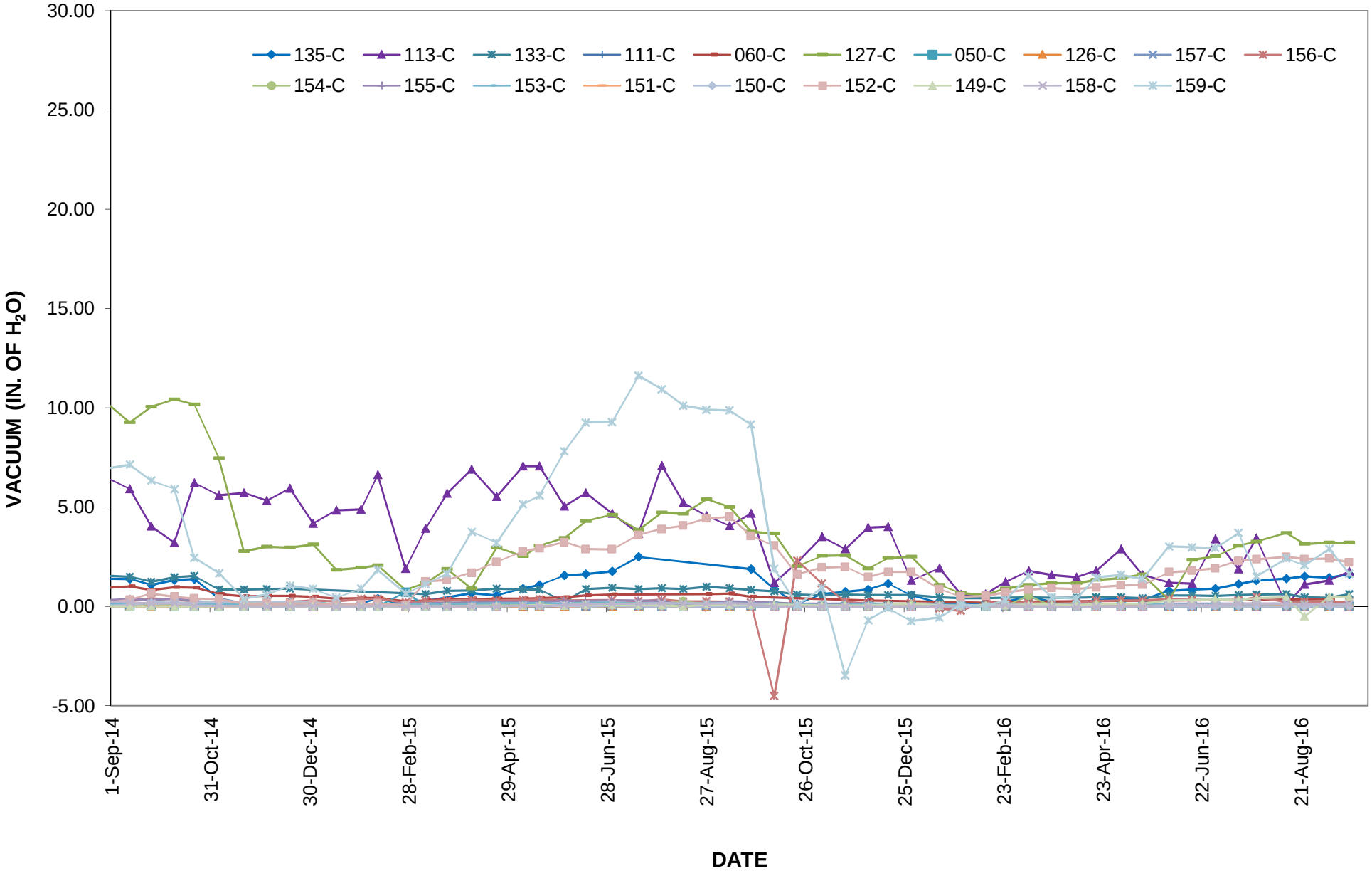
All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
VMPs we included in bi-weekly system checks upon start-up of the second-phase expansion on April 13, 2016.

FIGURE 8
INDUCED VACUUM
SEPTEMBER 2014 TO SEPTEMBER 2016
BUILDING C SSD SYSTEM - SOUTHERN BASEMENT AREA

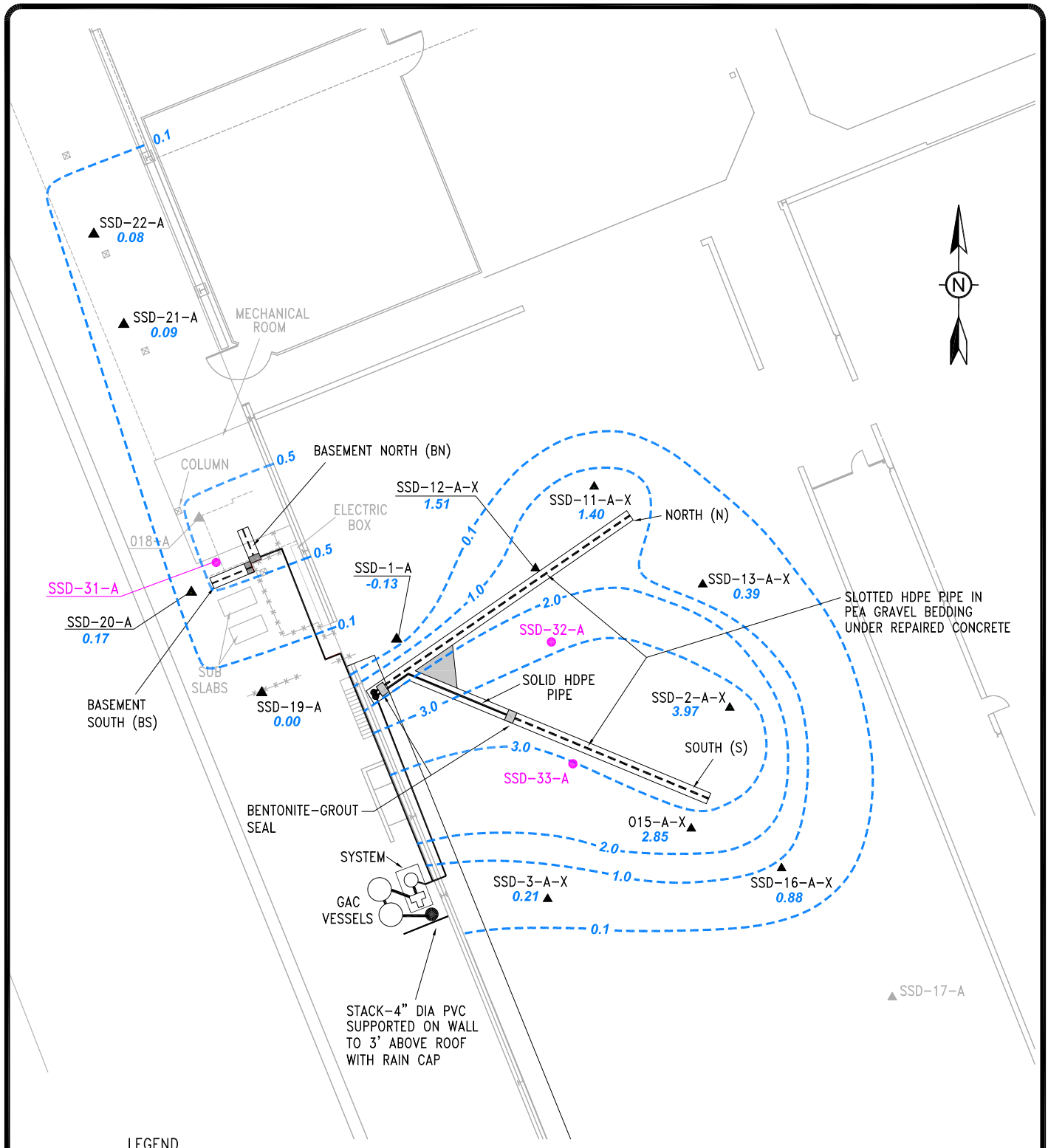


All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Only the past two years of vacuum data are depicted above.

FIGURE 9
INDUCED VACUUM
SEPTEMBER 2014 TO SEPTEMBER 2016
BUILDING C SSD SYSTEM - MID-BASEMENT AREA



All vacuum readings are instantaneous readings collected during the bi-weekly system checks.
Sub-slab vapor monitoring points routinely monitored beginning May 1, 2013 following second-phase system expansion in the middle basement area of Building C.



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SOIL VAPOR EXTRACTION POINT (USED IN PILOT TEST ONLY)
- 0.06 INCHES OF H_2O INDUCED VACUUM MEASURED ON 9/7/16
- INFERRED EQUAL VACUUM INFLUENCE
- HORIZONTAL SOIL VAPOR EXTRACTION POINT

0 25 50

SCALE IN FEET

TITLE:

INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A LAY-UP ROOM AND BASEMENT

LOCATION:

Middle River, Maryland

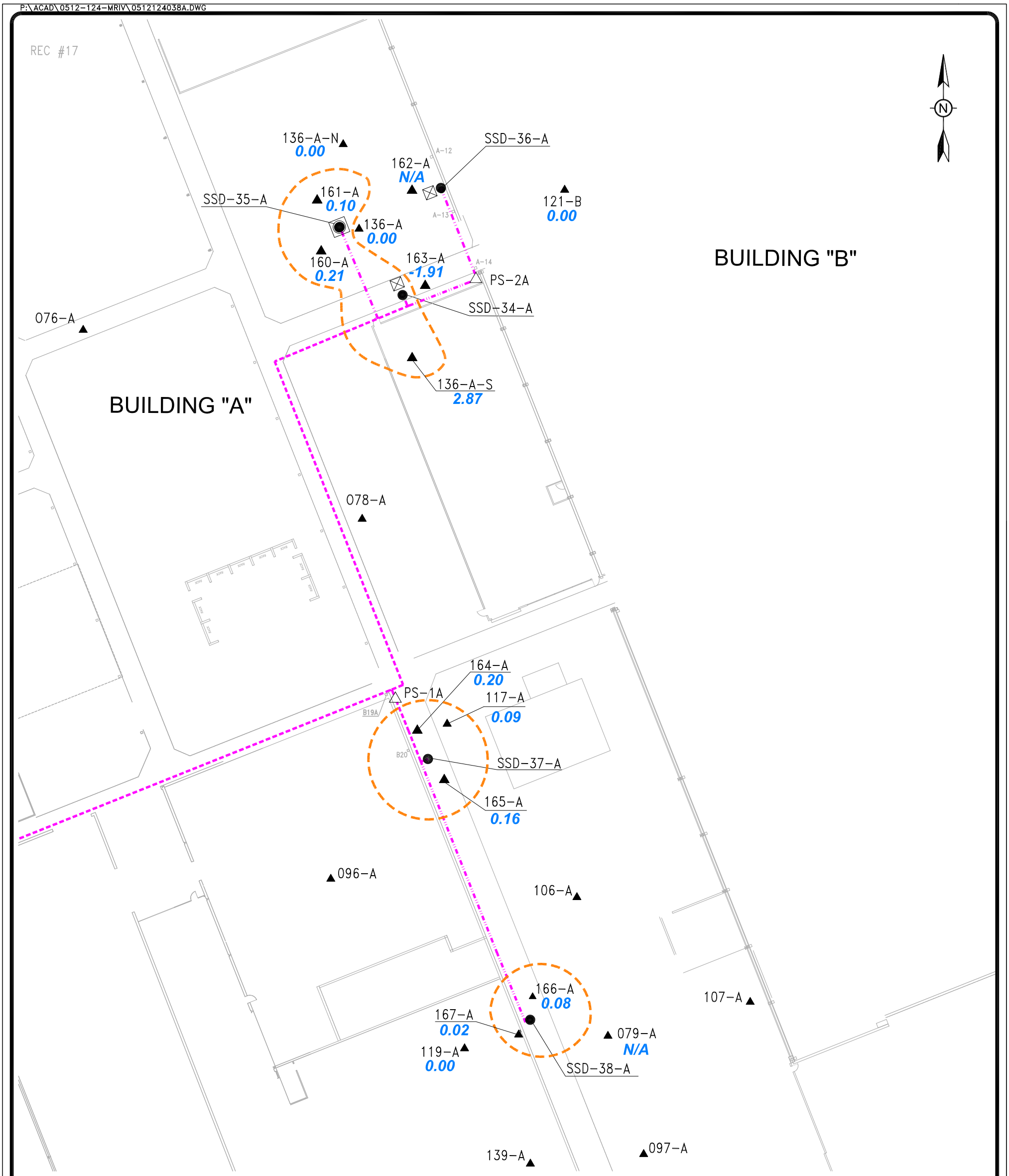
TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	10-4-16

FIGURE 10

P:\ACAD\0512-124-MRIV\0512124042A.DWG

P:\ACAD\0512-124-MRIV\0512124038A.DWG



LEGEND

- ▲ SUB-SLAB VAPOR MONITORING POINT
- ● VERTICAL SOIL VAPOR EXTRACTION POINT
- ● SOIL VAPOR EXTRACTION POINT (USED IN PREVIOUS PILOT TEST)
- ⊗ INDOOR AIR SAMPLING POINT
- AREA OF VACCUM INFLUENCE
- EXISTING HORIZONTAL SOIL VAPOR EXTRACTION POINT
- 1.03 INCHES OF H_2O INDUCED VACUUM MEASURED ON 9/7/16
- N/A NOT ACCESSIBLE
- EXTRACTION POINT PIPING (2" DIA. SCH 40)
- HEADER PIPE (6" DIA. SCH 40)
- INDOOR AIR FILTER CONNECTION TO EMERGENCY POWER SUPPLY (FIELD RUN)
- △ PIPE SUMP
- ◯ STEEL PIPE SLEEVE (4" DIA.)
- ⊠ PIPE BOLLARD (2" DIA.)
- SSD SUB-SLAB DEPRESSURIZATION

NOTE:

PIPE HANGERS PLACED NEXT TO EXISTING SUPPORT BRACKETS FOR STEEL PIPING IN CEILING APPROX. 6-12 FT APART.

0 40 80

SCALE IN FEET

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING A EASTERN AREA**

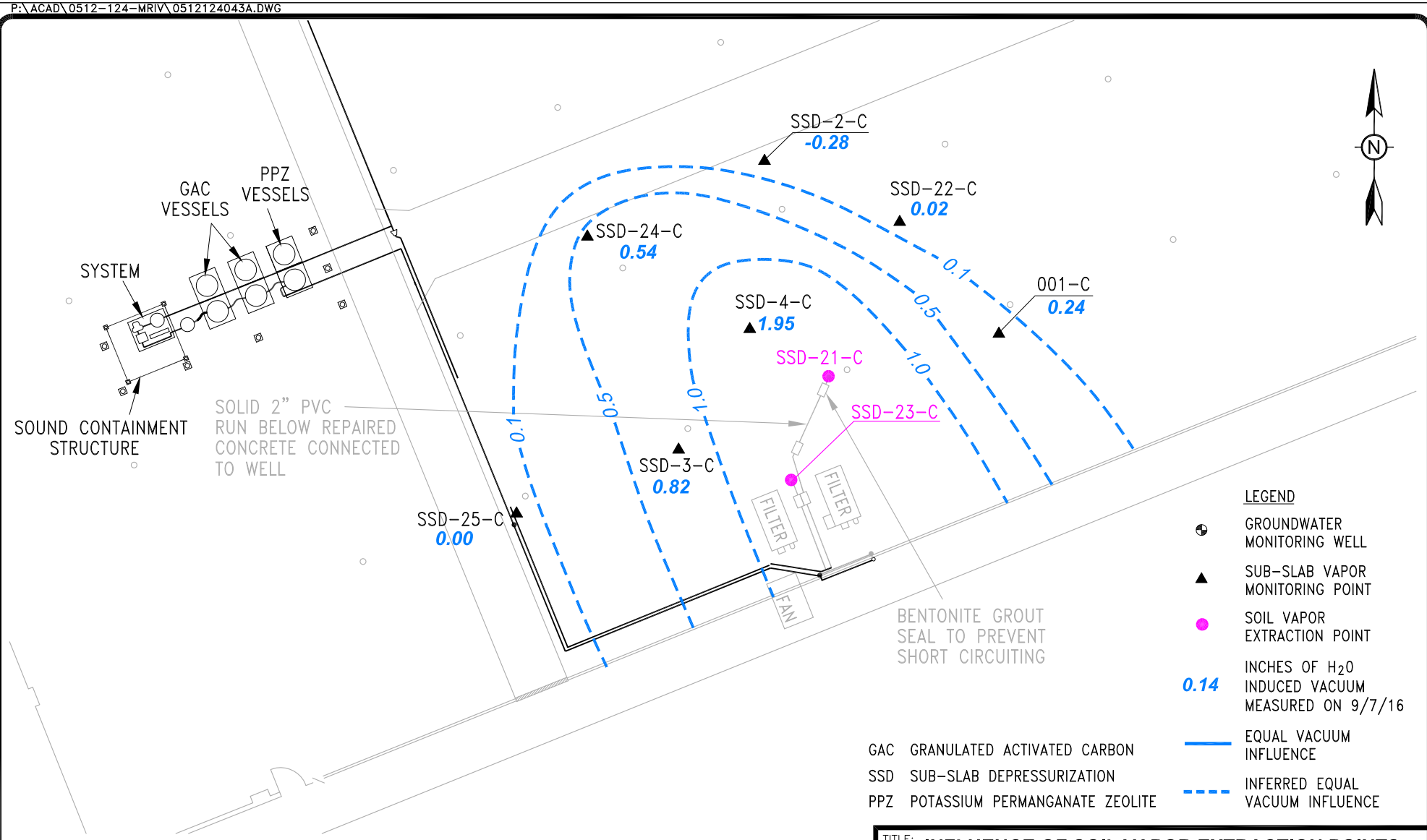
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	DM
DRAFTED	CP
PROJECT#	117-0512124
DATE	10-4-16

FIGURE 11

P:\ACAD\0512-124-MRIV\0512124043A.DWG



TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C - SOUTHERN BASEMENT AREA**

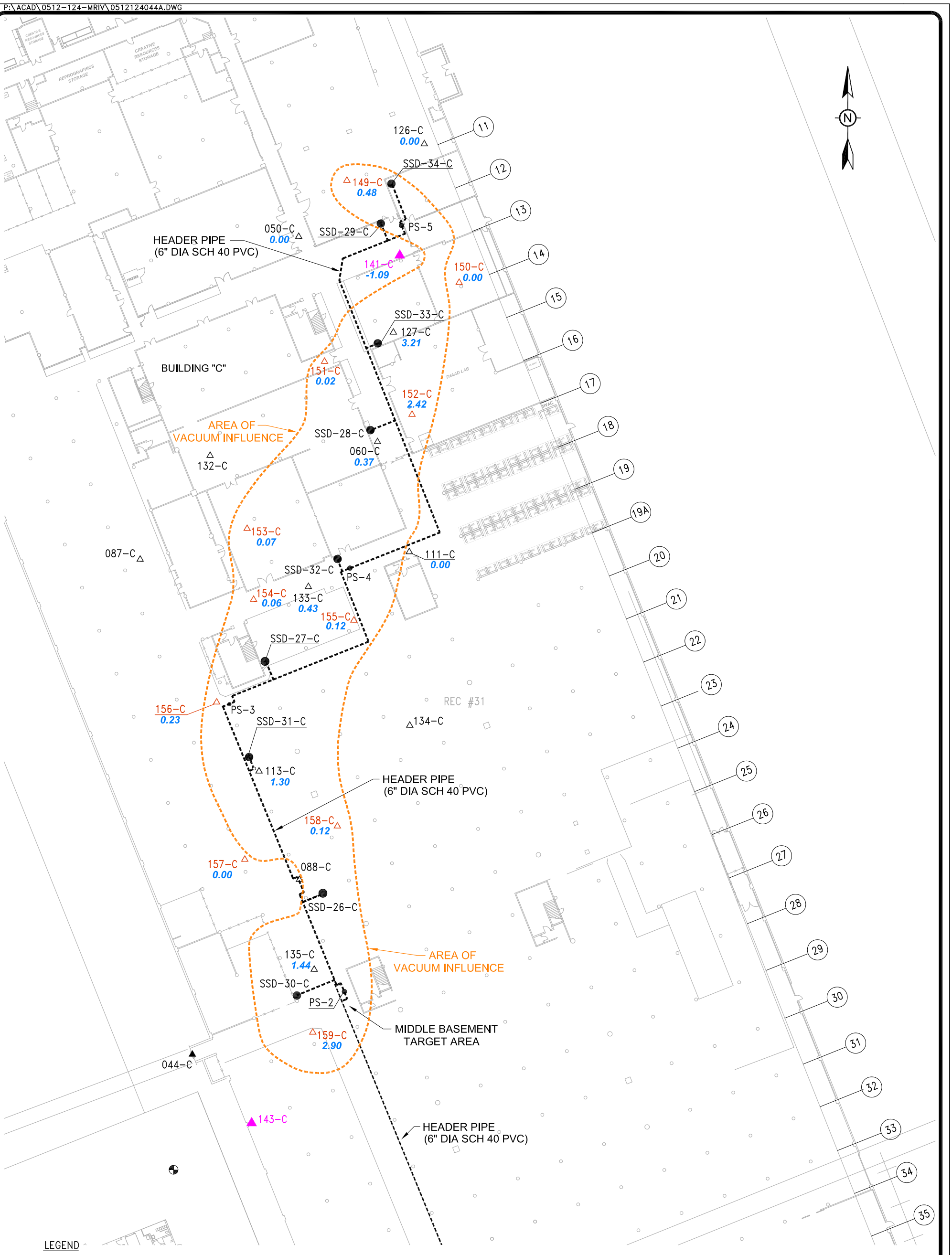
LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	9-28-16

FIGURE **12**

P:\ACAD\0512-124-MRIV\0512124044A.DWG



LEGEND

- GROUNDWATER MONITORING WELL
- SUB-SLAB VAPOR MONITORING POINT
- SUB-SLAB VAPOR MONITORING POINT INSTALLED JANUARY 2010
- SUB-SLAB VAPOR MONITORING POINT INSTALLED FEBRUARY 2013
- SUB-SLAB VAPOR MONITORING POINT INSTALLED AUGUST 2014
- SOIL VAPOR EXTRACTION POINT
- SUMP

NOTE:
088-C HAS BEEN REMOVED FROM MONITORING.

- AREA OF VACUUM INFLUENCE
- HEADER PIPE (2", 3" OR 6" DIA. SCH 40)
- SSD SUB-SLAB DEPRESSURIZATION
- 0.11 INCHES OF H_2O INDUCED VACUUM MEASURED ON 9/7/16

0 50 100
SCALE IN FEET

TITLE: **INFLUENCE OF SOIL VAPOR EXTRACTION POINTS BUILDING C MID-BASEMENT AREA**

LOCATION: **Middle River, Maryland**

TETRA TECH

APPROVED	PR
DRAFTED	CP
PROJECT#	117-0512124
DATE	9-28-16

FIGURE 13

FIGURE 14

BUILDING A INFLUENT VOC CONCENTRATIONS

SSD System, Middle River Complex, Middle River, Maryland

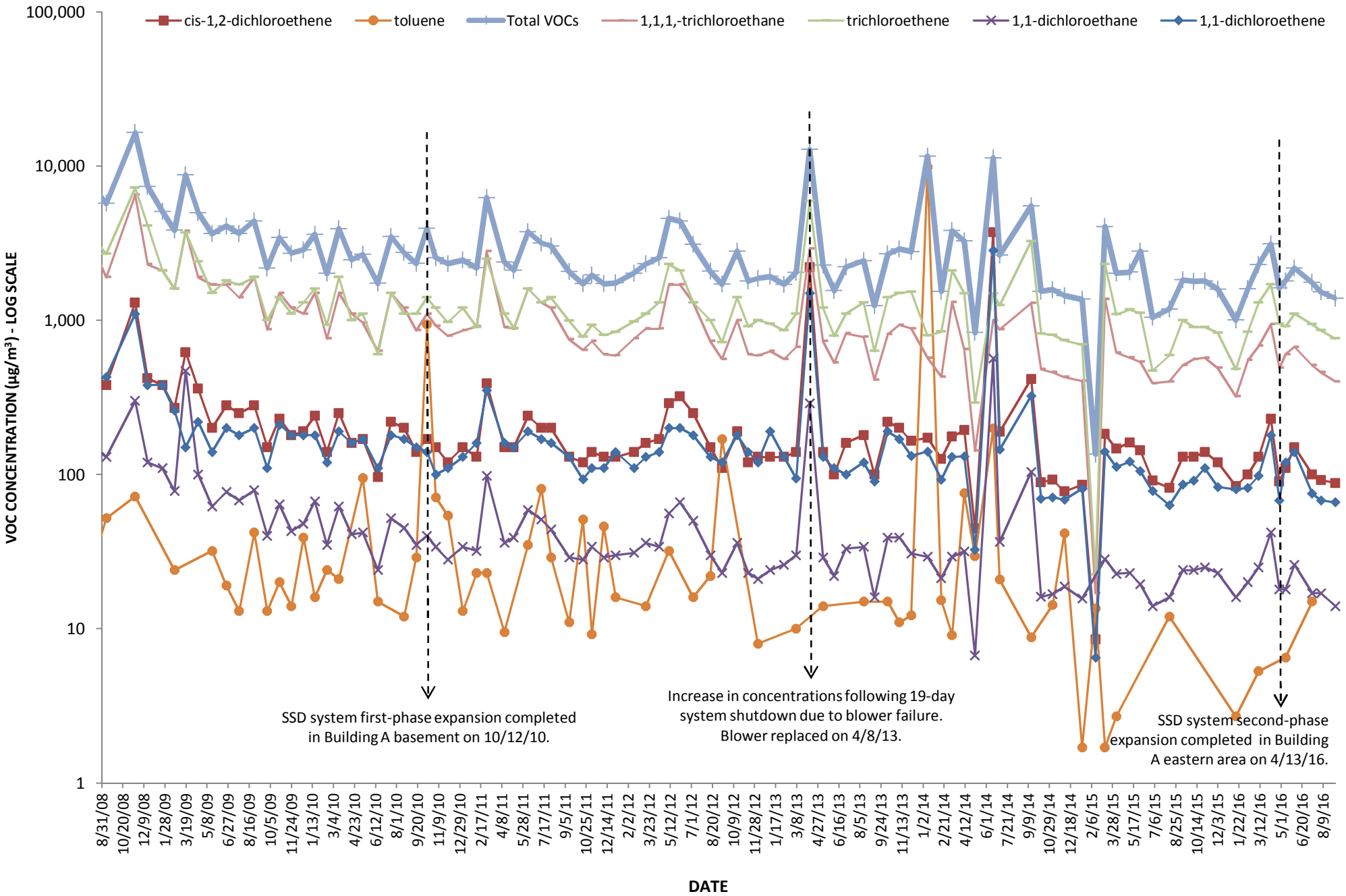
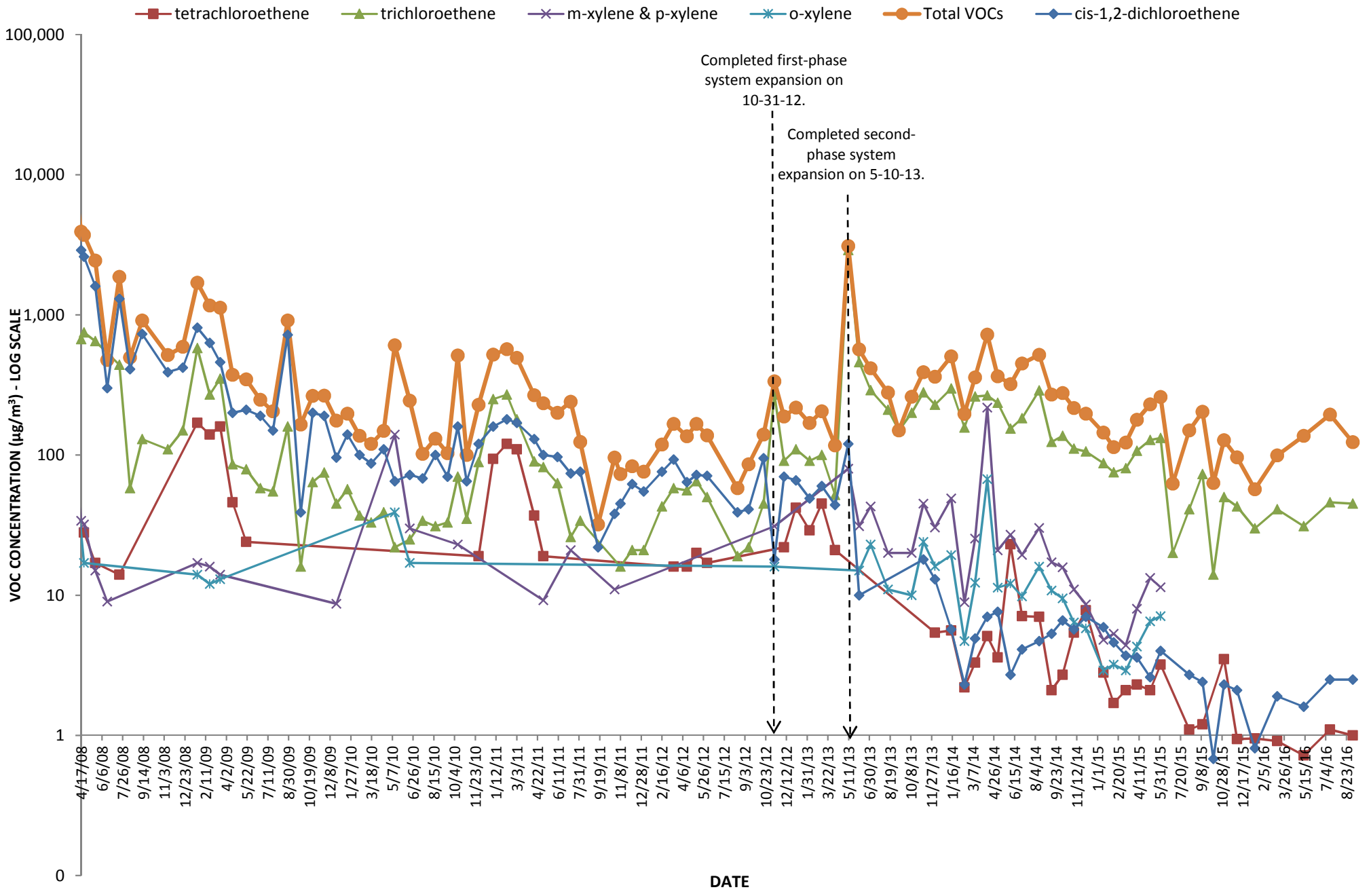


FIGURE 15

BUILDING C INFLUENT VOC CONCENTRATIONS

SSD System, Middle River Complex, Middle River, Maryland



APPENDIX A— BIWEEKLY AND QUARTERLY SYSTEM CHECK FORMS

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 4/4/16 Time: 1220 Personnel: DLM

1. Was the system running upon arrival?
   (YES) NO
2. Where there any alarm conditions upon arrival?
   YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES (NO)
4. Is the dilution valve open?
   YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses?
   YES (NO)
6. Is there any damage to system components?
   YES (NO)
7. Are all locks and zip-ties secure?
   (YES) NO
8. Was there a GAC change out?
   YES (NO)
9. How many GAC units are at this location?
   NEW 2 SPENT 1
10. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off?
    (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
27	34	7	143	76	49	288	96.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	9.64	1852	161.7 *	No	40% open	
South	14.80	1476	128.9 *	No	32% open	
Basement North	28.9	374	32.7 *	Yes	70% open	
Basement South	0.32	603	52.6 *	No	30% open	
SSD-34-A	N/A	N/A	N/A **	N/A	N/A	
SSD-35-A	↓	↓	↓ **	↓	↓	
SSD-36-A			**			
SSD-37-A			**			
SSD-38-A			**			

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	N/A		160-A	N/A	
079-A	↓		SSD-1-A	0.16	H_2O
167-A			SSD-12-A-X	5.43	
119-A			SSD-11-A-X	5.12	
165-A			SSD-13-A-X	1.13	
117-A			SSD-2-A-X	10.57	
164-A			015-A-X	7.60	
136-A-S			SSD-16-A-X	2.33	
163-A			SSD-3-A-X	0.53	
121-B			SSD-22-A	0.06	
162-A			SSD-21-A	0.07	
136-A-N			SSD-20-A	0.00	
136-A			SSD-19-A	0.00	
161-A	↓				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	N/A	N/A	N/A	N/A	
PS-1-A	↓	↓	↓	↓	
PS-2-A	↓	↓	↓	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
Small hole in North trench	Temp. covered w/ tape	(OPEN) CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Dawn L Mancer **TIME:** 1310

VACUUM-FLOW RELATIONSHIP TEST
SSD SYSTEM SECOND-PHASE EXPANSION - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 4/13/16 **Time:** 0822 **Personnel:** DLM/MW/MS

SSD-34-A

Extraction Point Data	
Vacuum (in. H_2O):	>max
Velocity (ft/min):	2073
Flow (scfm):	45.2

Blower Skid Data	
Dilution Valve Position:	95% closed
Flow (scfm):	90

VMP Data (in. H_2O)	
163-A	-1.89
162-A	0.00
160-A	0.00
136-A-S	3.63
136-A	0.00

Comments

SSD-35-A

Extraction Point Data	
Vacuum (in. H_2O):	>max
Velocity (ft/min):	1431
Flow (scfm):	31.2

Blower Skid Data	
Dilution Valve Position:	90% closed
Flow (scfm):	0

VMP Data (in. H_2O)	
160-A	0.46
136-A-N	0.00
162-A	0.00
163-A	-1.66
136-A-S	0.00
136-A	0.02
161-A	0.17

Comments

SSD-36-A

Extraction Point Data	
Vacuum (in. H_2O):	47.4
Velocity (ft/min):	>max
Flow (scfm):	N/A

Blower Skid Data	
Dilution Valve Position:	100% closed
Flow (scfm):	126

VMP Data (in. H_2O)	
136-A	0.00
136-A-N	0.00
162-A	0.02
121-B	0.00

Comments

SSD-37-A

Extraction Point Data	
Vacuum (in. H_2O):	73.2
Velocity (ft/min):	3544
Flow (scfm):	77.3

Blower Skid Data	
Dilution Valve Position:	95% closed
Flow (scfm):	60

VMP Data (in. H_2O)	
164-A	0.70
165-A	1.17
117-A	0.49

Comments

SSD-38-A

Extraction Point Data	
Vacuum (in. H_2O):	>max
Velocity (ft/min):	1029
Flow (scfm):	22.4

Blower Skid Data	
Dilution Valve Position:	95% closed
Flow (scfm):	100

VMP Data (in. H_2O)	
167-A	0.00
166-A	0.00
119-A	0.00

Comments
079-A located in closed-off construction area. Not accessible.

System Start-Up

SSD SYSTEM CHECK - BUILDING A
LMC Middle River Complex, Middle River, Maryland

Date: 4/13/16 **Time:** 1200 **Personnel:** DLM/mw/ms

1. **Was the system running upon arrival?** YES NO
2. **Where there any alarm conditions upon arrival?** YES NO
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES NO
4. **Is the dilution valve open?** YES NO % Open: _____
5. **Are there any leaks or damage to system hoses?** YES NO
6. **Is there any damage to system components?** YES NO
7. **Are all locks and zip-ties secure?** YES NO
8. **Was there a GAC change out?** YES NO
9. **How many GAC units are at this location?** NEW _____ SPENT _____
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
11. **Do the temp. gauges fall when system is turned off?** YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
22	30	8	140	71	50	300	———

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	5.25	1110	96.9 *	No		
South	9.17	1206	105.3 *	No		
Basement North	24.0	302	26.4 *	Yes	30% open	
Basement South	0.24	477	41.6 *	No	10% open	
SSD-34-A	25.2	695	15.2 **	No		
SSD-35-A	24.9	744	16.2 **	No		
SSD-36-A	13.87	3088	67.3 **	No		
SSD-37-A	22.8	1960	42.7 **	No		
SSD-38-A	24.2	522	11.4 **	No		

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.00		160-A	0.16	
079-A	N/A	Construction	SSD-1-A	-0.05	
167-A	0.00		SSD-12-A-X	3.09	
119-A	0.00		SSD-11-A-X	2.86	
165-A	0.30		SSD-13-A-X	0.67	
117-A	0.20		SSD-2-A-X	6.67	
164-A	0.28		015-A-X	4.73	
136-A-S	1.35		SSD-16-A-X	N/A	Heavy Equip
163-A	-3.06		SSD-3-A-X	0.32	
121-B	0.00		SSD-22-A	0.06	
162-A	0.01		SSD-21-A	0.06	
136-A-N	0.00		SSD-20-A	0.00	
136-A	0.00		SSD-19-A	0.00	
161-A	0.08				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	N/A	N/A	Yes	
Exhaust Stack Sump	N/A	↓	↓	N/A	
PS-1-A	↓	↓	↓	↓	
PS-2-A	↓	↓	↓	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	N/A	N/A	N/A	
Was the fan running upon arrival?	↓	↓	↓	
Fan speed/airflow setting (#/cfm)	↓	↓	↓	
Is there damage to unit or signs of tampering?	↓	↓	↓	
Is the "do not turn off filter" warning sign in place?	↓	↓	↓	
Life status color of the Pre-Filter (F-1)?	↓	↓	↓	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	↓	↓	↓	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

Start-up of expanded system.

PERSONNEL SIGNATURE: David J Mann **TIME:** 1350

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 4/14/16 Time: 1220 Personnel: DLM/MW

1. Was the system running upon arrival? (YES) NO
2. Where there any alarm conditions upon arrival? YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure? (YES) NO
8. Was there a GAC change out? YES (NO)
9. How many GAC units are at this location? NEW 2 SPENT 1
10. Do the these fall to zero when system is turned off?
    - Flow Gauge (YES) NO
    - Pressure Gauge (YES) NO
    - Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	44	4	156	78	40	—	309.5

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)		Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.59	641	56.0	*	No	~25% open	
South	6.39	882	77.0	*	No	~25% open	
Basement North	43.1	400	34.9	*	Yes	~30% open	
Basement South	0.39	660	57.6	*	No	~10% open	
SSD-34-A	43.5	730	15.9	**	No	100% open	variable vac.
SSD-35-A	43.1	1281	27.9	**	No	100% open	
SSD-36-A	0.87	741	16.1	**	No	~25% open	
SSD-37-A	39.3	2445	53.3	**	No	100% open	
SSD-38-A	43.0	431	9.40	**	No	100% open	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.02		160-A	0.25	
079-A	N/A	construction	SSD-1-A	-0.14	H_2O
167-A	0.00		SSD-12-A-X	1.77	
119-A	N/A	heavy equip	SSD-11-A-X	1.61	
165-A	0.05		SSD-13-A-X	0.44	
117-A	0.30		SSD-2-A-X	4.64	
164-A	0.44		015-A-X	3.33	
136-A-S	2.29		SSD-16-A-X	1.00	
163-A	-1.69		SSD-3-A-X	0.24	
121-B	0.00		SSD-22-A	0.06	
162-A	0.00		SSD-21-A	0.04	
136-A-N	0.00		SSD-20-A	0.00	
136-A	0.00		SSD-19-A	0.00	
161-A	0.11		118-A	0.00	

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	N/A	N/A	Yes	
Exhaust Stack Sump	No	↓	↓	Yes	
PS-1-A	No	↓	↓	Yes	
PS-2-A	No	↓	↓	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
Small hole in North trench	Patched w/ epoxi on 4/18	OPEN (CLOSED)
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

Collect vapor samples from new vapor extraction points

PERSONNEL SIGNATURE: Daniel J Munn **TIME:** 1455

SSD SYSTEM CHECK - BUILDING A

1 week post-start-up LMC Middle River Complex, Middle River, Maryland

Date: 4/19/16 Time: 1220 Personnel: DLM/MW

1. Was the system running upon arrival? (YES) NO
2. Where there any alarm conditions upon arrival? YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure? (YES) NO
8. Was there a GAC change out? YES (NO)
9. How many GAC units are at this location? NEW 2 SPENT 1
10. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	46	6	170	90	38	235	428.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	3.01	750	65.5 *	No	None	
South	6.62	1100	96.0 *	No	None	
Basement North	46.5	1150	100.4 *	Yes	None	
Basement South	0.72	685	59.8 *	No	None	
SSD-34-A	46.9	246	5.4 **	No	None	
SSD-35-A	47.0	480	10.5 **	No	None	
SSD-36-A	0.84	720	15.7 **	No	None	
SSD-37-A	8.46	1432	31.2 **	No	25% open	
SSD-38-A	46.2	1250	27.3 **	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.00		160-A	0.25	
079-A	N/A	construction	SSD-1-A	0.13	H_2O
167-A	0.00		SSD-12-A-X	1.88	
119-A	0.00		SSD-11-A-X	1.68	
165-A	0.22		SSD-13-A-X	0.48	
117-A	N/A	Heavy equip	SSD-2-A-X	4.91	
164-A	0.13		015-A-X	3.50	
136-A-S	2.96		SSD-16-A-X	1.09	
163-A	2.02		SSD-3-A-X	0.25	
121-B	0.00		SSD-22-A	0.50	
162-A	0.00		SSD-21-A	0.54	
136-A-N	0.00		SSD-20-A	0.56	
136-A	0.00		SSD-19-A	0.00	
161-A	0.12				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator	No	N/A	N/A	Yes	
Exhaust Stack Sump	No	↓	↓	Yes	
PS-1-A	No	↓	↓	Yes	
PS-2-A	No	↓	↓	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	**AF-M**	**AF-S**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Dawn L Mercer **TIME:** 1400

SSD SYSTEM CHECK - BUILDING A

2 weeks post-startup MC Middle River Complex, Middle River, Maryland

Date: 4/27/16 Time: 1100 Personnel: DLM/MW

1. Was the system running upon arrival?
   (YES) NO
2. Where there any alarm conditions upon arrival?
   YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES (NO)
4. Is the dilution valve open?
   YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses?
   YES (NO)
6. Is there any damage to system components?
   YES (NO)
7. Are all locks and zip-ties secure?
   (YES) NO
8. Was there a GAC change out? (conducted on 4/21)
   YES (NO)
9. How many GAC units are at this location?
   NEW 1 SPENT 2
10. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off?
    (YES) NO

GENERAL SYSTEM MONITORING							
Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
42	46	4	158	75	36	250	616.7

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING						
Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.94	681	59.5 *	No	None	
South	6.30	988	86.3 *	No	None	
Basement North	44.4	1219	106.4 *	Yes	None	
Basement South	0.39	663	57.9 *	No	None	
SSD-34-A	44.6	860	18.8 **	No	None	
SSD-35-A	44.5	1092	23.8 **	No	None	
SSD-36-A	0.73	600	13.1 **	No	None	
SSD-37-A	6.24	968	21.1 **	No	None	
SSD-38-A	39.9	1600	34.9 **	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING					
VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.25	
079-A	N/A	Construction	SSD-1-A	0.07	
167-A	0.02		SSD-12-A-X	1.84	
119-A	0.00		SSD-11-A-X	1.64	
165-A	0.18		SSD-13-A-X	0.44	
117-A	0.07		SSD-2-A-X	4.68	
164-A	0.12		015-A-X	3.30	
136-A-S	3.11		SSD-16-A-X	1.03	
163-A	0.70		SSD-3-A-X	0.26	
121-B	0.00		SSD-22-A	0.05	
162-A	0.00		SSD-21-A	0.08	
136-A-N	0.00		SSD-20-A	0.00	
136-A	0.02		SSD-19-A	0.00	
161-A	0.10				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	1119	1117	1115	
Summa Canister ID	09581	11164	11269	
Flow Contr. ID	N/A	N/A	N/A	
Start Vacuum (in. Hg)	-10	-20	-10	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	N/A	N/A	Yes	
Exhaust Stack	No	↓	↓	Yes	
PS-1-A	No	↓	↓	Yes	
PS-2-A	No	↓	↓	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: David L Mueller **TIME:** 1230

SSD SYSTEM CHECK - BUILDING A

3 weeks post-Start-up MC Middle River Complex, Middle River, Maryland

Date: 5/4/16 Time: 1130 Personnel: DM/MW

1. Was the system running upon arrival?
   YES NO
2. Where there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Is the dilution valve open?
   YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
   YES NO
6. Is there any damage to system components?
   YES NO
7. Are all locks and zip-ties secure?
   YES NO
8. Was there a GAC change out?
   YES NO
9. How many GAC units are at this location?
   NEW 3 SPENT 0
10. Do the these fall to zero when system is turned off?
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
11. Do the temp. gauges fall when system is turned off?
    YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	44	4	158	74	38	250	785.2

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.84	668	~~44.6~~ 58.3	No	None	
South	6.08	949	~~20.7~~ 28.8	No	None	
Basement North	41.8	374	32.7	Yes	None	~~water~~
Basement South	0.38	594	51.9	Yes	None	~~water~~
SSD-34-A	41.8	1110	24.2	No	None	
SSD-35-A	41.8	~~770~~	~~16.8~~	No	None	
SSD-36-A	0.63	599	13.0	No	None	
SSD-37-A	5.7	973	21.3	No	None	
SSD-38-A	34.3	1950	42.5	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.06		160-A	0.20	
079-A	N/A	Construction	SSD-1-A	0.14	
167-A	0.03		SSD-12-A-X	1.78	
119-A	0.00		SSD-11-A-X	1.58	
165-A	0.17		SSD-13-A-X	0.42	
117-A	0.07		SSD-2-A-X	4.54	
164-A	0.12		015-A-X	3.24	
136-A-S	2.86		SSD-16-A-X	N/A	Equipment
163-A	1.12	variable	SSD-3-A-X	0.24	
121-B	0.00		SSD-22-A	0.06	
162-A	0.00		SSD-21-A	0.07	
136-A-N	0.00		SSD-20-A	-0.07	
136-A	0.01		SSD-19-A	0.00	
161-A	0.08				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GREEN	GREEN	GREEN	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
None		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Dawn J Mercer **TIME:** 1320

4 weeks post-startup

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 5/12/16 **Time:** 1415 **Personnel:** JMW, DLM

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)

Comment: _____

3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES NO % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 3 SPENT 0
10. **Do the these fall to zero when system is turned off?**
    - Flow Gauge (YES) NO
    - Pressure Gauge (YES) NO
    - Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
40	46	6	164	82	38	248	952.2

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.70	619	54.0 *	No	None	
South	5.79	924	80.7 *	No	None	
Basement North	38.2	>max	N/A *	Yes	None	variable vac
Basement South	0.38	561	49.0 *	Yes	None	
SSD-34-A	38.5	1853	40.4 **	No	None	
SSD-35-A	38.7	2121	46.2 **	No	None	variable vac
SSD-36-A	2.20	1259	27.4 **	No	open to 30% open	
SSD-37-A	5.0	996	21.7 **	No	None	
SSD-38-A	30.8	2160	47.1 **	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.05		160-A	0.21	
079-A	N/A	Construction	SSD-1-A	0.13	
167-A	~~3.45~~	0.03	SSD-12-A-X	1.79	
119-A	0.00		SSD-11-A-X	1.53	
165-A	0.15		SSD-13-A-X	0.41	
117-A	0.05		SSD-2-A-X	4.32	
164-A	0.13		015-A-X	3.11	
136-A-S	2.73		SSD-16-A-X	0.94	
163-A	0.83		SSD-3-A-X	0.24	
121-B	0.00		SSD-22-A	0.07	
162-A	0.00		SSD-21-A	0.07	
136-A-N	0.00		SSD-20-A	-0.05	
136-A	0.01		SSD-19-A	0.00	
161-A	0.08				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1420	1415	1410	
Summa Canister ID	09668	10782	09835	
Flow Contr. ID	28	99	195	
Start Vacuum (in. Hg)	29	28	29	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
None		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: David F Mann **TIME:** 1533

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 5/17/16 **Time:** 1210 **Personnel:** JMW

1. **Was the system running upon arrival?** YES NO
2. **Where there any alarm conditions upon arrival?** YES NO
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES NO
4. **Is the dilution valve open?** YES NO % Open: _____
5. **Are there any leaks or damage to system hoses?** YES NO
6. **Is there any damage to system components?** YES NO
7. **Are all locks and zip-ties secure?** YES NO
8. **Was there a GAC change out?** YES NO
9. **How many GAC units are at this location?** NEW 3 SPENT 0
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge YES NO
    Pressure Gauge YES NO
    Vacuum Gauges YES NO
11. **Do the temp. gauges fall when system is turned off?** YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
36	42	6	156	80	42	235	1070.1

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.62	615	~~56.8~~ 53.7	No	None	
South	5.56	889	~~78.7~~ 77.6	No	None	
Basement North	> Max ⟷	36.5	N/A	Yes	None	Var
Basement South	530 ⟷	0.36	~~48.9~~ 46.3	Yes	None	
SSD-34-A	36.8	620	~~53.3~~ 13.5	No	None	
SSD-35-A	36.4	1445	~~45.2~~ 31.5	No	None	
SSD-36-A	2.52	1385	~~32.4~~ 30.2	No	None	
SSD-37-A	4.69	1050	22.9 **	No	None	
SSD-38-A	27.0	2570	56.0 **	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.17	
079-A	NA	Construction	SSD-1-A	0.20	
167-A	0.05		SSD-12-A-X	1.66	
119-A	0.00		SSD-11-A-X	1.48	
165-A	0.12		SSD-13-A-X	0.40	
117-A	0.05		SSD-2-A-X	4.17	
164-A	0.12		015-A-X	2.96	
136-A-S	2.59		SSD-16-A-X	0.91	
163-A	2.91		SSD-3-A-X	0.22	
121-B	0.00		SSD-22-A	0.06	
162-A	0.00		SSD-21-A	0.07	
136-A-N	0.00		SSD-20-A	~0.08	
136-A	0.06		SSD-19-A	0.00	
161-A	0.02				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	NA	NA	NA	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	↓	↓	Yes	
Exhaust Stack Sump	No	↓	↓	Yes	
PS-1-A	No	↓	↓	Yes	
PS-2-A	No	↓	↓	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Michael Wilkes **TIME:** 1430

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 6/2/16 Time: 1530 Personnel: DLM/MW

1. Was the system running upon arrival? YES (NO)
2. Where there any alarm conditions upon arrival? (YES) NO
   Comment: High Temp - Post-HE
3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure on system hoses? (YES) NO
8. Was there a GAC change out? (YES) NO
9. How many GAC units are at this location? NEW 2 SPENT 1
10. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off? (YES) NO
12. Does the heat-exchanger have dust on the underside? (YES) NO
13. Was the underside of the heat-exchanger vacuumed? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
36	42	6	164	92	36	259	1373.2

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.64	614	53.6	No	None	
South	5.56	915	79.9	No	None	
Basement North	35.90	>max	N/A	Yes	None	variable vac.
Basement South	0.42	517	45.1	Yes	None	
SSD-34-A	36.30	1991	43.4	No	None	variable vac
SSD-35-A	36.20	670	14.6	No	None	
SSD-36-A	3.08	1521	33.2	No	None	
SSD-37-A	4.65	891	19.4	No	None	
SSD-38-A	25.5	2675	58.3	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	0.22	
079-A	N/A	Destroyed	SSD-1-A	-0.04	
167-A	0.02		SSD-12-A-X	1.64	
119-A	N/A	Heavy Equip	SSD-11-A-X	1.49	
165-A	0.19		SSD-13-A-X	0.41	
117-A	0.07		SSD-2-A-X	4.17	
164-A	0.16		015-A-X	2.96	
136-A-S	2.91		SSD-16-A-X	0.91	
163-A	-2.59		SSD-3-A-X	0.25	
121-B	0.00		SSD-22-A	0.07	
162-A	0.00		SSD-21-A	0.09	
136-A-N	0.00		SSD-20-A	3.22	
136-A	0.02		SSD-19-A	0.01	
161-A	0.10				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1552	1548	1545	
Summa Canister ID	11118	09738	11276	
Flow Contr. ID	74	139	195	
Start Vacuum (in. Hg)	-29	-30	-30	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
Underside of heat exch. dirty	Vacuumed	OPEN **CLOSED**
		OPEN ~~CLOSED~~
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: James J Mercer **TIME:** 1650

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 6/16/16 **Time:** 1230 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** (YES) NO
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure on system hoses?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 2 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
35	42	7	162	92	36	200	1700.1

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.54	645	56.3 *	No	None	
South	5.38	901	78.7 *	No	None	
Basement North	33.5	>max	N/A *	Yes	None	H20, VAR VAC
Basement South	0.40	560	48.9 *	Yes	None	H20
SSD-34-A	34.4	2445	53.3 **	No	None	VAR VAC
SSD-35-A	34.3 2075→2445		45.2 **	No	None	
SSD-36-A	2.67	1486	32.4 **	No	None	
SSD-37-A	4.25	920	20.1 **	No	None	
SSD-38-A	20.8	2920	63.7 **	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.16	
079-A	N/A	Destroyed	SSD-1-A	0.00	
167-A	0.05		SSD-12-A-X	1.61	
119-A	N/A	HW EQP	SSD-11-A-X	1.45	
165-A	0.16		SSD-13-A-X	0.39	
117-A	0.07		SSD-2-A-X	4.08	
164-A	0.15		015-A-X	2.88	
136-A-S	2.76		SSD-16-A-X	0.87	
163-A	2.01		SSD-3-A-X	0.22	
121-B	0.00		SSD-22-A	0.17	
162-A	0.00		SSD-21-A	0.05	
136-A-N	0.00		SSD-20-A	0.08	VAR
136-A	0.20		SSD-19-A	0.00	
161-A	0.08				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓		

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	↓	—	—	↓	
PS-1-A	↓	—	—	↓	
PS-2-A	↓	—	—	↓	
PS-3-A	↓	—	—	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Red	Red	Red	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	Yes	Yes	Yes	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

- New barrel labeled and in use for BLDG-A Indoor air filter waste

PERSONNEL SIGNATURE: [signature] **TIME:** 1600

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 6/30/16 **Time:** 1510 **Personnel:** JHW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)

Comment: _____

3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure on system hoses?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 2 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    - Flow Gauge (YES) NO
    - Pressure Gauge (YES) NO
    - Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
34	40	6	168	102	34	260	2039.0

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.29	722	63.0 *	No	None	
South	5.23	960	83.8 *	No	None	
Basement North	32.6	>Max	N/A *	Yes	None	Var Vac, H_2O
Basement South	0.40	488	42.6 *	Yes	None	Var Vac, H_2O
SSD-34-A	33.3	2320	50.6 **	No	None	Var Vac + Vel
SSD-35-A	33.3	2107	45.9 **	No	None	Var Vac
SSD-36-A	2.67	1535	33.5 **	No	None	
SSD-37-A	4.03	967	21.1 **	No	None	
SSD-38-A	18.50	3344	72.9 **	No	None	Var Vac

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.22	
079-A	Destroyed		SSD-1-A	0.00	
167-A	0.04		SSD-12-A-X	1.58	
119-A	0.00		SSD-11-A-X	1.41	
165-A	0.17		SSD-13-A-X	0.38	
117-A	0.06		SSD-2-A-X	3.97	
164-A	0.18		015-A-X	2.81	
136-A-S	2.79		SSD-16-A-X	0.87	
163-A	~2.43		SSD-3-A-X	0.23	
121-B	0.00		SSD-22-A	0.08	
162-A	0.00		SSD-21-A	0.07	
136-A-N	0.00		SSD-20-A	<0.03	
136-A	0.01		SSD-19-A	0.01	
161-A	0.08				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	↓	—	—	↓	
PS-1-A		—	—		
PS-2-A		—	—		
PS-3-A	↓	—	—	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	**AF-M**	**AF-S**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?				

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M. M. Wilk **TIME:** 1700

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 7/14/16 Time: 1105 Personnel: DLM

1. Was the system running upon arrival? (YES) NO
2. Where there any alarm conditions upon arrival? YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure on system hoses? (YES) NO
8. Was there a GAC change out? YES (NO)
9. How many GAC units are at this location? NEW 2 SPENT 1
10. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. Do the temp. gauges fall when system is turned off? (YES) NO
12. Does the heat-exchanger have dust on the underside? (YES) NO
13. Was the underside of the heat-exchanger vacuumed? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
36	40	4	170	104	32	252	023696

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.41	642	56.0 *	No	None	
South	5.13	844	73.7 *	No	None	
Basement North	31.70	>max	N/A *	Yes	None	variable vac
Basement South	0.38	490	42.8 *	Yes	None	
SSD-34-A	32.60	543	11.8 **	No	None	
SSD-35-A	32.8	809	17.6 **	No	None	variable vacuum
SSD-36-A	2.72	1692	36.9 **	No	None	
SSD-37-A	3.88	1017	22.2 **	No	None	
SSD-38-A	17.46	3396	74.0 **	No	None	variable vac

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.04		160-A	0.23	
079-A	Destroyed		SSD-1-A	-0.18	
167-A	0.02		SSD-12-A-X	1.54	
119-A	0.00		SSD-11-A-X	1.35	
165-A	0.16		SSD-13-A-X	0.39	
117-A	0.03		SSD-2-A-X	N/A	Heavy Equip
164-A	0.15		015-A-X	2.70	
136-A-S	2.76		SSD-16-A-X	0.82	
163-A	-2.95		SSD-3-A-X	0.18	
121-B	0.00		SSD-22-A	0.08	
162-A	0.00	Needs Reinstalled	SSD-21-A	0.11	
136-A-N	0.00		SSD-20-A	0.10	
136-A	0.00		SSD-19-A	0.00	
161-A	0.09				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1142	1140	1138	
Summa Canister ID	09582	11270	10783	
Flow Contr. ID	28	99	71	
Start Vacuum (in. Hg)	-29	-30	-28.5	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	YES	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	↓	↓	↓	
Life status color of the Post-Filter (F-3)?	↓	↓	↓	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	↓	↓	↓	
Was the Post-Filter (F-3) replaced?	↓	↓	↓	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
162-A came out of hole	Removed Pole Taped over hole	(OPEN) CLOSED
high-temp post-HE alarm continues to flogger.	adjusted switch setpoint.	OPEN (CLOSED)
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Dawn F Munn **TIME:** 1250

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 7/25/16 **Time:** 1215 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure on system hoses?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 2 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
34	40	6	176	106	32	255	2594.2

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.15	625	54.6 *	No	None	
South	5.06	836	73.0 *	No	None	
Basement North	31.5	>MAX	N/A *	Yes	None	H_2O Vac Val
Basement South	0.40	622	54.3 *	Yes	None	H_2O Vac Val
SSD-34-A	32.1	1245	27.1 **	No	None	Vac Val/Vel
SSD-35-A	32.2	1404	30.6 **	No	None	Vac Val/Vel
SSD-36-A	2.72	1414	30.8 **	No	None	
SSD-37-A	3.70	1031	22.5 **	No	None	
SSD-38-A	16.59	3163	69.0 **	No	None	Vac Val

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.24	
079-A			SSD-1-A	0.00	
167-A	0.04		SSD-12-A-X	1.51	
119-A	0.00		SSD-11-A-X	1.35	
165-A	0.18		SSD-13-A-X	1.36	
117-A	0.06		SSD-2-A-X	3.80	
164-A	0.14		015-A-X	2.73	
136-A-S	2.80		SSD-16-A-X	0.84	
163-A	-2.64		SSD-3-A-X	0.22	
121-B	0.00		SSD-22-A	0.04	
162-A	NA 0.00	Maintenance	SSD-21-A	0.09	
136-A-N	0.00		SSD-20-A	-0.07	
136-A	0.00		SSD-19-A	0.02	
161-A	0.09				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Green	Green	Green	
Life status color of the GAC Filter (F-2)?	Green	Green	Green	
Life status color of the Post-Filter (F-3)?	Green	Green	Green	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD			
Issue Requiring Maintenance	Maintenance Conducted	Issue Status	
H02-A came out of hole	reinstalled	OPEN	CLOSED
		OPEN	CLOSED
		OPEN	CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: John M. Vike **TIME:** 1415

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 8/12/16 **Time:** 1250 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure on system hoses?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 2 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
36	42	6	176	106	31	250	3031.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.55	656	57.3 *	No	None	
South	5.51	935	81.6 *	No	None	
Basement North	35.3	>MAX	N/A *	Yes	None	Var vac
Basement South	0.33	644	56.2 *	Yes	None	Var vac
SSD-34-A	34.8	347	7.6 **	No	None	
SSD-35-A	34.8	465	10.1 **	No	None	
SSD-36-A	2.26	1298	28.3 **	No	None	
SSD-37-A	3.84	996	21.7 **	No	None	Cap Replaced
SSD-38-A	17.27	3530	77.0 **	No	None	

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.06		160-A	0.24	
079-A	N/A	Destroyed	SSD-1-A	0.09	
167-A	0.01		SSD-12-A-X	1.58	
119-A	0.00		SSD-11-A-X	1.44	
165-A	0.13		SSD-13-A-X	0.40	
117-A	0.09		SSD-2-A-X	4.14	
164-A	0.21		015-A-X	2.95	
136-A-S	3.07		SSD-16-A-X	0.92	
163-A	-3.68		SSD-3-A-X	0.24	
121-B	0.00		SSD-22-A	0.07	
162-A	Very Equal		SSD-21-A	0.07	
136-A-N	0.00	Partially Blocked	SSD-20-A	-0.04	
136-A	0.00		SSD-19-A	0.00	
161-A	0.11				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**A-INFLUENT**	**A-MID GAC**	**A-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	↓	—	—	↓	
PS-1-A	↓	—	—	↓	
PS-2-A	↓	—	—	↓	
PS-3-A	↓	—	—	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	**AF-M**	**AF-S**	**Comments**
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 8/23/16 **Time:** 1235 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 2 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
35	42	7	164	96	30	260	3263.1

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.50	652	56.9 *	No	None	
South	5.43	875	76.4 *	No	None	
Basement North	0.38	575	N/A *	Yes	None	
Basement South	33.8	>MAX	50.2 *	Yes	None	VAR VAC
SSD-34-A	33.8	1328	29.0 **	No	None	
SSD-35-A	33.8	1245	27.1 **	No	None	VAR VAC, VP1
SSD-36-A	2.13	1183	25.8 **	No	None	
SSD-37-A	3.76	941	20.5 **	No	None	
SSD-38-A	16.30	3387	73.8 **	No	None	VAR VAC

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.07		160-A	0.19	
079-A	Destroyed		SSD-1-A	0.00	
167-A	0.02		SSD-12-A-X	1.57	
119-A	0.00		SSD-11-A-X	1.42	
165-A	0.13		SSD-13-A-X	0.39	
117-A	0.07		SSD-2-A-X	4.09	
164-A	0.19		015-A-X	2.91	
136-A-S	2.42		SSD-16-A-X	0.91	
163-A	1.58		SSD-3-A-X	0.24	
121-B	0.00		SSD-22-A	0.00, 0.08	
162-A	HVY EQUIP		SSD-21-A	0.09	
136-A-N	0.00		SSD-20-A	0.09	

136-A	0.02		SSD-19-A	[illegible] 0.01
161-A	0.10			

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	-	-	Yes	
Exhaust Stack Sump	↓	-	-	↓	
PS-1-A	↓	-	-	↓	
PS-2-A	↓	-	-	↓	
PS-3-A	↓	-	-	↓	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	GRN	GRN	GRN	
Life status color of the GAC Filter (F-2)?	GRN	GRN	GRN	
Life status color of the Post-Filter (F-3)?	GRN	GRN	GRN	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M. Miller **TIME:** 1400

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 9/7/16 **Time:** 0825 **Personnel:** DLM

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)

Comment: _____

3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** YES (NO)
9. **How many GAC units are at this location?** NEW 2 SPENT 1
10. **Do the these fall to zero when system is turned off?**
    - Flow Gauge (YES) NO
    - Pressure Gauge (YES) NO
    - Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
34	40	6	164	92	30	2600	3617.5

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.46	642	56.0 *	No	None	
South	5.28	901	78.7 *	No	None	
Basement North	33.1	>max	N/A *	Yes	None	
Basement South	0.42	508	44.3 *	Yes	None	variable vac
SSD-34-A	33.3	329	7.2 **	No	None	
SSD-35-A	33.1	675	14.7 **	No	None	
SSD-36-A	2.06	1274	27.8 **	No	None	
SSD-37-A	3.62	928	20.2 **	No	None	
SSD-38-A	15.9	3333	72.7 **	No	None	variable vac

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	0.21	
079-A	*Destroyed*		SSD-1-A	-0.13	
167-A	0.02		SSD-12-A-X	1.51	
119-A	0.00		SSD-11-A-X	1.40	
165-A	0.16		SSD-13-A-X	0.39	
117-A	0.09		SSD-2-A-X	3.97	
164-A	0.20		015-A-X	2.85	
136-A-S	2.87		SSD-16-A-X	0.88	
163-A	-1.91		SSD-3-A-X	0.21	
121-B	0.00		SSD-22-A	0.08	
162-A	Covered by New Operation		SSD-21-A	0.09	
136-A-N	0.00		SSD-20-A	0.17	
136-A	0.00		SSD-19-A	0.00	
161-A	0.10				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	1000	0958	0956	
Summa Canister ID	11127	11493	10796	
Flow Contr. ID	71	28	195	
Start Vacuum (in. Hg)	-28	-30	-30	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	—	—	Yes	
Exhaust Stack Sump	No	—	—	Yes	
PS-1-A	No	—	—	Yes	
PS-2-A	No	—	—	Yes	
PS-3-A	No	—	—	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?				
Was the fan running upon arrival?				
Fan speed/airflow setting (#/cfm)				
Is there damage to unit or signs of tampering?				
Is the "do not turn off filter" warning sign in place?				
Life status color of the Pre-Filter (F-1)?				
Life status color of the GAC Filter (F-2)?				
Life status color of the Post-Filter (F-3)?				
Was the Pre-Filter (F-1) replaced?				
Was the GAC Filter (F-2) replaced?				
Was the Post-Filter (F-3) replaced?				

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
New equipment by SSD-35-A prevents proper monitoring. Needs tapped to new location		(OPEN) CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Diane L Munn **TIME:** 1010

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

Date: 9/19/16 **Time:** 1600 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC change out?** (YES) NO
9. **How many GAC units are at this location?** NEW 1 SPENT 2
10. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
11. **Do the temp. gauges fall when system is turned off?** (YES) NO
12. **Does the heat-exchanger have dust on the underside?** (YES) NO
13. **Was the underside of the heat-exchanger vacuumed?** (YES) NO

Comment: _____

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
37	44	7	150	90	30	270	3910.6

* Clean or change filter if differential pressure increases by 10 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
North	2.61	642	56.0 *	X	X	
South	5.45	923	80.6 *	X	X	
Basement North	33.2	1407	122.8 *	X ✓	X	Var Vac
Basement South	0.54	493	43.0 *	X ✓	X	
SSD-34-A	35.6	1230	26.8 **	X	X	Var Vac
SSD-35-A	35.5	1895	41.3 **	X	X	Var Vac
SSD-36-A	2.26	1259	27.4 **	X	X	
SSD-37-A	3.70	863	18.4 **	X	X	
SSD-38-A	16.46	3560	77.6 **	X	X	Var Vac

* Flow = Velocity x 0.0873; ** Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
166-A	0.08		160-A	0.21	
079-A	*Destroyed*		SSD-1-A	1.91	
167-A	0.03		SSD-12-A-X	1.65	
119-A	0.00		SSD-11-A-X	1.48	
165-A	0.16		SSD-13-A-X	0.41	
117-A	0.17		SSD-2-A-X	4.20	
164-A	0.21		015-A-X	2.98	
136-A-S	3.04		SSD-16-A-X	0.93	
163-A	3.26		SSD-3-A-X	0.23	
121-B	0.00		SSD-22-A	Flooded	In puddle
162-A	HW EQUIP		SSD-21-A	0.01	
136-A-N	0.00		SSD-20-A	0.25	
136-A	0.01		SSD-19-A	0.00	
161-A	0.14				

SSD SYSTEM CHECK - BUILDING A

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	A-INFLUENT	A-MID GAC	A-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separator	No	/	/	Yes	
Exhaust Stack Sump	No	/	/	Yes	
PS-1-A	No	/	/	Yes	
PS-2-A	No	/	/	Yes	
PS-3-A	No	/	/	Yes	

INDOOR AIR FILTER MONITORING				
	AF-N	AF-M	AF-S	Comments
Was the power on upon arrival?	Yes	Yes	Yes	
Was the fan running upon arrival?	Yes	Yes	Yes	
Fan speed/airflow setting (#/cfm)	6/300	6/300	6/300	
Is there damage to unit or signs of tampering?	No	No	No	
Is the "do not turn off filter" warning sign in place?	Yes	Yes	Yes	
Life status color of the Pre-Filter (F-1)?	Grn	Grn	Grn	
Life status color of the GAC Filter (F-2)?	Grn	Grn	Grn	
Life status color of the Post-Filter (F-3)?	Grn	Grn	Grn	
Was the Pre-Filter (F-1) replaced?	No	No	No	
Was the GAC Filter (F-2) replaced?	No	No	No	
Was the Post-Filter (F-3) replaced?	No	No	No	

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: John Walker **TIME:** 1745

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 4/7/16 Time: 1040 Personnel: DLM

1. Was the system running upon arrival?
   (YES) NO
2. Where there any alarm conditions upon arrival?
   YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES (NO)
4. Are there any leaks or damage to system hoses?
   YES (NO)
5. Is there any damage to system components?
   YES (NO)
6. Are all locks and zip-ties secure?
   (YES) NO
7. Was there a GAC or PPZ change out?
   YES (NO) Comment: _____
8. How many GAC units are at this location?
   NEW 1 SPENT 1
9. How many PPZ ($KMnO_4$) units are at this location?
   NEW 1 SPENT 0
10. How many water drums are on-site?
    EMPTY 0 PART FULL 2 FULL 0
11. How many filter drums are on-site?
    EMPTY 0 PART FULL 1 FULL 0
12. Are waste drums labeled and in good condition?
    (YES) NO
    Comment: _____
13. Do the these fall to zero when system is turned off?
    Flow Gauge (YES) NO
    Pressure Gauges (YES) NO
    Vacuum Gauges (YES) NO

GENERAL SYSTEM MONITORING

Time	Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Flow (scfm)	Pressure post-Blower (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)
N/A	28	36	8	182	44	150	95

* Replace filter if >25 in. H_2O

14. How many hours are displayed on the time counter? 2367.9.7

EXTRACTION WELL VACUUM AND VELOCITY MONITORING

Location	Time	Vacuum (in. H_2O)	Velocity (ft/min)	Flow** (scfm)	Vacuum/Flow Adjustment	Comments
SSD-21-C	N/A	10.86	1129	24.6	None	
SSD-23-C			CLOSED			
SSD-30-C		16.02	550	12.0	100%→25%	Vel=142 pre-Δ 100%→25% op
SSD-26-C		12.38	683	14.9	100%→25%	Vel=1368 pre-Δ
SSD-31-C		21.70	1930	42.1	None	
SSD-27-C		1.08	1088	23.7		
SSD-32-C		1.72	1192	26.0		
SSD-28-C		1.10	1679	36.6		
SSD-33-C		5.88	1367	29.8		
SSD-29-C		16.39	3204	69.8		
SSD-34-C		22.60	1486	32.40		

** Flow = Velocity x 0.0218

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

VAPOR MONITORING POINT (VMP) VACUUM MONITORING							
VMP	Time	Vacuum (in. H_2O)	Comments	VMP	Time	Vacuum (in. H_2O)	Comments
159-C	N/A	0.38		060-C	N/A	N/A	Heavy Equip.
135-C		0.09		111-C		0.00	
~~068-C~~		~~0.16~~	N/A	155-C		0.09	
157-C		0.00		133-C		0.44	
113-C		1.46		154-C		0.02	
156-C		0.16		153-C		0.06	
151-C		0.00		158-C		-0.03	
126-C		0.00		001-C		0.10	
149-C		0.07		SSD-22-C		0.00	
050-C		0.00		SSD-2-C		0.01	
141-C		-0.84		SSD-4-C		1.15	
127-C		1.16		SSD-24-C		0.05	
150-C		0.00		SSD-3-C		0.43	
152-C	↓	0.88		SSD-25-C	↓	0.00	

MOISTURE SEPARATOR, SUMP, AND DRAIN MONITORING				
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?
Moisture Separators				
MS-1	No	N/A	N/A	Yes
MS-2	No	↓	↓	Yes
Pipe Sumps				
PS-1	No	N/A	N/A	Yes
PS-2	No			Yes
PS-3	No			Yes
PS-4	No			Yes
PS-5	No	↓	↓	Yes
System Sumps				
Exhaust Stack	No	N/A	N/A	Yes
GAC and PPZ Drains				
Lead GAC	No	N/A	N/A	Yes
Lag GAC	No	↓	↓	Yes
PPZ	No	↓	↓	Yes

ADDITIONAL COMMENTS:

MONTHLY VAPOR SAMPLING			
~~Location~~	C-INFLUENT	C-MID GAC	~~C-EFFLUENT~~
Time			
Canister ID			
Flow Contr. ID			
Start Vacuum (in. Hg)			
Stop Vacuum (in. Hg)			

PERSONNEL SIGNATURE: Diane L Mauer

Time: 1240

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 04/19/16 Time: 1000 Personnel: D. Monica, M. Wilks

1. Was the system running upon arrival?
   YES NO
2. Where there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Are there any leaks or damage to system hoses?
   YES NO
5. Is there any damage to system components?
   YES NO
6. Are all locks and zip-ties secure?
   YES NO
7. Was there a GAC or PPZ change out?
   YES NO Comment: _____
8. How many GAC units are at this location?
   NEW 1 SPENT 1
9. How many PPZ ($KMnO_4$) units are at this location?
   NEW 1 SPENT 0
10. How many water drums are on-site?
    EMPTY 0 PART FULL 2 FULL 0
11. How many filter drums are on-site?
    EMPTY 0 PART FULL 1 FULL 0
    1 PPE Drum
12. Are waste drums labeled and in good condition?
    YES NO
    Comment: _____
13. Do the these fall to zero when system is turned off?
    Flow Gauge YES NO
    Pressure Gauges YES NO
    Vacuum Gauges YES NO

GENERAL SYSTEM MONITORING

Time	Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Flow (scfm)	Pressure post-Blower (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)
1000	29	37	8	182	44	159	104

* Replace filter if >25 in. H_2O

14. How many hours are displayed on the time counter? 2394537

EXTRACTION WELL VACUUM AND VELOCITY MONITORING

	Location	Time	Vacuum (in. H_2O)	Velocity (ft/min)	Flow** (scfm)	Vacuum/Flow Adjustment	Comments
1	SSD-21-C	1017	11.56	1125	24.5	None	
2	SSD-23-C			CLOSED			
3	SSD-30-C	1028	17.10	360	7.8	None	variable vac
4	SSD-26-C	1033	6.75	190	4.1	None	
5	SSD-31-C	1038	22.80	1930	42.1	None	
11	SSD-27-C	1132	1.05	1040	22.7	None	
10	SSD-32-C	1123	1.71	1280	27.9	None	
9	SSD-28-C	1118	1.00	1775	38.7	None	
8	SSD-33-C	1109	6.10	1575	34.3	None	
6	SSD-29-C	1102	16.43	3660	79.8	None	
7	SSD-34-C	1104	23.40	490	10.70	None	

** Flow = Velocity x 0.0218

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

VAPOR MONITORING POINT (VMP) VACUUM MONITORING							
VMP	Time	Vacuum (in. H_2O)	Comments	VMP	Time	Vacuum (in. H_2O)	Comments
159-C	1025	1.46		060-C	1119	N/A	Heavy Equip
135-C	1030	0.33		111-C	1121	0.00	
088-C	—	N/A	Remove from monitoring	155-C	1124	0.11	
157-C	1035	0.00		133-C	1126	0.46	
113-C	1037	1.80	variable	154-C	1131	0.05	
156-C	1040	0.28		153-C	1128	0.08	
151-C	1046	0.00		158-C	1136	0.00	
126-C	1050	0.00		001-C	1140	0.15	
149-C	1047	0.12		SSD-22-C	1141	0.00	
050-C	1056	0.00		SSD-2-C	1142	0.04	
141-C	1100	-0.13		SSD-4-C	1144	1.02	
127-C	1111	1.33		SSD-24-C	1146	0.07	
150-C	1114	0.00		SSD-3-C	1147	0.42	
152-C	1116	0.96		SSD-25-C	1148	0.00	

MOISTURE SEPARATOR, SUMP, AND DRAIN MONITORING				
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?
Moisture Separators				
MS-1	No	—	—	Yes
MS-2	No	—	—	Yes
Pipe Sumps				
PS-1	No	—	—	Yes
PS-2	No	—	—	Yes
PS-3	No	—	—	Yes
PS-4	No	—	—	Yes
PS-5	No	—	—	Yes
System Sumps				
Exhaust Stack	Yes	Yes	~30Z	Yes
GAC and PPZ Drains				
Lead GAC	No	—	—	Yes
Lag GAC	No	—	—	Yes
PPZ	No	—	—	Yes

ADDITIONAL COMMENTS:

MONTHLY VAPOR SAMPLING			
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT
Time			
Canister ID			
Flow Contr. ID			
Start Vacuum (in. Hg)			
Stop Vacuum (in. Hg)			

PERSONNEL SIGNATURE: Daniel J Miller **Time:** 1210

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 5/4/16 **Time:** 0851 **Personnel:** DLM/MW

1. Was the system running upon arrival?
(YES) NO

2. Where there any alarm conditions upon arrival?
YES (NO)

Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Are there any leaks or damage to system hoses?
YES (NO)

5. Is there any damage to system components?
YES (NO)

6. Are all locks and zip-ties secure?
(YES) NO

7. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

8. How many GAC units are at this location?
NEW 2 SPENT 0

9. How many PPZ ($KMnO_4$) units are at this location?
NEW 1 SPENT 0

10. How many Bldg A water drums are on-site?
EMPTY 0 PART FULL 1 FULL 0

10. How many Bldg C water drums are on-site?
EMPTY 0 PART FULL 1 FULL 0

11. How many filter drums are on-site?
EMPTY 0 PART FULL 1 FULL 0

12. Are waste drums labeled and in good condition?
(YES) NO

Comment: _____

13. Do the these fall to zero when system is turned off?

Flow Gauge	(YES)	NO
Pressure Gauges	(YES)	NO
Vacuum Gauges	(YES)	NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Pressure (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Flow (scfm)	Time Counter Display
30	38	8	44	155	100	190	24311.8

* Replace filter if >25 in. H_2O

EXTRACTION WELL VACUUM AND VELOCITY MONITORING

Location	Time	Vacuum (in. H_2O)	Velocity (ft/min)	Flow** (scfm)	Vacuum/Flow Adjustment	Comments
SSD-21-C	0853	12.58	1015	22.1	None	
SSD-23-C			CLOSED			
SSD-30-C		17.91	465	10.1	None	
SSD-26-C		6.67	195	4.3	None	
SSD-31-C		23.2	1720	37.5	None	
SSD-27-C		1.03	965	21.0	None	
SSD-32-C		1.75	1070	23.3	None	
SSD-28-C		0.98	1580	34.4	None	
SSD-33-C		6.36	1333	29.1	None	
SSD-29-C		16.69	3410	74.3	None	
SSD-34-C		23.90	455	9.9	None	

** Flow = Velocity x 0.0218

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

VAPOR MONITORING POINT (VMP) VACUUM MONITORING							
VMP	Time	Vacuum (in. H_2O)	Comments	VMP	Time	Vacuum (in. H_2O)	Comments
159-C		1.59		060-C		N/A	Heavy Equip
135-C		0.36		111-C		0.00	
088-C		N/A		155-C		0.10	
157-C		0.00		133-C		0.46	
113-C		2.90	Variable	154-C		0.04	
156-C		0.30		153-C		0.08	
151-C		0.02		158-C		0.00	
126-C		0.00		001-C		0.12	
149-C		0.13		SSD-22-C		0.00	
050-C		0.05		SSD-2-C		0.03	
141-C		-0.08		SSD-4-C		1.23	
127-C		1.42		SSD-24-C		0.08	
150-C		0.00		SSD-3-C		0.51	
152-C		1.06		SSD-25-C		-0.29	

MOISTURE SEPARATOR, SUMP, AND DRAIN MONITORING				
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?
Moisture Separators				
MS-1	No	—	—	Yes
MS-2	No	—	—	Yes
Pipe Sumps				
PS-1	No	—	—	Yes
PS-2	No	—	—	Yes
PS-3	No	—	—	Yes
PS-4	No	—	—	Yes
PS-5	No	—	—	Yes
System Sumps				
Exhaust Stack	No	—	—	Yes
GAC and PPZ Drains				
Lead GAC	No	—	—	Yes
Lag GAC	No	—	—	Yes
PPZ	No	—	—	Yes

ADDITIONAL COMMENTS:

MONTHLY VAPOR SAMPLING			
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT
Time			
Canister ID			
Flow Contr. ID			
Start Vacuum (in. Hg)			
Stop Vacuum (in. Hg)			

PERSONNEL SIGNATURE: [signature]

Time: 1125

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 5/17/16 **Time:** 0910 **Personnel:** JMW

1. Was the system running upon arrival?
(YES) NO

2. Where there any alarm conditions upon arrival?
YES (NO)
Comment: _____

3. Is the blower vacuum relief valve open?
YES (NO)

4. Are there any leaks or damage to system hoses?
YES (NO)

5. Is there any damage to system components?
YES (NO)

6. Are all locks and zip-ties secure?
(YES) NO

7. Was there a GAC or PPZ change out?
YES (NO) Comment: _____

8. How many GAC units are at this location?
NEW 2 SPENT _____

9. How many PPZ ($KMnO_4$) units are at this location?
NEW 1 SPENT 0

10. How many Bldg A water drums are on-site?
EMPTY 0 PART FULL 1 FULL 0

10. How many Bldg C water drums are on-site?
EMPTY 0 PART FULL 1 FULL 0

11. How many filter drums are on-site?
EMPTY 0 PART FULL 1 FULL 0

12. Are waste drums labeled and in good condition?
(YES) NO
Comment: _____

13. Do the these fall to zero when system is turned off?

Flow Gauge	(YES)	NO
Pressure Gauges	(YES)	NO
Vacuum Gauges	(YES)	NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Pressure (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Flow (scfm)	Time Counter Display
30	~~44~~ 38	8	44	154	98	185	24624.1

* Replace filter if >25 in. H_2O

EXTRACTION WELL VACUUM AND VELOCITY MONITORING

Location	Time	Vacuum (in. H_2O)	Velocity (ft/min)	Flow** (scfm)	Vacuum/Flow Adjustment	Comments
SSD-21-C		12.69	940	20.5	None	
SSD-23-C		Closed				
SSD-30-C		18.18	390	8.5	None	
SSD-26-C		6.91	205	4.5	None	
SSD-31-C		23.7	1810	39.5	None	
SSD-27-C		1.01	1015	22.1	None	
SSD-32-C		1.79	1030	22.5	None	
SSD-28-C		0.99	1630	35.5	None	
SSD-33-C		6.52	1364	29.7	None	
SSD-29-C		16.86	3478	75.6	None	
SSD-34-C		24.2	265	5.8	None	

** Flow = Velocity x 0.0218

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

VAPOR MONITORING POINT (VMP) VACUUM MONITORING							
VMP	Time	Vacuum (in. H_2O)	Comments	VMP	Time	Vacuum (in. H_2O)	Comments
159-C	0930	1.38	slow	060-C		NA	HW EQP
135-C		0.32		111-C		0.00	
088-C		NA		155-C		0.08	
157-C		0.00		133-C		~~0.05~~ 0.42	
113-C		1.59	var	154-C		0.04	
156-C		0.29		153-C		0.09	
151-C		0.02		158-C		0.00	
126-C		0.00		001-C		0.10	
149-C		0.15		SSD-22-C		0.00	
050-C		0.00		SSD-2-C		0.06	
141-C		-0.05		SSD-4-C		1.08	
127-C		1.60		SSD-24-C		0.08	
150-C		0.00		SSD-3-C		0.06	
152-C		1.09		SSD-25-C		0.00	

MOISTURE SEPARATOR, SUMP, AND DRAIN MONITORING				
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?
Moisture Separators				
MS-1	No	—	—	Yes
MS-2	No	—	—	Yes
Pipe Sumps				
PS-1	No	—	—	Yes
PS-2	No	—	—	Yes
PS-3	No	—	—	Yes
PS-4	No	—	—	Yes
PS-5	No	—	—	Yes
System Sumps				
Exhaust Stack	No	—	—	Yes
GAC and PPZ Drains				
Lead GAC	No	—	—	Yes
Lag GAC	No	—	—	Yes
PPZ	No	—	—	Yes

ADDITIONAL COMMENTS:

MONTHLY VAPOR SAMPLING			
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT
Time	NA	NA	NA
Canister ID			
Flow Contr. ID			
Start Vacuum (in. Hg)			
Stop Vacuum (in. Hg)			

PERSONNEL SIGNATURE: Michael Wilkes **Time:** 1200

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 6/2/16 **Time:** 1410 **Personnel:** DLM/MW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
30	42	12	166	110	42	185	25012.9

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	16.16	1126	24.5	No	None	
SSD-23-C			CLOSED			
SSD-30-C	20.30	1039	22.7	No	None	variable vel.
SSD-26-C	9.62	434	9.5	No	None	variable. vac.
SSD-31-C	26.90	1962	42.8	Yes	None	variable vel
SSD-27-C	1.12	1103	24.0	No	None	
SSD-32-C	2.02	1161	25.3	No	None	
SSD-28-C	1.22	1690	36.8	No	None	
SSD-33-C	7.68	1497	32.6	No	None	
SSD-29-C	18.51	3659	79.8	No	None	variable vac.
SSD-34-C	26.30	461	10.0	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	3.02		111-C	0.00	
135-C	0.79		155-C	0.14	
157-C	0.00		133-C	0.55	
113-C	1.20	variable	154-C	0.04	
156-C	0.37		153-C	0.10	
151-C	0.02		158-C	0.06	
126-C	0.00		001-C	0.15	
149-C	0.31		SSD-22-C	0.00	
050-C	0.00		SSD-2-C	0.04	
141-C	-0.16		SSD-4-C	1.26	
127-C	0.32		SSD-24-C	0.07	
150-C	0.00		SSD-3-C	0.46	
152-C	1.73		SSD-25-C	0.00	
060-C	N/A	Heavy Equip			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	—	—	Yes	
MS-2	No	—	—	Yes	
Pipe Sumps					
PS-1	No	—	—	Yes	
PS-2	No	—	—	Yes	
PS-3	No	—	—	Yes	
PS-4	No	—	—	Yes	
PS-5	No	—	—	Yes	
System Sumps					
Exhaust Stack	No	—	—	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	No	—	—	Yes	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 3

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 0

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
Lamp in system enclosure broken	will replace	(OPEN) CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Dawn L Mauer **TIME:** 1524

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 6/16/16 **Time:** 1010 **Personnel:** JMW

1. **Was the system running upon arrival?** YES NO
2. **Where there any alarm conditions upon arrival?** YES NO
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES NO
4. **Is the dilution valve open?** YES NO % Open: _____
5. **Are there any leaks or damage to system hoses?** YES NO
6. **Is there any damage to system components?** YES NO
7. **Are all locks and zip-ties secure?** YES NO
8. **Was there a GAC or PPZ change out?** YES NO Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
   Flow Gauge YES NO
   Pressure Gauge YES NO
   Vacuum Gauges YES NO
12. **Do the temp. gauges fall when system is turned off?** YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
32	~~42~~ 40	~~18~~ 8	166	110	42	180	~~25314.6~~

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	16.98	1865	40.7	No	None	
SSD-23-C			CLOSED			
SSD-30-C	20.7	1330	29.0	No	None	
SSD-26-C	9.65	635	13.8	No	None	VAR VAC
SSD-31-C	27.6	>MAX	N/A	Yes	None	H_2O?
SSD-27-C	1.09	1173	25.6	No	None	
SSD-32-C	2.16	1297	28.3	No	None	
SSD-28-C	1.11	1730	37.7	No	None	
SSD-33-C	8.11	1395	30.4	No	None	
SSD-29-C	18.85	3775	82.3	No	None	VAR VAC
SSD-34-C	27.1	1545	33.7	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	2.98		111-C	0.00	
135-C	0.86		155-C	0.13	
157-C	0.00		133-C	0.54	
113-C	1.15	Variable	154-C	0.05	
156-C	0.34		153-C	0.08	
151-C	0.02		158-C	0.06	
126-C	0.00		001-C	0.15	
149-C	0.32		SSD-22-C	0.00	
050-C	0.00		SSD-2-C	0.05	
141-C	0.06	Variable	SSD-4-C	1.24	
127-C	~~2.33~~ 2.33		SSD-24-C	0.08	
150-C	0.00		SSD-3-C	0.00	
152-C	1.88		SSD-25-C	0.00	
060-C	N/A	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	–	–	Yes	
MS-2	No	–	–	Yes	
Pipe Sumps					
PS-1	No	–	–	Yes	
PS-2	No	–	–	Yes	
PS-3	No	–	–	Yes	
PS-4	No	–	–	Yes	
PS-5	No	–	–	Yes	
System Sumps					
Exhaust Stack	No	–	–	Yes	
GAC and PPZ Drains					
Lead GAC	No	–	–	Yes	
Lag GAC	No	–	–	Yes	
PPZ	No	–	–	Yes	

13. How many empty drums are on-site? 12

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 9

16. How many filter drums are on-site? PART FULL 1 FULL 8 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
Lamp in system enclosure broken	Will replace	OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: J M Tilley **TIME:** 1200

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 6/30/16 **Time:** 1310 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
32	41	9	168	110	42	180	25692.5

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	16.75	1772	38.6	No	None	
SSD-23-C			CLOSED			
SSD-30-C	21.7	1493	32.5	No	None	
SSD-26-C	10.62	734	16.0	No	None	
SSD-31-C	28.4	>Max	N/A	Yes	None	H_2O
SSD-27-C	1.01	1090	23.8	No	None	
SSD-32-C	1.92	1442	31.4	No	None	
SSD-28-C	1.06	1576	34.4	No	None	
SSD-33-C	7.68	1395	30.4	No	None	
SSD-29-C	19.4	3575	77.9	No	None	Var Vac
SSD-34-C	27.8	2120	46.2	No	None	Var Vel

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	2.94		111-C	0.00	
135-C	0.99		155-C	0.13	
157-C	0.00		133-C	0.53	
113-C	3.40	Var	154-C	0.05	
156-C	N/A	HVY EQP	153-C	0.09	
151-C	0.00		158-C	0.08	Var
126-C	0.00		001-C	0.00	
149-C	0.37		SSD-22-C	0.01	
050-C	0.00		SSD-2-C	0.05	
141-C	-0.92		SSD-4-C	1.03	
127-C	2.53		SSD-24-C	0.08	
150-C	0.00		SSD-3-C	-0.01	
152-C	1.92		SSD-25-C	0.00	
060-C	N/A	HVY EQUIP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID				
Start Vacuum (in. Hg)				
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	✓	✓	Yes	
MS-2	No	✓	✓	Yes	
Pipe Sumps					
PS-1	No	/	✓	Yes	
PS-2	No	/	✓	Yes	
PS-3	No	/	✓	Yes	
PS-4	No	/	✓	Yes	
PS-5	No	/	✓	Yes	
System Sumps					
Exhaust Stack	No	/	/	Yes	
GAC and PPZ Drains					
Lead GAC	No	/	/	Yes	
Lag GAC	No	/	/	Yes	
PPZ	No	/	/	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** _____

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 7/14/16 Time: 0845 Personnel: DLM

1. Was the system running upon arrival? (YES) NO
2. Where there any alarm conditions upon arrival? YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open? YES (NO)
4. Is the dilution valve open? YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses? YES (NO)
6. Is there any damage to system components? YES (NO)
7. Are all locks and zip-ties secure? (YES) NO
8. Was there a GAC or PPZ change out? YES (NO) Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. Do the these fall to zero when system is turned off?
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. Do the temp. gauges fall when system is turned off? (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
30	38	8	166	110	43	180	26014.3

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	19.27	755	16.5	No	None	
SSD-23-C			CLOSED			
SSD-30-C	19.87	1250	27.3	No	None	variable vac
SSD-26-C	8.85	609	13.3	No	None	
SSD-31-C	25.70	>max	N/A	Yes	None	variable vac.
SSD-27-C	1.08	1226	26.7	No	None	
SSD-32-C	2.28	1207	26.3	No	None	
SSD-28-C	1.18	1611	35.1	No	None	
SSD-33-C	8.59	1510	32.9	No	None	
SSD-29-C	17.71	3434	74.9	No	None	variable vac
SSD-34-C	27.70	1532	33.4	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	3.70		111-C	0.00	
135-C	1.12		155-C	0.14	
157-C	0.00		133-C	0.58	
113-C	1.89	variable	154-C	0.05	
156-C	0.30		153-C	0.09	
151-C	0.00		158-C	0.14	
126-C	0.00		001-C	0.19	
149-C	0.33		SSD-22-C	0.00	
050-C	0.00		SSD-2-C	0.04	
141-C	-0.47		SSD-4-C	1.30	
127-C	3.05		SSD-24-C	0.08	
150-C	0.00		SSD-3-C	0.56	
152-C	2.29		SSD-25-C	0.00	
060-C	N/A	Heavy Equip			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	1012	1008	1006	
Summa Canister ID	11139	10341	10340	
Flow Contr. ID	74	193	139	
Start Vacuum (in. Hg)	-29	-29.5	-30	
Stop Vacuum (in. Hg)	0	0	0	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	—	—	Yes	
MS-2	No	—	—	Yes	
Pipe Sumps					
PS-1	No	—	—	Yes	
PS-2	No	—	—	Yes	
PS-3	No	—	—	Yes	
PS-4	No	—	—	Yes	
PS-5	No	—	—	Yes	
System Sumps					
Exhaust Stack	No	—	—	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	No	—	—	Yes	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
None		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Dawn L Mercer **TIME:** 1100

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 7/25/16 **Time:** 1025 **Personnel:** JMW

1. **Was the system running upon arrival?** YES (NO)
2. **Where there any alarm conditions upon arrival?** (YES) NO
   Comment: Power outage - system restarted
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT _____
   PPZ: NEW 1 SPENT _____
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
34	38	4	148	110	42	185	26256.4

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	22.0	>MAX	N/A	Yes	None	H_2O, Var Vac
SSD-23-C	CLOSED					
SSD-30-C	21.4	1185	25.8	No	None	
SSD-26-C	10.94	432	9.4	No	None	Var Vac
SSD-31-C	28.9	998	21.8	Yes	None	H_2O
SSD-27-C	1.08	1092	23.8	No	None	
SSD-32-C	2.21	1206	26.3	No	None	
SSD-28-C	1.18	1592	34.7	No	None	Var Vel
SSD-33-C	9.16	1465	31.9	No	None	
SSD-29-C	20.10	3574	77.9	No	None	
SSD-34-C	29.1	976	21.3	No	None	Var Vac

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	1.51		111-C	0.00	
135-C	1.31		155-C	0.14	
157-C	0.00		133-C	0.59	
113-C	3.45	Var Vac	154-C	0.04	
156-C	0.47		153-C	0.88	
151-C SSW	0.00 0.01		158-C	0.15	
126-C	0.00		001-C	0.00	
149-C	0.47		SSD-22-C	0.00	
050-C	0.00		SSD-2-C	0.20	Flooded
141-C	-0.93		SSD-4-C	1.56	
127-C	3.25		SSD-24-C	0.05	
150-C	0.00		SSD-3-C	-0.15	Flooded
152-C	2.37		SSD-25-C	0.00	
060-C	N/A	HVY EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	–	–	Yes	
MS-2	No	–	–	Yes	
Pipe Sumps					
PS-1	No	–	–	Yes	
PS-2	No	–	–	Yes	
PS-3	No	–	–	Yes	
PS-4	No	–	–	Yes	
PS-5	No	–	–	Yes	
System Sumps					
Exhaust Stack	No	–	–	Yes	
GAC and PPZ Drains					
Lead GAC	No	–	–	Yes	
Lag GAC	No	–	–	Yes	
PPZ	No	–	–	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL _____ FULL _____

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL _____

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: _____ **TIME:** 1225

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 8/12/16 **Time:** 1030 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
36	42	6	174	110	40	175	26688.3

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	22.3	848	18.5	No	None	
SSD-23-C	(LOST SP			No	None	
SSD-30-C	22.8	564	12.3	No	None	Var Vel
SSD-26-C	12.06	517	11.3	No	None	
SSD-31-C	29.5	>MAX	N/A	Yes	None	Var VAC
SSD-27-C	1.11	1126	24.5	No	None	
SSD-32-C	2.23	1199	26.1	No	None	
SSD-28-C	1.27	1689	36.8	No	None	
SSD-33-C	10.01	1405	30.6	No	None	
SSD-29-C	20.8	3625	79.0	No	None	
SSD-34-C	29.9	962	21.0	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	2.41		111-C	0.00	
135-C	1.41		155-C	0.15	
157-C	0.00		133-C	0.61	
113-C	0.07		154-C	0.05	
156-C	0.24		153-C	0.10	
151-C	0.02		158-C	0.14	
126-C	0.08		001-C	0.15	
149-C	0.46		SSD-22-C	N/A	Flooded
050-C	0.00		SSD-2-C	0.14	Flooded
141-C	-0.84		SSD-4-C	1.3	
127-C	3.69		SSD-24-C	0.09	Flooded
150-C	0.00		SSD-3-C	-0.52	Flooded
152-C	2.50		SSD-25-C	-0.09	
060-C	N/A	W/Y EQP			

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	–	–	Yes	
MS-2	No	–	–	Yes	
Pipe Sumps					
PS-1	No	–	–	Yes	
PS-2	↓	–	–	↓	
PS-3	↓	–	–	↓	
PS-4	↓	–	–	↓	
PS-5	↓	–	–	↓	
System Sumps					
Exhaust Stack	No			Yes	
GAC and PPZ Drains					
Lead GAC	No	–	–	Yes	
Lag GAC	No	–	–	Yes	
PPZ	No	–	–	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL _____ FULL _____

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL _____

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	Maintenance Conducted	Issue Status
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M. Wilson **TIME:** 1245

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 8/23/16 **Time:** 1020 **Personnel:** JMW

1. **Was the system running upon arrival?** (YES) NO
2. **Where there any alarm conditions upon arrival?** JMW YES (NO)
   Comment: _____
3. **Is the blower vacuum relief valve open?** YES (NO)
4. **Is the dilution valve open?** YES (NO) % Open: _____
5. **Are there any leaks or damage to system hoses?** YES (NO)
6. **Is there any damage to system components?** YES (NO)
7. **Are all locks and zip-ties secure?** (YES) NO
8. **Was there a GAC or PPZ change out?** YES (NO) Comment: _____
9. **How many GAC and PPZ units are at this location?**
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. **Do the these fall to zero when system is turned off?**
    Flow Gauge (YES) NO
    Pressure Gauge (YES) NO
    Vacuum Gauges (YES) NO
12. **Do the temp. gauges fall when system is turned off?** (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
38	44	6	170	110	40	240	26919.9

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	19.50	610	13.3	Yes	None	Var Vel, Var Vac
SSD-23-C	CLOSED			No	None	
SSD-30-C	23.8	585	12.8	No	None	Var Vel
SSD-26-C	11.78	325	7.1	No	None	Var Vac
SSD-31-C	30.5	>MAX	N/A	Yes	None	Var Vac
SSD-27-C	1.12	1100	24.0	No	None	
SSD-32-C	2.31	1237	27.0	No	None	
SSD-28-C	1.31	1770	38.6	No	None	
SSD-33-C	9.83	1420	31.0	No	None	Var Vac
SSD-29-C	22.1	3812	83.1	No	None	
SSD-34-C	31.9	910	19.8	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	2.07		111-C	0.08	
135-C	1.51		155-C	0.12	
157-C	0.00		133-C	0.45	
113-C	1.10		154-C	0.05	
156-C	0.24		153-C	0.08	
151-C	0.04		158-C	0.10	
126-C	0.00		001-C	0.11	
149-C	-0.50		SSD-22-C		Flooded
050-C	0.08		SSD-2-C	0.00	Flooded
141-C	-0.65	Var Vac	SSD-4-C	1.12	
127-C	3.15		SSD-24-C	0.42	Partial Flood
150-C	0.00		SSD-3-C	0.78	Flooded
152-C	2.38		SSD-25-C	0.00	Partial Flood
060-C	UV EQUIP				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)	↓	↓	↓	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No			Yes	
MS-2	No			Yes	
Pipe Sumps					
PS-1	No			Yes	
PS-2	↓			↓	
PS-3	↓			↓	
PS-4	↓			↓	
PS-5	↓			↓	
System Sumps					
Exhaust Stack	No			Yes	
GAC and PPZ Drains					
Lead GAC	No			Yes	
Lag GAC	No			Yes	
PPZ	No			Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD		
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**
		OPEN CLOSED
		OPEN CLOSED
		OPEN CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: M. Wilkes **TIME:** 1230

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 9/7/16 Time: 1020 Personnel: DLM

1. Was the system running upon arrival?
   (YES) NO
2. Where there any alarm conditions upon arrival?
   YES (NO)
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES (NO)
4. Is the dilution valve open?
   YES (NO) % Open: _____
5. Are there any leaks or damage to system hoses?
   YES (NO)
6. Is there any damage to system components?
   YES (NO)
7. Are all locks and zip-ties secure?
   (YES) NO
8. Was there a GAC or PPZ change out?
   YES (NO) Comment: _____
9. How many GAC and PPZ units are at this location?
   GAC: NEW 2 SPENT 0
   PPZ: NEW 1 SPENT 0
11. Do the these fall to zero when system is turned off?
   Flow Gauge (YES) NO
   Pressure Gauge (YES) NO
   Vacuum Gauges (YES) NO
12. Do the temp. gauges fall when system is turned off?
   (YES) NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
36	42	6	169	110	40	182	27280.0

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	16.8	1042	22.7	No	None	(~25% open)
SSD-23-C			CLOSED			
SSD-30-C	21.90	385	8.4	No	None	
SSD-26-C	10.29	238	5.2	No	None	
SSD-31-C	*30.0	>max	N/A	Yes	None	
SSD-27-C	1.06	1014	22.1	No	None	
SSD-32-C	2.23	1213	26.4	No	None	
SSD-28-C	1.21	1629	35.5	No	None	
SSD-33-C	8.98	1323	28.8	No	None	
SSD-29-C	20.5	3678	80.2	No	None	
SSD-34-C	29.4	322	7.0	No	None	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	2.90		111-C	0.00	
135-C	1.44		155-C	0.12	
157-C	0.00		133-C	0.43	
113-C	1.30		154-C	0.06	
156-C	0.23		153-C	0.07	
151-C	0.02		158-C	0.12	
126-C	0.00		001-C	0.24	
149-C	0.48		SSD-22-C	0.02	H_2O
050-C	0.00		SSD-2-C	-0.28	H_2O
141-C	-1.09		SSD-4-C	1.95	
127-C	3.21		SSD-24-C	*0.54	H_2O
150-C	0.00		SSD-3-C	0.82	H_2O
152-C	2.40		SSD-25-C	0.00	
060-C	8.37				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	**C-INFLUENT**	**C-MID GAC**	**C-EFFLUENT**	**Comments**
Time	1024	1022	1020	
Summa Canister ID	10501	09646	10965	
Flow Contr. ID	74	99	139	
Start Vacuum (in. Hg)	-29	-29.5	-30	
Stop Vacuum (in. Hg)	0	0	-1	

SYSTEM CONDENSATE MONITORING					
Location	**Contains Water?**	**Water Drained?**	**Volume Drained**	**Drain Valve Closed?**	**Comments**
Moisture Separators					
MS-1	No	—	—	Yes	
MS-2	No	—	—	Yes	
Pipe Sumps					
PS-1	No	—	—	Yes	
PS-2	No	—	—	Yes	
PS-3	No	—	—	Yes	
PS-4	No	—	—	Yes	
PS-5	No	—	—	Yes	
System Sumps					
Exhaust Stack	No	—	—	Yes	
GAC and PPZ Drains					
Lead GAC	No	—	—	Yes	
Lag GAC	No	—	—	Yes	
PPZ	No	—	—	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 0

15. How many Bldg. C water drums are on-site? PART FULL 1 FULL 0

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

(YES) NO Comment: _____

18. Is the secondary containment pad in good condition?

(YES) NO Comment: Reattached front wall

MAINTENANCE RECORD			
Issue Requiring Maintenance	**Maintenance Conducted**	**Issue Status**	
Front wall of secondary containment came loose	reattached	OPEN	(CLOSED)
		OPEN	CLOSED
		OPEN	CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: Daniel L Mann **TIME:** 1220

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

Date: 9/19/16 Time: 1045 Personnel: JMW

1. Was the system running upon arrival?
   YES NO
2. Where there any alarm conditions upon arrival?
   YES NO
   Comment: _____
3. Is the blower vacuum relief valve open?
   YES NO
4. Is the dilution valve open?
   YES NO % Open: _____
5. Are there any leaks or damage to system hoses?
   YES NO
6. Is there any damage to system components?
   YES NO
7. Are all locks and zip-ties secure?
   YES NO
8. Was there a GAC or PPZ change out?
   YES NO Comment: GAC
9. How many GAC and PPZ units are at this location?
   GAC: NEW 1 SPENT 1
   PPZ: NEW 1 SPENT _____
11. Do the these fall to zero when system is turned off?
   Flow Gauge YES NO
   Pressure Gauge YES NO
   Vacuum Gauges YES NO
12. Do the temp. gauges fall when system is turned off?
   YES NO

GENERAL SYSTEM MONITORING

Vacuum pre-Filter (in. H_2O)	Vacuum post-Filter (in. H_2O)	Diff Pressure of Filter* (in. H_2O)	Temp post-Blower (°F)	Temp post-HE (°F)	Pressure (in. H_2O)	Flow (scfm)	Time Counter Display (hours)
35	42	7	167	110	41	180	27566.7

* Replace filter if >25 in. H_2O

EXTRACTION POINT VACUUM AND VELOCITY MONITORING

Location	Vacuum (in. H_2O)	Velocity (ft/min)	Flow* (scfm)	Contains H_2O?	Vacuum/Flow Adjustment	Comments
SSD-21-C	19.40	954	20.8	X	X	Var Vac Level
SSD-23-C		CLOSED				
SSD-30-C	22.7	355	7.7	X	X	
SSD-26-C	11.14	418	9.1	X	X	
SSD-31-C	30.7	MAX	~~22.4~~ Clow	√	X	Var Vac
SSD-27-C	1.10	1052	22.9	X	X	
SSD-32-C	2.20	1195	26.1	X	X	
SSD-28-C	1.25	1645	35.9	X	X	
SSD-33-C	9.64	1361	29.7	X	X	
SSD-29-C	20.1	3562	77.7	X	X	
SSD-34-C	29.6	882	19.2	X	X	

**Flow = Velocity x 0.0218

VMP VACUUM MONITORING

VMP	Vacuum	Comments	VMP	Vacuum	Comments
159-C	1.65		111-C	0.00	
135-C	1.63		155-C	0.15	Var Vac
157-C	0.00		133-C	0.61	
113-C	1.77		154-C	0.04	
156-C	0.24		153-C	0.16	
151-C	0.01		158-C	0.11	
126-C	0.00		001-C	0.40	
149-C	0.60		SSD-22-C	0.04	
050-C	0.00		SSD-2-C	0.05	
141-C	~~0.00~~-1.00		SSD-4-C	2.82	
127-C	3.22		SSD-24-C	-0.35	
150-C	0.00		SSD-3-C	-0.55	
152-C	2.22		SSD-25-C	0.10	
060-C	HV4 EQP				

SSD SYSTEM CHECK - BUILDING C

LMC Middle River Complex, Middle River, Maryland

MONTHLY VAPOR SAMPLING				
Location	C-INFLUENT	C-MID GAC	C-EFFLUENT	Comments
Time	N/A	N/A	N/A	
Summa Canister ID	↓	↓	↓	
Flow Contr. ID	↓	↓	↓	
Start Vacuum (in. Hg)	↓	↓	↓	
Stop Vacuum (in. Hg)				

SYSTEM CONDENSATE MONITORING					
Location	Contains Water?	Water Drained?	Volume Drained	Drain Valve Closed?	Comments
Moisture Separators					
MS-1	No	✓	✓	Yes	
MS-2	No	✓	✓	Yes	
Pipe Sumps					
PS-1	No	✓	✓	Yes	
PS-2	No	✓	✓	Yes	
PS-3	No	✓	✓	Yes	
PS-4	No	✓	✓	Yes	
PS-5	No	✓	✓	Yes	
System Sumps					
Exhaust Stack	No	✓	✓	Yes	
GAC and PPZ Drains					
Lead GAC	No	✓	✓	Yes	
Lag GAC	No	✓	✓	Yes	
PPZ	No	✓	✓	Yes	

13. How many empty drums are on-site? 2

14. How many Bldg. A water drums are on-site? PART FULL 0 FULL 8

15. How many Bldg. C water drums are on-site? PART FULL 0 FULL 8

16. How many filter drums are on-site? PART FULL 1 FULL 1

17. Are waste drums labeled and in good condition?

YES NO Comment: _____

18. Is the secondary containment pad in good condition?

YES NO Comment: _____

MAINTENANCE RECORD			
Issue Requiring Maintenance	Maintenance Conducted	Issue Status	
		OPEN	CLOSED
		OPEN	CLOSED
		OPEN	CLOSED

ADDITIONAL COMMENTS:

PERSONNEL SIGNATURE: John Wilke TIME: 1200

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 6/24/16 **Time:** _____ **Quarter:** 2 **Personnel:** JMW

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
   YES NO Comments: _____
2. Are there any leaks in the system pipes?
   YES NO Comments: _____
3. Does the air filter need replaced?
   YES NO Comments: _____
4. Does the dilution valve air filter need replaced?
   YES NO Comments: _____
5. Does the vacuum relief valve activate upon high vacuum?
   YES NO Comments: _____
6. What is the amperage draw on the blower?

Wire Color	Amperage
Black	16.65
Red	17.10
White	17.40

Comments: _____

7. Is the fire extinguisher located near the system?
   YES NO Comments: _____
8. Was the area around the system cleaned?
   YES NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Switch Functioning Properly		Auto-Dialer Triggered		Comments
Zone 1	High Liquid Level	YES	NO	YES	NO	Cut wire & patched insulation in
Zone 2	High Pressure	YES	NO	YES	NO	
Zone 3	High Temperature	YES	NO	YES	NO	
Zone 4	Low Pressure	YES	NO	YES	NO	

High T2

Do the Auto-Dialer Batteries Need Replaced? YES NO

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?
   YES NO Comments: _____
2. Are the sample ports in good condition?
   YES NO Comments: _____
3. Are there any warn spots or holes in the flexible hoses?
   YES NO Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?
   YES NO Comments: _____
2. Are all secure covers flush with the ground?
   YES NO Comments: _____
3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?
   YES NO Comments: _____
4. Are all VMPs properly labeled?
   YES NO Comments: _____

Classic VMPs

5. Are all well lids in good condition?
   YES NO Comments: _____
6. Do all well lids have the proper number of bolts?
   YES NO Comments: _____
7. Is the tubing inside the point in good condition?
   YES NO Comments: _____
8. Is the tubing capped?
   YES NO Comments: _____

INDOOR AIR FILTER MONITORING

AF-N

Date of quartelry HEPA filter change: 6/16/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-M

Date of quartelry HEPA filter change: 6/16/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

AF-S

Date of quartelry HEPA filter change: 6/16/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES NO

Personnel's Signature: [signature] Date: 6/24/16

QUARTERLY SSD SYSTEM CHECK - BUILDING C

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 6/24/16 **Time:** _____ **Quarter:** 2 **Personnel:** JMW, D. Seaman (515)

GENERAL SYSTEM

Checked System Components? (YES) NO Comments: _____

Checked System Pipes for Leaks? (YES) NO Comments: _____

Visually Inspected Air Filter? (YES) NO Need Replaced? YES (NO)
(replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? (YES) NO Need Replaced? YES NO

Checked Vacuum Relief Valve? (YES) NO Comments: _____

Measured and Recorded Amperage Draw on Blower? White Yellow = 11.90 Yellow Orange = 11.90 Black Brown = 10.95

Are all components returned to system operating position? (YES) NO

Vacuumed dirt/dust from Heat Exchanger vent? (YES) NO

Cleaned System and Area Around System? (YES) NO Comments: _____

Checked that Fire Extinguisher Near System? (YES) NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 1 Alarm? (YES) NO

Checked Post-HEX Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 2 Alarm? (YES) NO

Checked MS-1 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 3 Alarm? (YES) NO

Checked MS-2 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 4 Alarm? (YES) NO

Checked High-Pressure Switch? (YES) NO Did Auto-Dialer Indicate Zone 5 Alarm? (YES) NO

Checked Low-Vacuum Switch? (YES) NO Did Auto-Dialer Indicate Zone 6 Alarm? (YES) NO

Set points

Do the Auto-Dialer Batteries Need Replaced? YES NO

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? (YES) NO Comments: _____

Checked Condition of Sample Ports? (YES) NO Comments: _____

Number of used GAC/PPZ Units On-site: _____/_____ Contain Non-Haz Waste Labels? YES NO

Number of Unused GAC/PPZ Units On-site: _____/_____

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? (YES) NO Comments: _____

Checked Condition of Tubing and Seal? (YES) NO Comments: _____

ADDITIONAL COMMENTS

Breaker flipped to off disabling lighting unit in C enclosure - flipped to "in" and labeled by D. Seaman. New lighting unit installed in C. Dust barrier placed under BLDG-A skid

Personnel's Signature: J M Vetter Date: 6/24/16

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 09/08/16 **Time:** _____ **Quarter:** 3 **Personnel:** JMW, DLM, BL
Dave Seaman - S-T-S

GENERAL SYSTEM MONITORING

1. Are all system components in good condition?
   YES NO Comments: _____
2. Are there any leaks in the system pipes?
   YES NO Comments: _____
3. Does the demister media need cleaned or replaced?
   YES NO Comments: What is life expectancy
4. Does the dilution valve air filter need replaced?
   YES NO Comments: _____
5. Does the vacuum relief valve activate upon high vacuum?
   YES NO Comments: _____
6. What is the amperage draw on the blower?

Wire Color	Amperage
Black	16.65
Red	17.07
White	17.20

Comments: _____

7. Is the fire extinguisher located near the system?
   YES NO Comments: _____
8. Was the area around the system cleaned?
   YES NO Comments: _____

AUTO-DIALER AND ALARM SWITCH MONITORING

Zone	Alarm	Switch Functioning Properly		Auto-Dialer Call-Out Triggered		Comments
Zone 1	High Liquid Level	~~YES~~	~~NO~~	~~YES~~	~~NO~~	Cannot test
Zone 2	High Pressure	YES	NO	YES	NO	
Zone 3	High Temperature 1	YES	NO	YES	NO	
Zone 4	High Temperature 2	YES	NO	YES	NO	
Zone 7	Low Vacuum	YES	NO	YES	NO	

Do the Auto-Dialer Batteries Need Replaced? YES NO

GAC UNIT MONITORING

1. Are there any signs of corrosion and/or leaks in any of the GAC units?
   YES NO Comments: _____
2. Are the sample ports in good condition?
   YES NO Comments: _____
3. Are there any warn spots or holes in the flexible hoses?
   YES NO Comments: _____

QUARTERLY SSD SYSTEM CHECK - BUILDING A

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

VMP MONITORING

Vapor Pins

1. Are all secure covers in good condition?
   (YES) NO Comments: _____
2. Are all secure covers flush with the ground?
   (YES) NO Comments: _____
3. Are all vapor pins firmly installed in the concrete slab with little wiggle room?
   (YES) NO Comments: _____
4. Are all VMPs properly labeled?
   (YES) NO Comments: _____

Classic Vapor Monitoring Points

5. Are all well lids in good condition?
   (YES) NO Comments: _____
6. Do all well lids have the proper number of bolts?
   YES (NO) Comments: 001-C has no bolts
7. Is the tubing inside the point in good condition?
   (YES) NO Comments: _____
8. Is the tubing capped?
   (YES) NO Comments: _____

INDOOR AIR FILTER MONITORING

AF-N

Date of quarterly HEPA filter change: 9/8/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES (NO)

AF-M

Date of quarterly HEPA filter change: 9/8/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES (NO)

AF-S

Date of quarterly HEPA filter change: 9/8/16
Date of quarterly GAC filter change: ↓
Date of quarterly filter sleeve change: ↓
Was the filter housing cleaned? YES (NO)

Personnel's Signature: Dawn L Munce Date: 9/8/16

QUARTERLY SSD SYSTEM CHECK - BUILDING C

LMC MIDDLE RIVER COMPLEX, MIDDLE RIVER, MARYLAND

Date: 9/8/16 **Time:** 1018 **Quarter:** 3 **Personnel:** DLM/MW/BC/DS

GENERAL SYSTEM

Checked System Components? (YES) NO Comments: Good Condition

Checked System Pipes for Leaks? (YES) NO Comments: None

Visually Inspected Air Filter? (YES) NO Need Replaced? YES (NO)
(replace filter when AP = 2-3 in. Hg)

Visually Inspected Intake Air Filter? (YES) NO Need Replaced? YES (NO)

Checked Vacuum Relief Valve? (YES) NO Comments:

Measured and Recorded Amperage Draw on Blower? Yellow = 10.80 ~~Orange~~ White = 11.74 ~~Brown~~ Black = 10.3

Are all components returned to system operating position? (YES) NO

Vacuumed dirt/dust from Heat Exchanger vent? YES NO

Cleaned System and Area Around System? (YES) NO Comments:

Checked that Fire Extinguisher Near System? (YES) NO

SYSTEM ALARM SWITCHES AND AUTO-DIALER

Checked Post-Blower Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 1 Alarm? (YES) NO

Checked Post-HEX Temp Switch? (YES) NO Did Auto-Dialer Indicate Zone 2 Alarm? (YES) NO

Checked MS-1 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 3 Alarm? (YES) NO

Checked MS-2 Water Level Switch? (YES) NO Did Auto-Dialer Indicate Zone 4 Alarm? (YES) NO

Checked High-Pressure Switch? (YES) NO Did Auto-Dialer Indicate Zone 5 Alarm? (YES) NO

Checked Low-Vacuum Switch? (YES) NO Did Auto-Dialer Indicate Zone 6 Alarm? (YES) NO

Do the Auto-Dialer Batteries Need Replaced? (YES) NO

GRANULAR ACTIVATED-CARBON (GAC) & POTASSIUM PERMANGANATE ZEOLITE (PPZ) UNITS

Checked GAC Units for Corrosion and Leaks? (YES) NO Comments:

Checked Condition of Sample Ports? (YES) NO Comments:

Number of used GAC/PPZ Units On-site: 0 / 0 ~~Contain Non-Haz Waste Labels? YES (NO)~~

Number of Unused GAC/PPZ Units On-site: 2 / 1

VAPOR MONITORING POINTS (VMPs)

Checked Condition of Well Lids and Bolts? (YES) NO Comments:

Checked Condition of Tubing and Seal? (YES) NO Comments:

ADDITIONAL COMMENTS

Personnel's Signature: [signature] Date: 9/8/16

APPENDIX B— ANALYTICAL REPORTS FOR SYSTEM SAMPLES

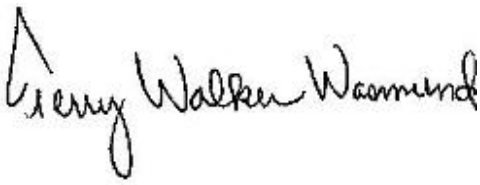
ANALYTICAL REPORT

Job Number: 140-4736-1

Job Description: SSM OEM MRC

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
4/19/2016 10:06 AM

Terry Walker Wasmund, Project Manager II
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cc: Belssi Chang
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Amy Thomson

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-4736-1

Receipt
The samples were received on 4/9/2016 at 9:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-4736-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.7		4.1	1.2	ppb v/v	3.07		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	57		4.1	1.2	ppb v/v	3.07		TO 15 LL	Total/NA
1,1-Dichloroethane	10		4.1	0.51	ppb v/v	3.07		TO 15 LL	Total/NA
1,1-Dichloroethene	44		4.1	0.72	ppb v/v	3.07		TO 15 LL	Total/NA
1,1,1-Trichloroethane	170		4.1	0.61	ppb v/v	3.07		TO 15 LL	Total/NA
Trichloroethene	320		2.0	0.72	ppb v/v	3.07		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	28		13	3.8	ug/m3	3.07		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	230		16	4.9	ug/m3	3.07		TO 15 LL	Total/NA
1,1-Dichloroethane	42		17	2.1	ug/m3	3.07		TO 15 LL	Total/NA
1,1-Dichloroethene	180		16	2.8	ug/m3	3.07		TO 15 LL	Total/NA
1,1,1-Trichloroethane	940		22	3.4	ug/m3	3.07		TO 15 LL	Total/NA
Trichloroethene	1700		11	3.8	ug/m3	3.07		TO 15 LL	Total/NA

Client Sample ID: A-MID-GAC — Lab Sample ID: 140-4736-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	160		12	3.5	ppb v/v	10.16		TO 15 LL	Total/NA
1,1-Dichloroethane	22		12	1.5	ppb v/v	10.16		TO 15 LL	Total/NA
1,1-Dichloroethene	73		12	2.0	ppb v/v	10.16		TO 15 LL	Total/NA
1,1,1-Trichloroethane	500		12	1.7	ppb v/v	10.16		TO 15 LL	Total/NA
Trichloroethene	98		5.8	2.0	ppb v/v	10.16		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	650		46	14	ug/m3	10.16		TO 15 LL	Total/NA
1,1-Dichloroethane	90		47	5.9	ug/m3	10.16		TO 15 LL	Total/NA
1,1-Dichloroethene	290		46	8.1	ug/m3	10.16		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2700		63	9.5	ug/m3	10.16		TO 15 LL	Total/NA
Trichloroethene	530		31	11	ug/m3	10.16		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-4736-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	8.3	J	14	2.6	ppb v/v	10.44		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	170		14	4.2	ppb v/v	10.44		TO 15 LL	Total/NA
1,1-Dichloroethane	56		14	1.7	ppb v/v	10.44		TO 15 LL	Total/NA
1,1-Dichloroethene	130		14	2.4	ppb v/v	10.44		TO 15 LL	Total/NA
1,1,1-Trichloroethane	730		14	2.1	ppb v/v	10.44		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	41	J	68	13	ug/m3	10.44		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	670		55	17	ug/m3	10.44		TO 15 LL	Total/NA
1,1-Dichloroethane	230		56	7.0	ug/m3	10.44		TO 15 LL	Total/NA
1,1-Dichloroethene	530		55	9.7	ug/m3	10.44		TO 15 LL	Total/NA
1,1,1-Trichloroethane	4000		76	11	ug/m3	10.44		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-4736-1

Date Collected: 04/07/16 13:35

Matrix: Air

Date Received: 04/09/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.7**		4.1	1.2	ppb v/v			04/12/16 21:34	3.07
Carbon tetrachloride	ND		4.1	0.77	ppb v/v			04/12/16 21:34	3.07
Chlorodifluoromethane	ND		4.1	0.77	ppb v/v			04/12/16 21:34	3.07
Chloroform	ND		4.1	0.77	ppb v/v			04/12/16 21:34	3.07
cis-1,2-Dichloroethene	**57**		4.1	1.2	ppb v/v			04/12/16 21:34	3.07
Dichlorodifluoromethane	ND		4.1	1.4	ppb v/v			04/12/16 21:34	3.07
1,1-Dichloroethane	**10**		4.1	0.51	ppb v/v			04/12/16 21:34	3.07
1,2-Dichloroethane	ND		4.1	0.97	ppb v/v			04/12/16 21:34	3.07
1,1-Dichloroethene	**44**		4.1	0.72	ppb v/v			04/12/16 21:34	3.07
Ethylbenzene	ND		4.1	1.4	ppb v/v			04/12/16 21:34	3.07
Methylene Chloride	ND		10	6.7	ppb v/v			04/12/16 21:34	3.07
Methyl tert-butyl ether	ND		20	3.5	ppb v/v			04/12/16 21:34	3.07
Naphthalene	ND		2.0	2.0	ppb v/v			04/12/16 21:34	3.07
Tetrachloroethene	ND		4.1	0.82	ppb v/v			04/12/16 21:34	3.07
Toluene	ND		6.1	6.1	ppb v/v			04/12/16 21:34	3.07
trans-1,2-Dichloroethene	ND		4.1	1.0	ppb v/v			04/12/16 21:34	3.07
1,2,4-Trichlorobenzene	ND		4.1	2.0	ppb v/v			04/12/16 21:34	3.07
1,1,1-Trichloroethane	**170**		4.1	0.61	ppb v/v			04/12/16 21:34	3.07
1,1,2-Trichloroethane	ND		4.1	1.1	ppb v/v			04/12/16 21:34	3.07
Trichloroethene	**320**		2.0	0.72	ppb v/v			04/12/16 21:34	3.07
1,2,3-Trimethylbenzene	ND		4.1	1.7	ppb v/v			04/12/16 21:34	3.07
1,2,4-Trimethylbenzene	ND		4.1	1.3	ppb v/v			04/12/16 21:34	3.07
1,3,5-Trimethylbenzene	ND		4.1	1.3	ppb v/v			04/12/16 21:34	3.07
Vinyl chloride	ND		2.0	1.5	ppb v/v			04/12/16 21:34	3.07
Xylenes, Total	ND		8.2	1.2	ppb v/v			04/12/16 21:34	3.07

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**28**		13	3.8	ug/m3			04/12/16 21:34	3.07
Carbon tetrachloride	ND		26	4.8	ug/m3			04/12/16 21:34	3.07
Chlorodifluoromethane	ND		14	2.7	ug/m3			04/12/16 21:34	3.07
Chloroform	ND		20	3.7	ug/m3			04/12/16 21:34	3.07
cis-1,2-Dichloroethene	**230**		16	4.9	ug/m3			04/12/16 21:34	3.07
Dichlorodifluoromethane	ND		20	6.8	ug/m3			04/12/16 21:34	3.07
1,1-Dichloroethane	**42**		17	2.1	ug/m3			04/12/16 21:34	3.07
1,2-Dichloroethane	ND		17	3.9	ug/m3			04/12/16 21:34	3.07
1,1-Dichloroethene	**180**		16	2.8	ug/m3			04/12/16 21:34	3.07
Ethylbenzene	ND		18	6.0	ug/m3			04/12/16 21:34	3.07
Methylene Chloride	ND		36	23	ug/m3			04/12/16 21:34	3.07
Methyl tert-butyl ether	ND		74	13	ug/m3			04/12/16 21:34	3.07
Naphthalene	ND		11	11	ug/m3			04/12/16 21:34	3.07
Tetrachloroethene	ND		28	5.6	ug/m3			04/12/16 21:34	3.07
Toluene	ND		23	23	ug/m3			04/12/16 21:34	3.07
trans-1,2-Dichloroethene	ND		16	4.1	ug/m3			04/12/16 21:34	3.07
1,2,4-Trichlorobenzene	ND		30	15	ug/m3			04/12/16 21:34	3.07
1,1,1-Trichloroethane	**940**		22	3.4	ug/m3			04/12/16 21:34	3.07
1,1,2-Trichloroethane	ND		22	5.9	ug/m3			04/12/16 21:34	3.07
Trichloroethene	**1700**		11	3.8	ug/m3			04/12/16 21:34	3.07
1,2,3-Trimethylbenzene	ND		20	8.6	ug/m3			04/12/16 21:34	3.07
1,2,4-Trimethylbenzene	ND		20	6.3	ug/m3			04/12/16 21:34	3.07

Client Sample ID: A-INFLUENT
Date Collected: 04/07/16 13:35
Date Received: 04/09/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4736-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		20	6.5	ug/m3			04/12/16 21:34	3.07
Vinyl chloride	ND		5.2	3.8	ug/m3			04/12/16 21:34	3.07
Xylenes, Total	ND		36	5.3	ug/m3			04/12/16 21:34	3.07

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*04/12/16 21:34*	*3.07*

Client Sample ID: A-MID-GAC

Date Collected: 04/07/16 13:33
Date Received: 04/09/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4736-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		12	3.3	ppb v/v			04/12/16 22:26	10.16
Carbon tetrachloride	ND		12	2.2	ppb v/v			04/12/16 22:26	10.16
Chlorodifluoromethane	ND		12	2.2	ppb v/v			04/12/16 22:26	10.16
Chloroform	ND		12	2.2	ppb v/v			04/12/16 22:26	10.16
cis-1,2-Dichloroethene	**160**		12	3.5	ppb v/v			04/12/16 22:26	10.16
Dichlorodifluoromethane	ND		12	3.9	ppb v/v			04/12/16 22:26	10.16
1,1-Dichloroethane	**22**		12	1.5	ppb v/v			04/12/16 22:26	10.16
1,2-Dichloroethane	ND		12	2.8	ppb v/v			04/12/16 22:26	10.16
1,1-Dichloroethene	**73**		12	2.0	ppb v/v			04/12/16 22:26	10.16
Ethylbenzene	ND		12	3.9	ppb v/v			04/12/16 22:26	10.16
Methylene Chloride	ND		29	19	ppb v/v			04/12/16 22:26	10.16
Methyl tert-butyl ether	ND		58	9.9	ppb v/v			04/12/16 22:26	10.16
Naphthalene	ND		5.8	5.8	ppb v/v			04/12/16 22:26	10.16
Tetrachloroethene	ND		12	2.3	ppb v/v			04/12/16 22:26	10.16
Toluene	ND		17	17	ppb v/v			04/12/16 22:26	10.16
trans-1,2-Dichloroethene	ND		12	2.9	ppb v/v			04/12/16 22:26	10.16
1,2,4-Trichlorobenzene	ND		12	5.7	ppb v/v			04/12/16 22:26	10.16
1,1,1-Trichloroethane	**500**		12	1.7	ppb v/v			04/12/16 22:26	10.16
1,1,2-Trichloroethane	ND		12	3.0	ppb v/v			04/12/16 22:26	10.16
Trichloroethene	**98**		5.8	2.0	ppb v/v			04/12/16 22:26	10.16
1,2,3-Trimethylbenzene	ND		12	4.9	ppb v/v			04/12/16 22:26	10.16
1,2,4-Trimethylbenzene	ND		12	3.6	ppb v/v			04/12/16 22:26	10.16
1,3,5-Trimethylbenzene	ND		12	3.8	ppb v/v			04/12/16 22:26	10.16
Vinyl chloride	ND		5.8	4.2	ppb v/v			04/12/16 22:26	10.16
Xylenes, Total	ND		23	3.5	ppb v/v			04/12/16 22:26	10.16

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		37	11	ug/m3			04/12/16 22:26	10.16
Carbon tetrachloride	ND		73	14	ug/m3			04/12/16 22:26	10.16
Chlorodifluoromethane	ND		41	7.7	ug/m3			04/12/16 22:26	10.16
Chloroform	ND		57	11	ug/m3			04/12/16 22:26	10.16
cis-1,2-Dichloroethene	**650**		46	14	ug/m3			04/12/16 22:26	10.16
Dichlorodifluoromethane	ND		57	19	ug/m3			04/12/16 22:26	10.16
1,1-Dichloroethane	**90**		47	5.9	ug/m3			04/12/16 22:26	10.16
1,2-Dichloroethane	ND		47	11	ug/m3			04/12/16 22:26	10.16
1,1-Dichloroethene	**290**		46	8.1	ug/m3			04/12/16 22:26	10.16
Ethylbenzene	ND		50	17	ug/m3			04/12/16 22:26	10.16
Methylene Chloride	ND		100	66	ug/m3			04/12/16 22:26	10.16
Methyl tert-butyl ether	ND		210	36	ug/m3			04/12/16 22:26	10.16
Naphthalene	ND		30	30	ug/m3			04/12/16 22:26	10.16
Tetrachloroethene	ND		79	16	ug/m3			04/12/16 22:26	10.16
Toluene	ND		66	66	ug/m3			04/12/16 22:26	10.16
trans-1,2-Dichloroethene	ND		46	12	ug/m3			04/12/16 22:26	10.16
1,2,4-Trichlorobenzene	ND		86	42	ug/m3			04/12/16 22:26	10.16
1,1,1-Trichloroethane	**2700**		63	9.5	ug/m3			04/12/16 22:26	10.16
1,1,2-Trichloroethane	ND		63	17	ug/m3			04/12/16 22:26	10.16
Trichloroethene	**530**		31	11	ug/m3			04/12/16 22:26	10.16
1,2,3-Trimethylbenzene	ND		57	24	ug/m3			04/12/16 22:26	10.16
1,2,4-Trimethylbenzene	ND		57	18	ug/m3			04/12/16 22:26	10.16

Client Sample ID: A-MID-GAC

Date Collected: 04/07/16 13:33
Date Received: 04/09/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4736-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		57	19	ug/m3			04/12/16 22:26	10.16
Vinyl chloride	ND		15	11	ug/m3			04/12/16 22:26	10.16
Xylenes, Total	ND		100	15	ug/m3			04/12/16 22:26	10.16

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*04/12/16 22:26*	*10.16*

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-4736-3

Date Collected: 04/07/16 13:31

Matrix: Air

Date Received: 04/09/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		14	4.0	ppb v/v			04/12/16 23:19	10.44
Carbon tetrachloride	ND		14	2.6	ppb v/v			04/12/16 23:19	10.44
Chlorodifluoromethane	ND		14	2.6	ppb v/v			04/12/16 23:19	10.44
Chloroform	**8.3**	**J**	14	2.6	ppb v/v			04/12/16 23:19	10.44
cis-1,2-Dichloroethene	**170**		14	4.2	ppb v/v			04/12/16 23:19	10.44
Dichlorodifluoromethane	ND		14	4.7	ppb v/v			04/12/16 23:19	10.44
1,1-Dichloroethane	**56**		14	1.7	ppb v/v			04/12/16 23:19	10.44
1,2-Dichloroethane	ND		14	3.3	ppb v/v			04/12/16 23:19	10.44
1,1-Dichloroethene	**130**		14	2.4	ppb v/v			04/12/16 23:19	10.44
Ethylbenzene	ND		14	4.7	ppb v/v			04/12/16 23:19	10.44
Methylene Chloride	ND		35	23	ppb v/v			04/12/16 23:19	10.44
Methyl tert-butyl ether	ND		70	12	ppb v/v			04/12/16 23:19	10.44
Naphthalene	ND		7.0	7.0	ppb v/v			04/12/16 23:19	10.44
Tetrachloroethene	ND		14	2.8	ppb v/v			04/12/16 23:19	10.44
Toluene	ND		21	21	ppb v/v			04/12/16 23:19	10.44
trans-1,2-Dichloroethene	ND		14	3.5	ppb v/v			04/12/16 23:19	10.44
1,2,4-Trichlorobenzene	ND		14	6.8	ppb v/v			04/12/16 23:19	10.44
1,1,1-Trichloroethane	**730**		14	2.1	ppb v/v			04/12/16 23:19	10.44
1,1,2-Trichloroethane	ND		14	3.7	ppb v/v			04/12/16 23:19	10.44
Trichloroethene	ND		7.0	2.4	ppb v/v			04/12/16 23:19	10.44
1,2,3-Trimethylbenzene	ND		14	5.9	ppb v/v			04/12/16 23:19	10.44
1,2,4-Trimethylbenzene	ND		14	4.4	ppb v/v			04/12/16 23:19	10.44
1,3,5-Trimethylbenzene	ND		14	4.5	ppb v/v			04/12/16 23:19	10.44
Vinyl chloride	ND		7.0	5.0	ppb v/v			04/12/16 23:19	10.44
Xylenes, Total	ND		28	4.2	ppb v/v			04/12/16 23:19	10.44

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		44	13	ug/m3			04/12/16 23:19	10.44
Carbon tetrachloride	ND		88	16	ug/m3			04/12/16 23:19	10.44
Chlorodifluoromethane	ND		49	9.2	ug/m3			04/12/16 23:19	10.44
Chloroform	**41**	**J**	68	13	ug/m3			04/12/16 23:19	10.44
cis-1,2-Dichloroethene	**670**		55	17	ug/m3			04/12/16 23:19	10.44
Dichlorodifluoromethane	ND		69	23	ug/m3			04/12/16 23:19	10.44
1,1-Dichloroethane	**230**		56	7.0	ug/m3			04/12/16 23:19	10.44
1,2-Dichloroethane	ND		56	13	ug/m3			04/12/16 23:19	10.44
1,1-Dichloroethene	**530**		55	9.7	ug/m3			04/12/16 23:19	10.44
Ethylbenzene	ND		60	20	ug/m3			04/12/16 23:19	10.44
Methylene Chloride	ND		120	79	ug/m3			04/12/16 23:19	10.44
Methyl tert-butyl ether	ND		250	43	ug/m3			04/12/16 23:19	10.44
Naphthalene	ND		36	36	ug/m3			04/12/16 23:19	10.44
Tetrachloroethene	ND		94	19	ug/m3			04/12/16 23:19	10.44
Toluene	ND		79	79	ug/m3			04/12/16 23:19	10.44
trans-1,2-Dichloroethene	ND		55	14	ug/m3			04/12/16 23:19	10.44
1,2,4-Trichlorobenzene	ND		100	50	ug/m3			04/12/16 23:19	10.44
1,1,1-Trichloroethane	**4000**		76	11	ug/m3			04/12/16 23:19	10.44
1,1,2-Trichloroethane	ND		76	20	ug/m3			04/12/16 23:19	10.44
Trichloroethene	ND		37	13	ug/m3			04/12/16 23:19	10.44
1,2,3-Trimethylbenzene	ND		68	29	ug/m3			04/12/16 23:19	10.44
1,2,4-Trimethylbenzene	ND		68	21	ug/m3			04/12/16 23:19	10.44

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Client Sample ID: A-EFFLUENT
Date Collected: 04/07/16 13:31
Date Received: 04/09/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4736-3
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		68	22	ug/m3			04/12/16 23:19	10.44
Vinyl chloride	ND		18	13	ug/m3			04/12/16 23:19	10.44
Xylenes, Total	ND		120	18	ug/m3			04/12/16 23:19	10.44

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*04/12/16 23:19*	*10.44*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
140-4736-1	A-INFLUENT	96								
140-4736-2	A-MID-GAC	97								
140-4736-3	A-EFFLUENT	96								
LCS 140-4632/1002	Lab Control Sample	101								
MB 140-4632/7	Method Blank	94								

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-4632/7
Matrix: Air
Analysis Batch: 4632

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			04/12/16 18:57	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			04/12/16 18:57	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			04/12/16 18:57	1
Chloroform	ND		0.080	0.015	ppb v/v			04/12/16 18:57	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/12/16 18:57	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			04/12/16 18:57	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			04/12/16 18:57	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			04/12/16 18:57	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			04/12/16 18:57	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			04/12/16 18:57	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			04/12/16 18:57	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			04/12/16 18:57	1
Naphthalene	ND		0.040	0.040	ppb v/v			04/12/16 18:57	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			04/12/16 18:57	1
Toluene	ND		0.12	0.12	ppb v/v			04/12/16 18:57	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			04/12/16 18:57	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			04/12/16 18:57	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			04/12/16 18:57	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			04/12/16 18:57	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/12/16 18:57	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			04/12/16 18:57	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			04/12/16 18:57	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			04/12/16 18:57	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/12/16 18:57	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			04/12/16 18:57	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			04/12/16 18:57	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			04/12/16 18:57	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			04/12/16 18:57	1
Chloroform	ND		0.39	0.073	ug/m3			04/12/16 18:57	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/12/16 18:57	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			04/12/16 18:57	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			04/12/16 18:57	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			04/12/16 18:57	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			04/12/16 18:57	1
Ethylbenzene	ND		0.35	0.12	ug/m3			04/12/16 18:57	1
Methylene Chloride	ND		0.69	0.45	ug/m3			04/12/16 18:57	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			04/12/16 18:57	1
Naphthalene	ND		0.21	0.21	ug/m3			04/12/16 18:57	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			04/12/16 18:57	1
Toluene	ND		0.45	0.45	ug/m3			04/12/16 18:57	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			04/12/16 18:57	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			04/12/16 18:57	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			04/12/16 18:57	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			04/12/16 18:57	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/12/16 18:57	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			04/12/16 18:57	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-4632/7
Matrix: Air
Analysis Batch: 4632

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			04/12/16 18:57	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			04/12/16 18:57	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/12/16 18:57	1
Xylenes, Total	ND		0.69	0.10	ug/m3			04/12/16 18:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*60 - 140*		*04/12/16 18:57*	*1*

Lab Sample ID: LCS 140-4632/1002
Matrix: Air
Analysis Batch: 4632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.05		ppb v/v		103	70 - 130
Carbon tetrachloride	2.00	2.29		ppb v/v		115	70 - 130
Chlorodifluoromethane	2.00	2.14		ppb v/v		107	60 - 140
Chloroform	2.00	2.07		ppb v/v		104	70 - 130
cis-1,2-Dichloroethene	2.00	2.03		ppb v/v		101	70 - 130
Dichlorodifluoromethane	2.00	1.63		ppb v/v		82	60 - 140
1,1-Dichloroethane	2.00	2.14		ppb v/v		107	70 - 130
1,2-Dichloroethane	2.00	2.18		ppb v/v		109	70 - 130
1,1-Dichloroethene	2.00	1.95		ppb v/v		97	70 - 130
Ethylbenzene	2.00	2.08		ppb v/v		104	70 - 130
Methylene Chloride	2.00	1.94		ppb v/v		97	70 - 130
Methyl tert-butyl ether	2.00	2.05		ppb v/v		103	60 - 140
Naphthalene	2.00	1.85		ppb v/v		92	60 - 140
Tetrachloroethene	2.00	2.03		ppb v/v		101	70 - 130
Toluene	2.00	2.15		ppb v/v		108	70 - 130
trans-1,2-Dichloroethene	2.00	1.95		ppb v/v		97	70 - 130
1,2,4-Trichlorobenzene	2.00	1.85		ppb v/v		92	60 - 140
1,1,1-Trichloroethane	2.00	2.11		ppb v/v		105	70 - 130
1,1,2-Trichloroethane	2.00	2.10		ppb v/v		105	70 - 130
Trichloroethene	2.00	2.18		ppb v/v		109	70 - 130
1,2,3-Trimethylbenzene	2.00	2.21		ppb v/v		110	70 - 130
1,2,4-Trimethylbenzene	2.00	2.09		ppb v/v		105	70 - 130
1,3,5-Trimethylbenzene	2.00	2.06		ppb v/v		103	70 - 130
Vinyl chloride	2.00	2.17		ppb v/v		108	70 - 130
Xylenes, Total	6.00	6.29		ppb v/v		105	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.56		ug/m3		103	70 - 130
Carbon tetrachloride	13	14.4		ug/m3		115	70 - 130
Chlorodifluoromethane	7.1	7.55		ug/m3		107	60 - 140
Chloroform	9.8	10.1		ug/m3		104	70 - 130
cis-1,2-Dichloroethene	7.9	8.04		ug/m3		101	70 - 130
Dichlorodifluoromethane	9.9	8.08		ug/m3		82	60 - 140
1,1-Dichloroethane	8.1	8.66		ug/m3		107	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-4632/1002
Matrix: Air
Analysis Batch: 4632

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.83		ug/m3		109	70 - 130
1,1-Dichloroethene	7.9	7.72		ug/m3		97	70 - 130
Ethylbenzene	8.7	9.02		ug/m3		104	70 - 130
Methylene Chloride	6.9	6.74		ug/m3		97	70 - 130
Methyl tert-butyl ether	7.2	7.39		ug/m3		103	60 - 140
Naphthalene	10	9.68		ug/m3		92	60 - 140
Tetrachloroethene	14	13.8		ug/m3		101	70 - 130
Toluene	7.5	8.11		ug/m3		108	70 - 130
trans-1,2-Dichloroethene	7.9	7.72		ug/m3		97	70 - 130
1,2,4-Trichlorobenzene	15	13.7		ug/m3		92	60 - 140
1,1,1-Trichloroethane	11	11.5		ug/m3		105	70 - 130
1,1,2-Trichloroethane	11	11.5		ug/m3		105	70 - 130
Trichloroethene	11	11.7		ug/m3		109	70 - 130
1,2,3-Trimethylbenzene	9.8	10.9		ug/m3		110	70 - 130
1,2,4-Trimethylbenzene	9.8	10.3		ug/m3		105	70 - 130
1,3,5-Trimethylbenzene	9.8	10.1		ug/m3		103	70 - 130
Vinyl chloride	5.1	5.54		ug/m3		108	70 - 130
Xylenes, Total	26	27.3		ug/m3		105	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Air - GC/MS VOA

Analysis Batch: 4632

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-4736-1	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-4736-2	A-MID-GAC	Total/NA	Air	TO 15 LL	
140-4736-3	A-EFFLUENT	Total/NA	Air	TO 15 LL	
LCS 140-4632/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-4632/7	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-4736-1
Date Collected: 04/07/16 13:35
Matrix: Air
Date Received: 04/09/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		3.07	30 mL	500 mL	4632	04/12/16 21:34	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-MID-GAC
Lab Sample ID: 140-4736-2
Date Collected: 04/07/16 13:33
Matrix: Air
Date Received: 04/09/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		10.16	35 mL	500 mL	4632	04/12/16 22:26	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-4736-3
Date Collected: 04/07/16 13:31
Matrix: Air
Date Received: 04/09/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		10.44	30 mL	500 mL	4632	04/12/16 23:19	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-4632/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	4632	04/12/16 14:05	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-4632/7
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	4632	04/12/16 18:57	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: SSM OEM MRC

TestAmerica Job ID: 140-4736-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-4736-1	A-INFLUENT	Air	04/07/16 13:35	04/09/16 09:30
140-4736-2	A-MID-GAC	Air	04/07/16 13:33	04/09/16 09:30
140-4736-3	A-EFFLUENT	Air	04/07/16 13:31	04/09/16 09:30

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
A-INFLUENT	140-4736-1	96
A-MID-GAC	140-4736-2	97
A-EFFLUENT	140-4736-3	96
	MB 140-4632/7	94
	LCS 140-4632/1002	101

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVD12-LCS.d

Lab ID: LCS 140-4632/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.05	103	70-130	
Carbon tetrachloride	2.00	2.29	115	70-130	
Chlorodifluoromethane	2.00	2.14	107	60-140	
Chloroform	2.00	2.07	104	70-130	
cis-1,2-Dichloroethene	2.00	2.03	101	70-130	
Dichlorodifluoromethane	2.00	1.63	82	60-140	
1,1-Dichloroethane	2.00	2.14	107	70-130	
1,2-Dichloroethane	2.00	2.18	109	70-130	
1,1-Dichloroethene	2.00	1.95	97	70-130	
Ethylbenzene	2.00	2.08	104	70-130	
Methylene Chloride	2.00	1.94	97	70-130	
Methyl tert-butyl ether	2.00	2.05	103	60-140	
Naphthalene	2.00	1.85	92	60-140	
Tetrachloroethene	2.00	2.03	101	70-130	
Toluene	2.00	2.15	108	70-130	
trans-1,2-Dichloroethene	2.00	1.95	97	70-130	
1,2,4-Trichlorobenzene	2.00	1.85	92	60-140	
1,1,1-Trichloroethane	2.00	2.11	105	70-130	
1,1,2-Trichloroethane	2.00	2.10	105	70-130	
Trichloroethene	2.00	2.18	109	70-130	
1,2,3-Trimethylbenzene	2.00	2.21	110	70-130	
1,2,4-Trimethylbenzene	2.00	2.09	105	70-130	
1,3,5-Trimethylbenzene	2.00	2.06	103	70-130	
Vinyl chloride	2.00	2.17	108	70-130	
Xylenes, Total	6.00	6.29	105	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab File ID: Rmb500D12.D Lab Sample ID: MB 140-4632/7

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 04/12/2016 18:57

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-4632/1002	RCCVD12-LCS.d	04/12/2016 14:05
A-INFLUENT	140-4736-1	RD12p103.D	04/12/2016 21:34
A-MID-GAC	140-4736-2	RD12p104.D	04/12/2016 22:26
A-EFFLUENT	140-4736-3	RD12p105.D	04/12/2016 23:19

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab File ID: RBFBJ29.D BFB Injection Date: 10/29/2015

Instrument ID: MR BFB Injection Time: 12:53

Analysis Batch No.: 3621

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.8	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	75.7	
175	5.0 - 9.0 % of mass 174	5.5	(7.2) 1
176	95.0 - 101.0 % of mass 174	73.7	(97.4) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-3621/2	RJ29IC01.D	10/29/2015	14:14
	IC 140-3621/3	RJ29IC02.D	10/29/2015	15:07
	IC 140-3621/4	RJ29IC03.D	10/29/2015	15:58
	IC 140-3621/5	RJ29IC04.D	10/29/2015	16:50
	IC 140-3621/6	RJ29IC05.D	10/29/2015	17:41
	ICIS 140-3621/7	RJ29ICIS06.D	10/29/2015	18:33
	IC 140-3621/8	RJ29IC07.D	10/29/2015	19:26
	IC 140-3621/9	RJ29IC08.D	10/29/2015	20:18
	IC 140-3621/10	RJ29IC09.D	10/29/2015	21:11
	ICV 140-3621/12	RJ29ICV.D	10/29/2015	22:54

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab File ID: RBFBD12.D BFB Injection Date: 04/12/2016

Instrument ID: MR BFB Injection Time: 13:33

Analysis Batch No.: 4632

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	20.9	
75	30.0 - 60.0 % of mass 95	49.4	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	76.1	
175	5.0 - 9.0 % of mass 174	5.6	(7.4) 1
176	95.0 - 101.0 % of mass 174	75.5	(99.2) 1
177	5.0 - 9.0 % of mass 176	5.0	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-4632/2	RCCVD12.D	04/12/2016	14:05
	LCS 140-4632/1002	RCCVD12-LCS.d	04/12/2016	14:05
	MB 140-4632/7	Rmb500D12.D	04/12/2016	18:57
A-INFLUENT	140-4736-1	RD12p103.D	04/12/2016	21:34
A-MID-GAC	140-4736-2	RD12p104.D	04/12/2016	22:26
A-EFFLUENT	140-4736-3	RD12p105.D	04/12/2016	23:19

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Sample No.: ICIS 140-3621/7 Date Analyzed: 10/29/2015 18:33

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RJ29ICIS06.D Heated Purge: (Y/N) N

Calibration ID: 393

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		382463	8.43	1942786	10.62	1806380	16.84
UPPER LIMIT		535448	8.76	2719900	10.95	2528932	17.17
LOWER LIMIT		229478	8.10	1165672	10.29	1083828	16.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-3621/12		485034	8.44	2411549	10.63	2232798	16.84

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Sample No.: CCVIS 140-4632/2 Date Analyzed: 04/12/2016 14:05

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVD12.D Heated Purge: (Y/N) N

Calibration ID: 393

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		287029	8.43	1469572	10.60	1326124	16.82
UPPER LIMIT		401841	8.76	2057401	10.93	1856574	17.15
LOWER LIMIT		172217	8.10	881743	10.27	795674	16.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-4632/1002		287029	8.43	1469572	10.60	1326124	16.82
MB 140-4632/7		342197	8.42	1709198	10.60	1538679	16.81
140-4736-1	A-INFLUENT	268958	8.42	1363320	10.60	1218791	16.81
140-4736-2	A-MID-GAC	245362	8.41	1247860	10.59	1109769	16.81
140-4736-3	A-EFFLUENT	225476	8.41	1153104	10.59	1024784	16.81

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-4736-1

Matrix: Air | Lab File ID: RD12p103.D

Analysis Method: TO 15 LL | Date Collected: 04/07/2016 13:35

Sample wt/vol: 30(mL) | Date Analyzed: 04/12/2016 21:34

Soil Aliquot Vol: | Dilution Factor: 3.07

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	8.7		4.1	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.1	0.77
75-45-6	Chlorodifluoromethane	86.47	ND		4.1	0.77
67-66-3	Chloroform	119.38	ND		4.1	0.77
156-59-2	cis-1,2-Dichloroethene	96.94	57		4.1	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.1	1.4
75-34-3	1,1-Dichloroethane	98.96	10		4.1	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.1	0.97
75-35-4	1,1-Dichloroethene	96.94	44		4.1	0.72
100-41-4	Ethylbenzene	106.17	ND		4.1	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.7
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.5
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.1	0.82
108-88-3	Toluene	92.14	ND		6.1	6.1
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.1	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.1	2.0
71-55-6	1,1,1-Trichloroethane	133.41	170		4.1	0.61
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.1	1.1
79-01-6	Trichloroethene	131.39	320		2.0	0.72
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.1	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.1	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.1	1.3
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.2	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-4736-1

Matrix: Air Lab File ID: RD12p103.D

Analysis Method: TO 15 LL Date Collected: 04/07/2016 13:35

Sample wt/vol: 30(mL) Date Analyzed: 04/12/2016 21:34

Soil Aliquot Vol: Dilution Factor: 3.07

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4632 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	28		13	3.8
56-23-5	Carbon tetrachloride	153.81	ND		26	4.8
75-45-6	Chlorodifluoromethane	86.47	ND		14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	230		16	4.9
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.8
75-34-3	1,1-Dichloroethane	98.96	42		17	2.1
107-06-2	1,2-Dichloroethane	98.96	ND		17	3.9
75-35-4	1,1-Dichloroethene	96.94	180		16	2.8
100-41-4	Ethylbenzene	106.17	ND		18	6.0
75-09-2	Methylene Chloride	84.93	ND		36	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		74	13
91-20-3	Naphthalene	128.17	ND		11	11
127-18-4	Tetrachloroethene	165.83	ND		28	5.6
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.1
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	15
71-55-6	1,1,1-Trichloroethane	133.41	940		22	3.4
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.9
79-01-6	Trichloroethene	131.39	1700		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.6
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.5
75-01-4	Vinyl chloride	62.50	ND		5.2	3.8
1330-20-7	Xylenes, Total	106.17	ND		36	5.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D
Lims ID: 140-4736-A-1 Lab Sample ID: 140-4736-1
Client ID: A-INFLUENT
Sample Type: Client
Inject. Date: 12-Apr-2016 21:34:30 ALS Bottle#: 3 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 3.0700
Sample Info: 140-0002734-010
Misc. Info.: 140-4736-A-1@3.07
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Apr-2016 11:13:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: tajh Date: 13-Apr-2016 10:01:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.420	8.425	-0.005	97	268958	4.00	
* 2 1,4-Difluorobenzene	114	10.598	10.604	-0.006	95	1363320	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.810	16.816	-0.006	87	1218791	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.561	19.560	0.001	87	865804	3.85	
27 1,1-Dichloroethene	96	5.778	5.772	0.006	96	81099	0.8665	
31 Methylene Chloride	84	6.080	6.074	0.006	98	6676	0.0737	
37 1,1-Dichloroethane	63	7.196	7.201	-0.005	100	35494	0.2036	
42 cis-1,2-Dichloroethene	96	8.113	8.123	-0.010	96	112256	1.12	
47 1,1,1-Trichloroethane	97	9.439	9.439	0.000	97	635987	3.35	
50 Benzene	78	10.027	10.027	0.000	98	49465	0.1710	
59 Trichloroethene	130	11.391	11.396	-0.005	98	850454	6.24	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

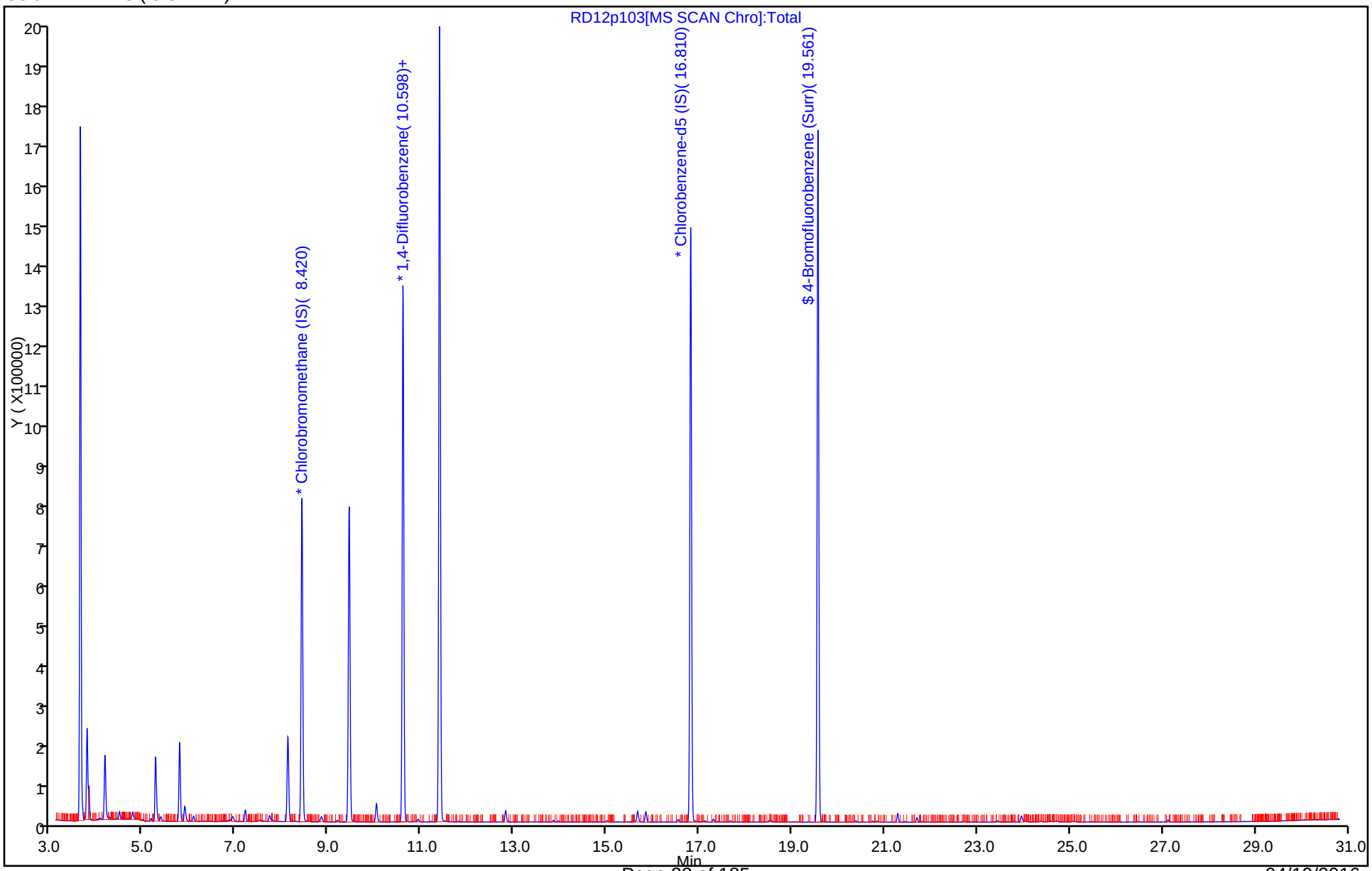
Report Date: 13-Apr-2016 11:15:33 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D

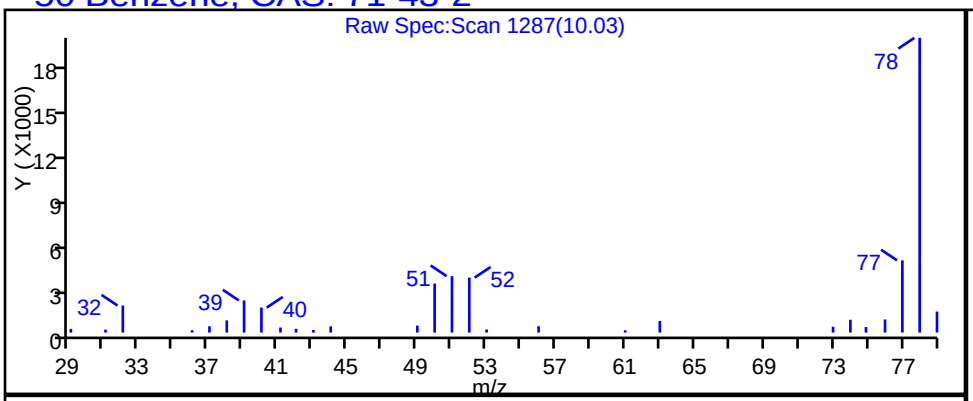
Injection Date:	12-Apr-2016 21:34:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-4736-A-1	Lab Sample ID:	140-4736-1	Worklist Smp#:	10
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	3.0700	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

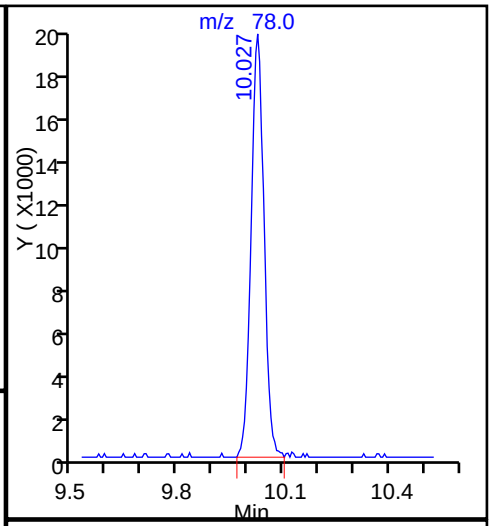
Column: RTX-5 (0.32 mm)

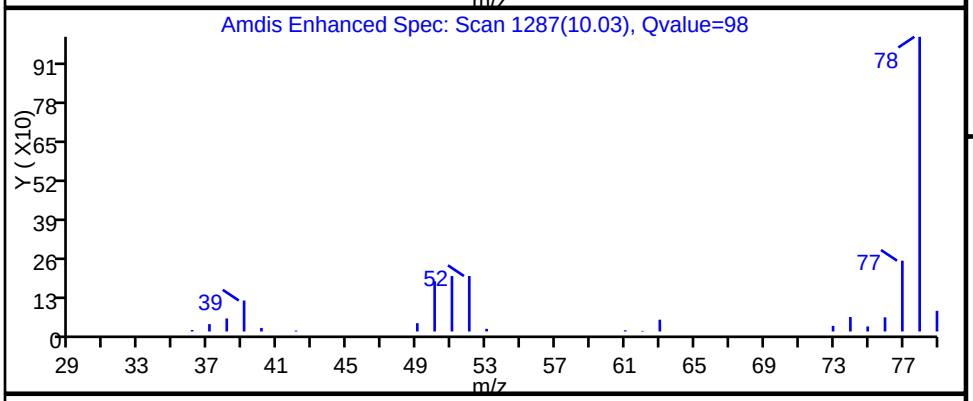


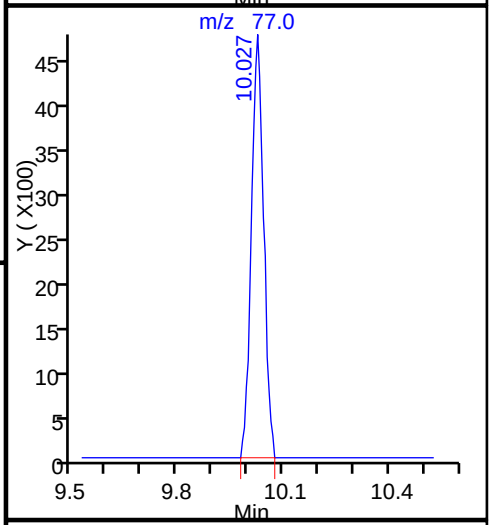
Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D
Injection Date: 12-Apr-2016 21:34:30 Instrument ID: MR
Lims ID: 140-4736-A-1 Lab Sample ID: 140-4736-1
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 3 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 3.0700
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

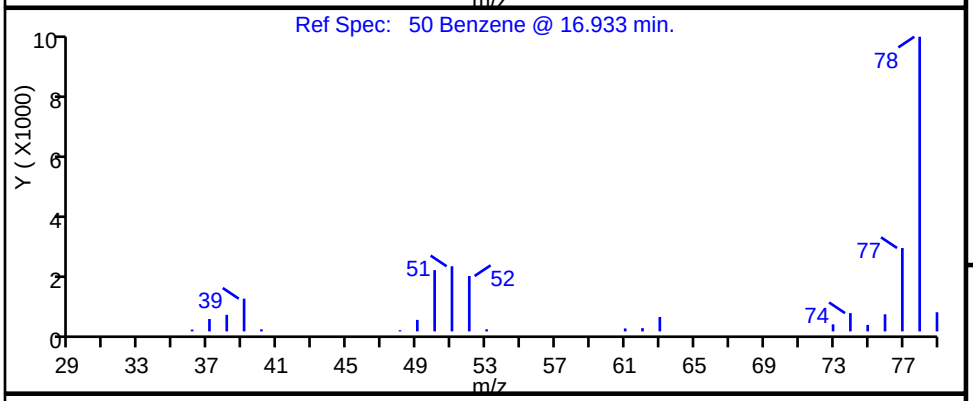
50 Benzene, CAS: 71-43-2

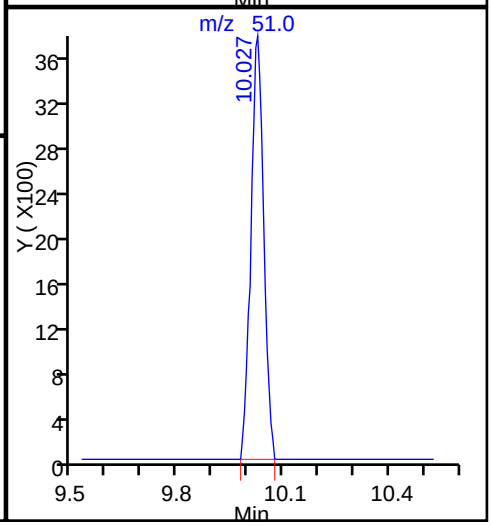


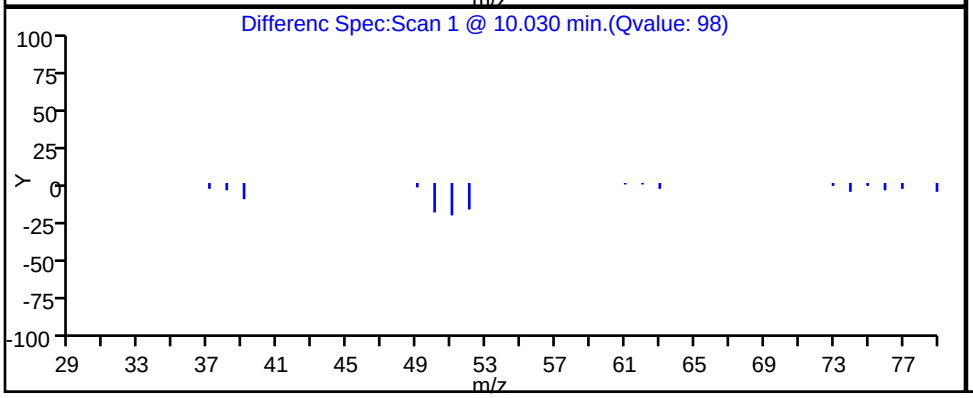








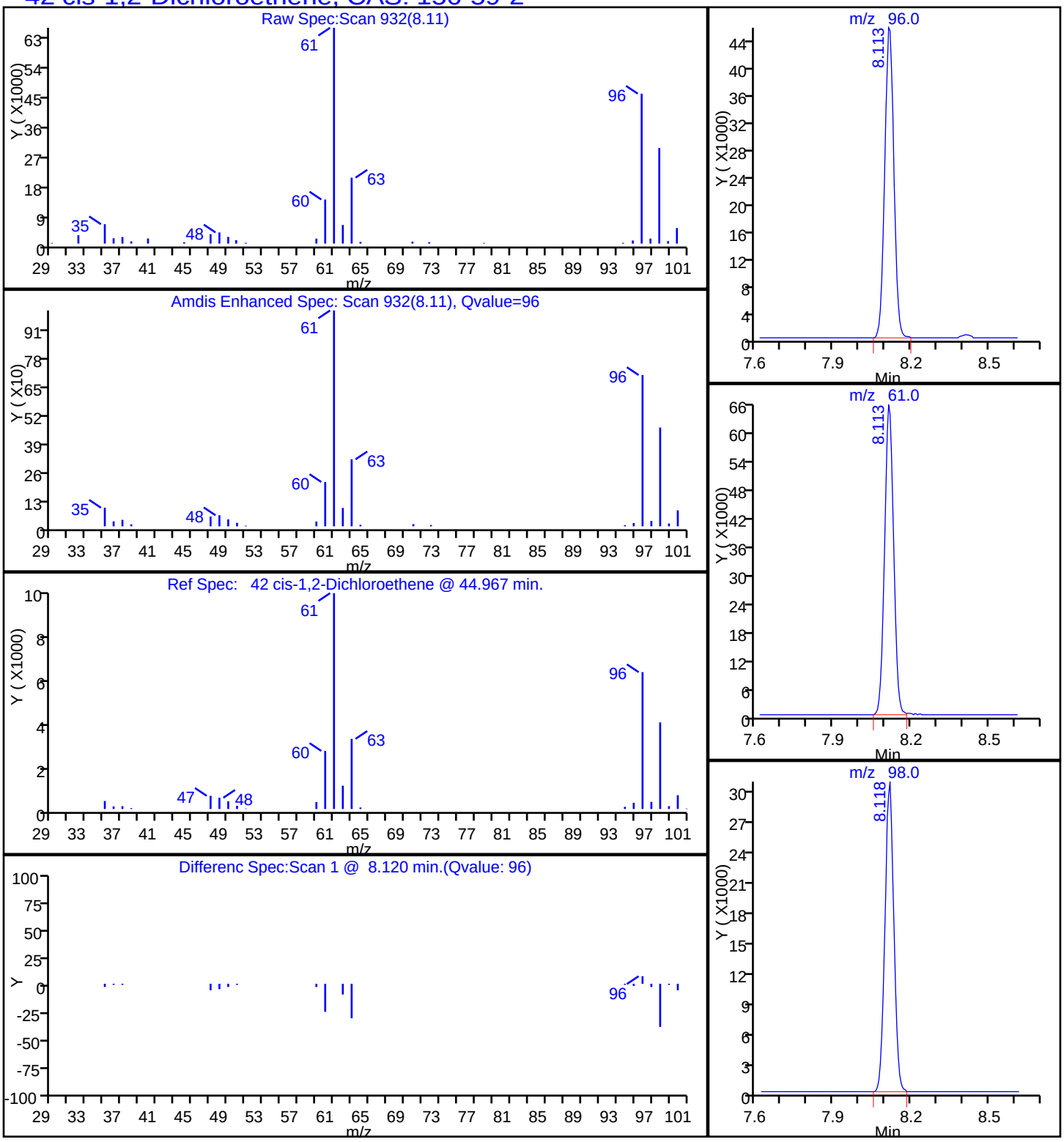




TestAmerica Knoxville

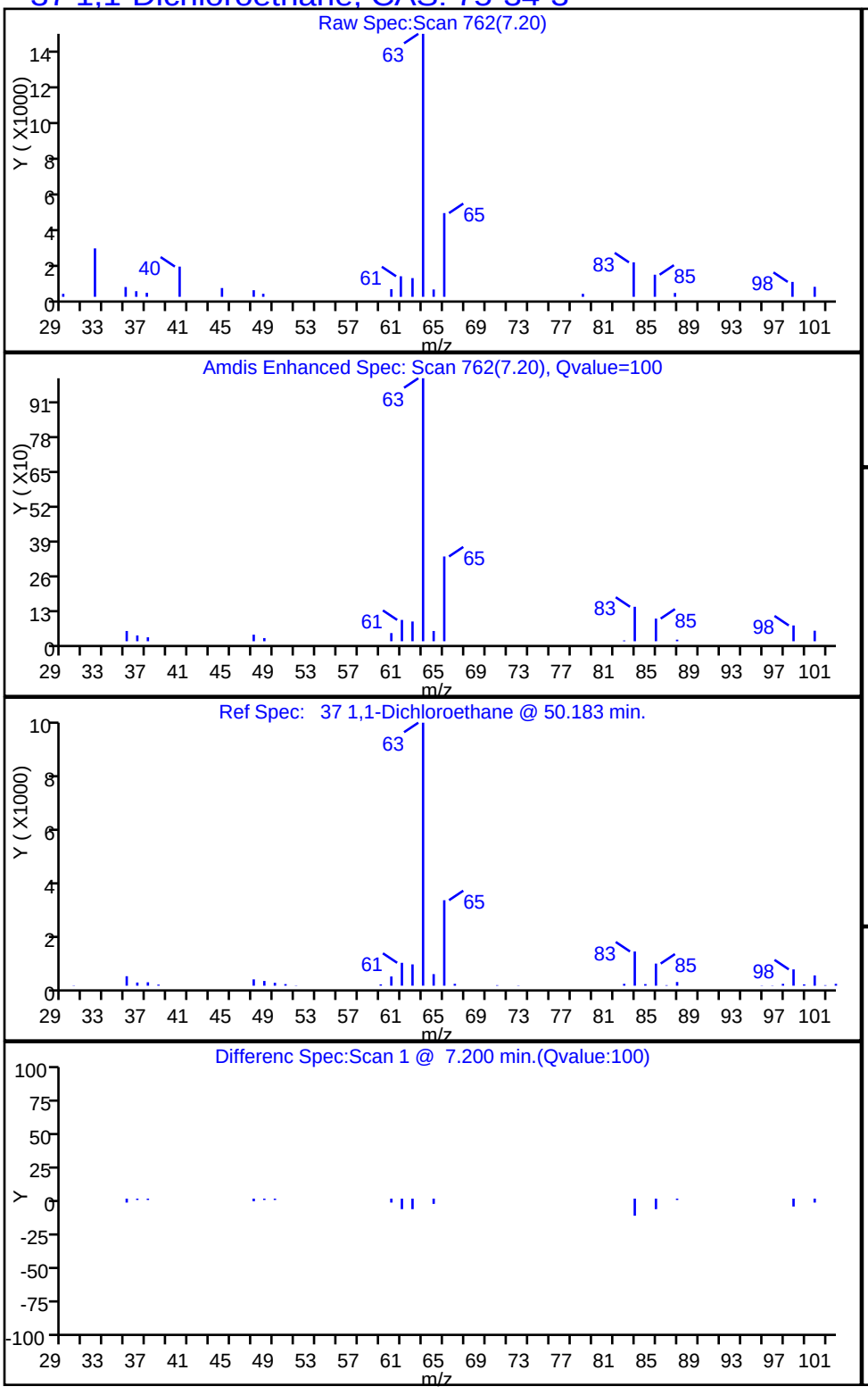
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D		
Injection Date:	12-Apr-2016 21:34:30	Instrument ID:	MR
Lims ID:	140-4736-A-1	Lab Sample ID:	140-4736-1
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	3.0700
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

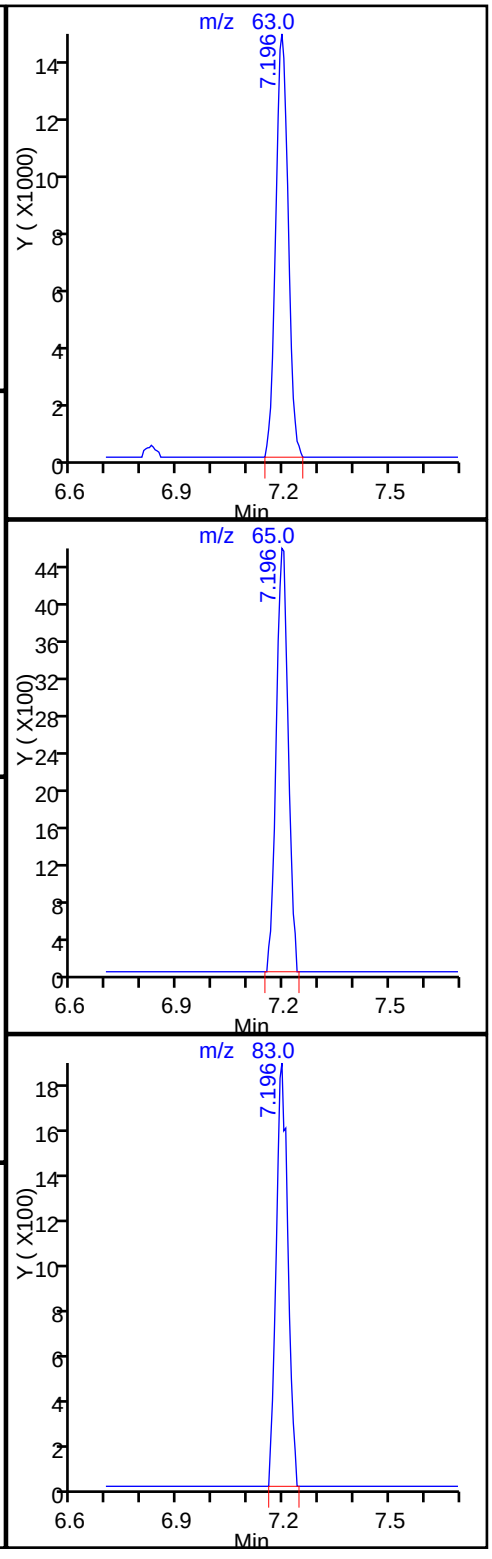
42 cis-1,2-Dichloroethene, CAS: 156-59-2



Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D
Injection Date: 12-Apr-2016 21:34:30 Instrument ID: MR
Lims ID: 140-4736-A-1 Lab Sample ID: 140-4736-1
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 3 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 3.0700
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3





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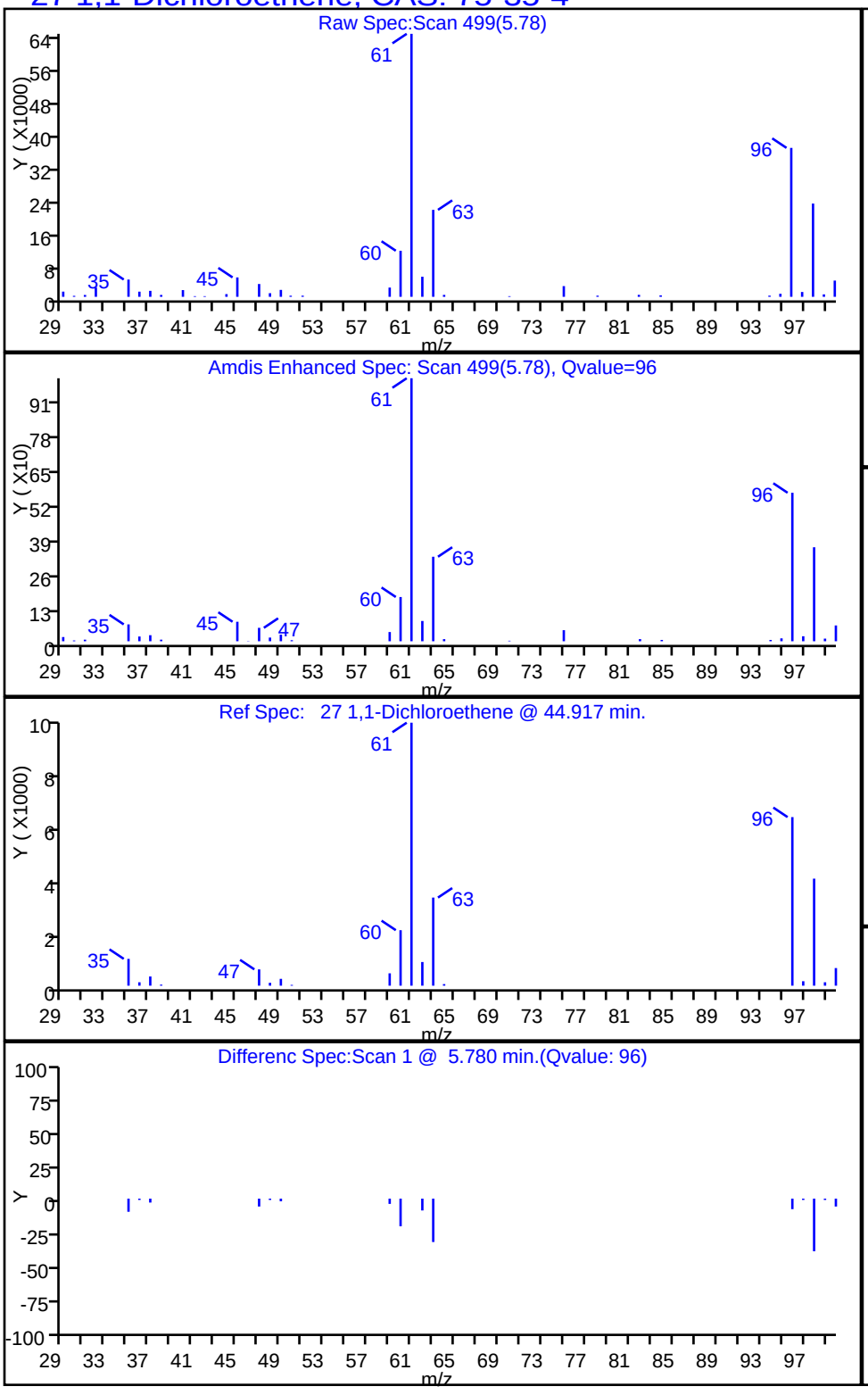
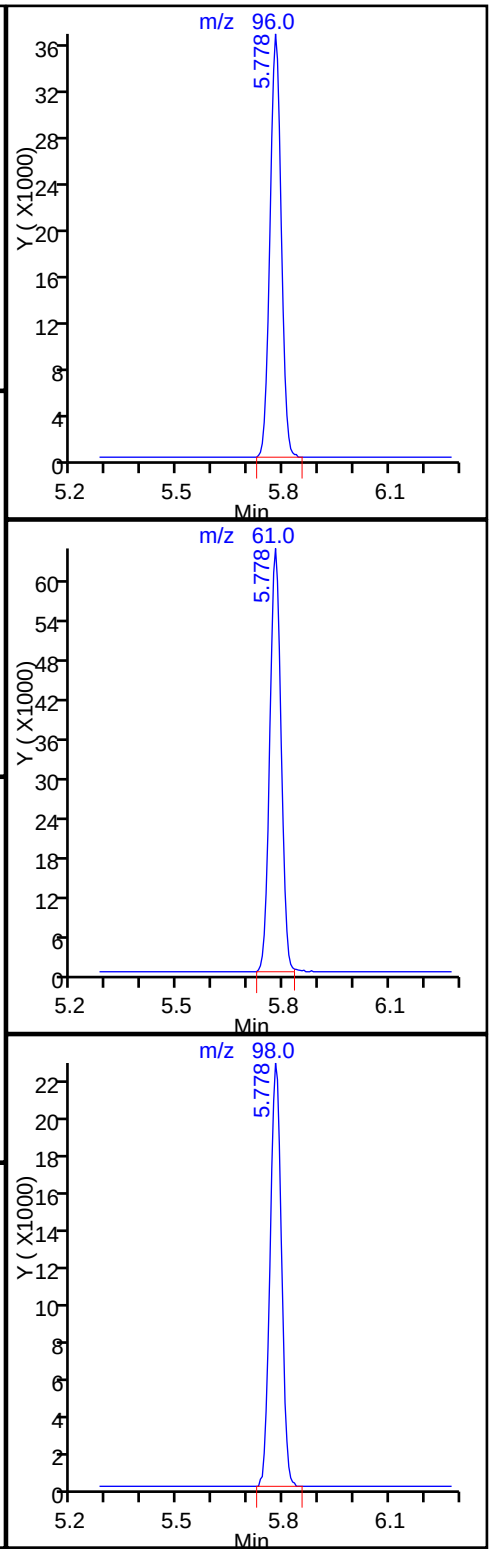
Injection Date: 12-Apr-2016 21:34:30 Instrument ID: MR
Lims ID: 140-4736-A-1 Lab Sample ID: 140-4736-1
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 3 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 3.0700
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

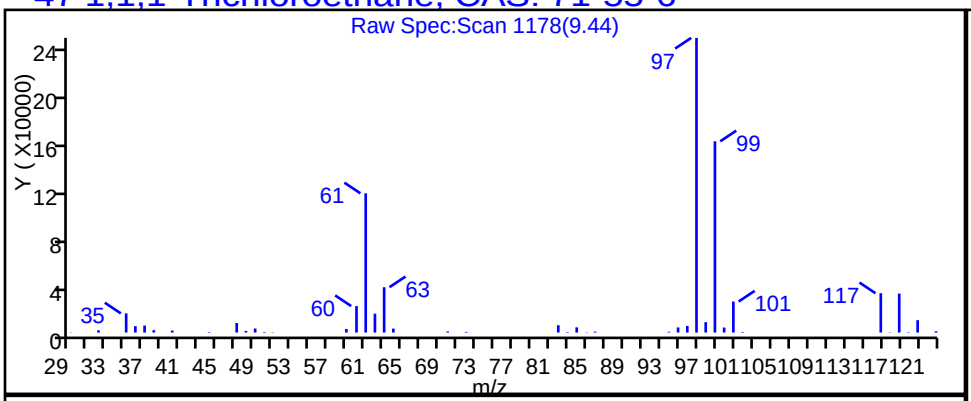
27 1,1-Dichloroethene, CAS: 75-35-4

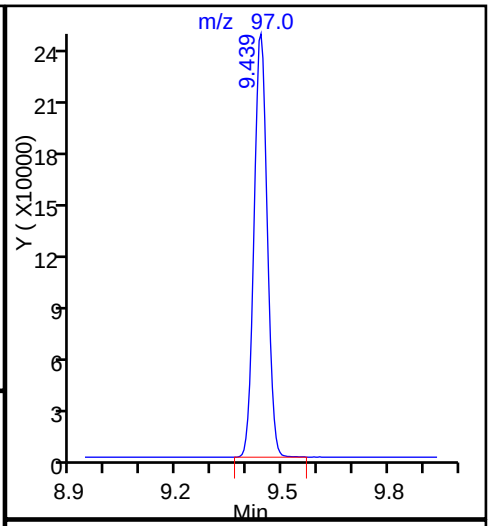


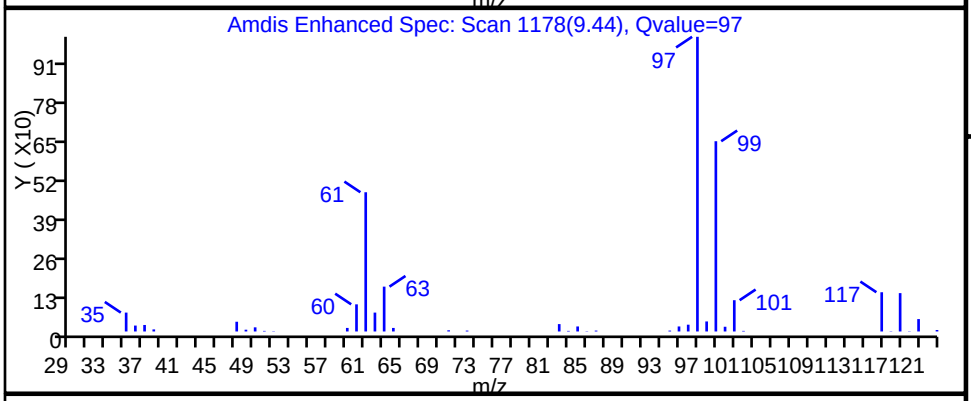


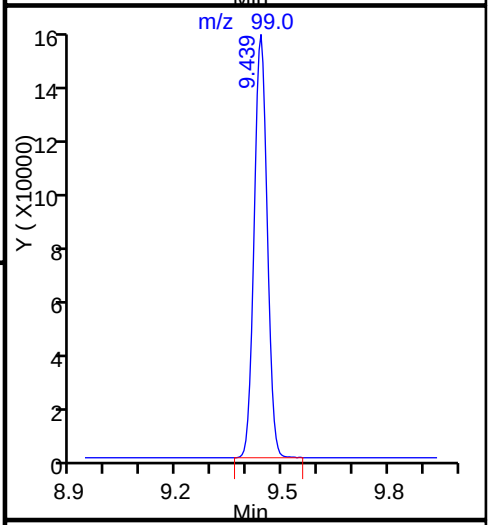
Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D
Injection Date: 12-Apr-2016 21:34:30 Instrument ID: MR
Lims ID: 140-4736-A-1 Lab Sample ID: 140-4736-1
Client ID: A-INFLUENT
Operator ID: ALS Bottle#: 3 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 3.0700
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

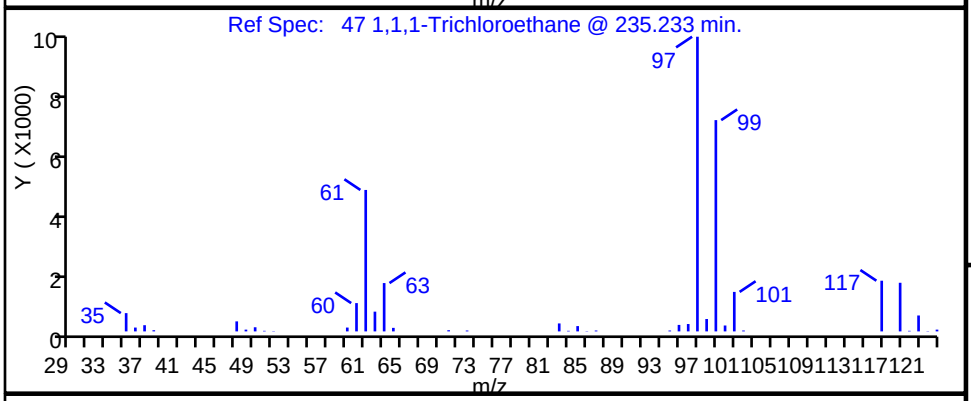
47 1,1,1-Trichloroethane, CAS: 71-55-6

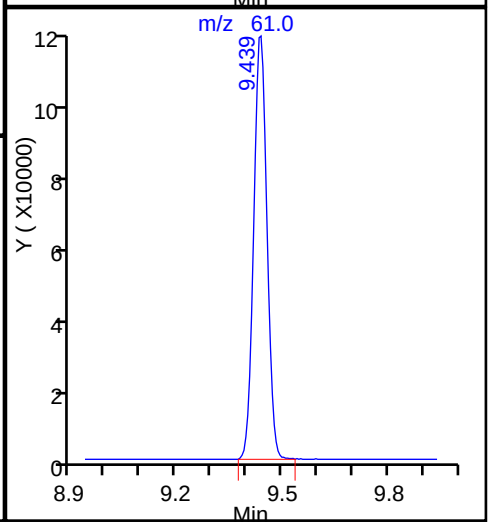


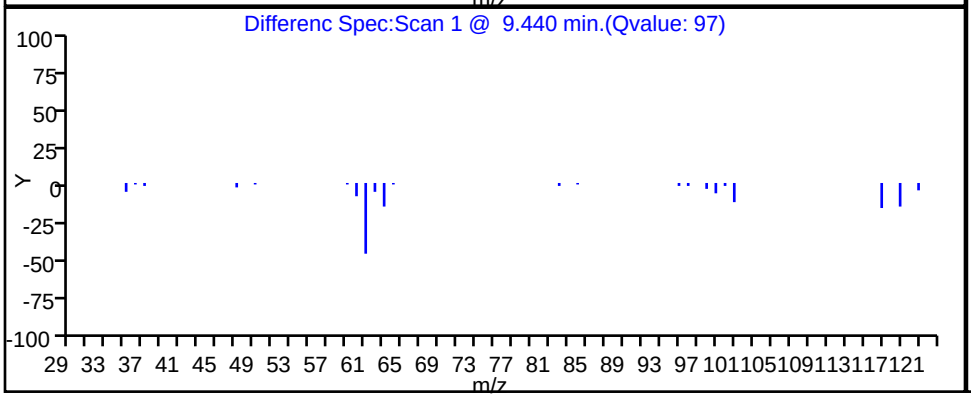












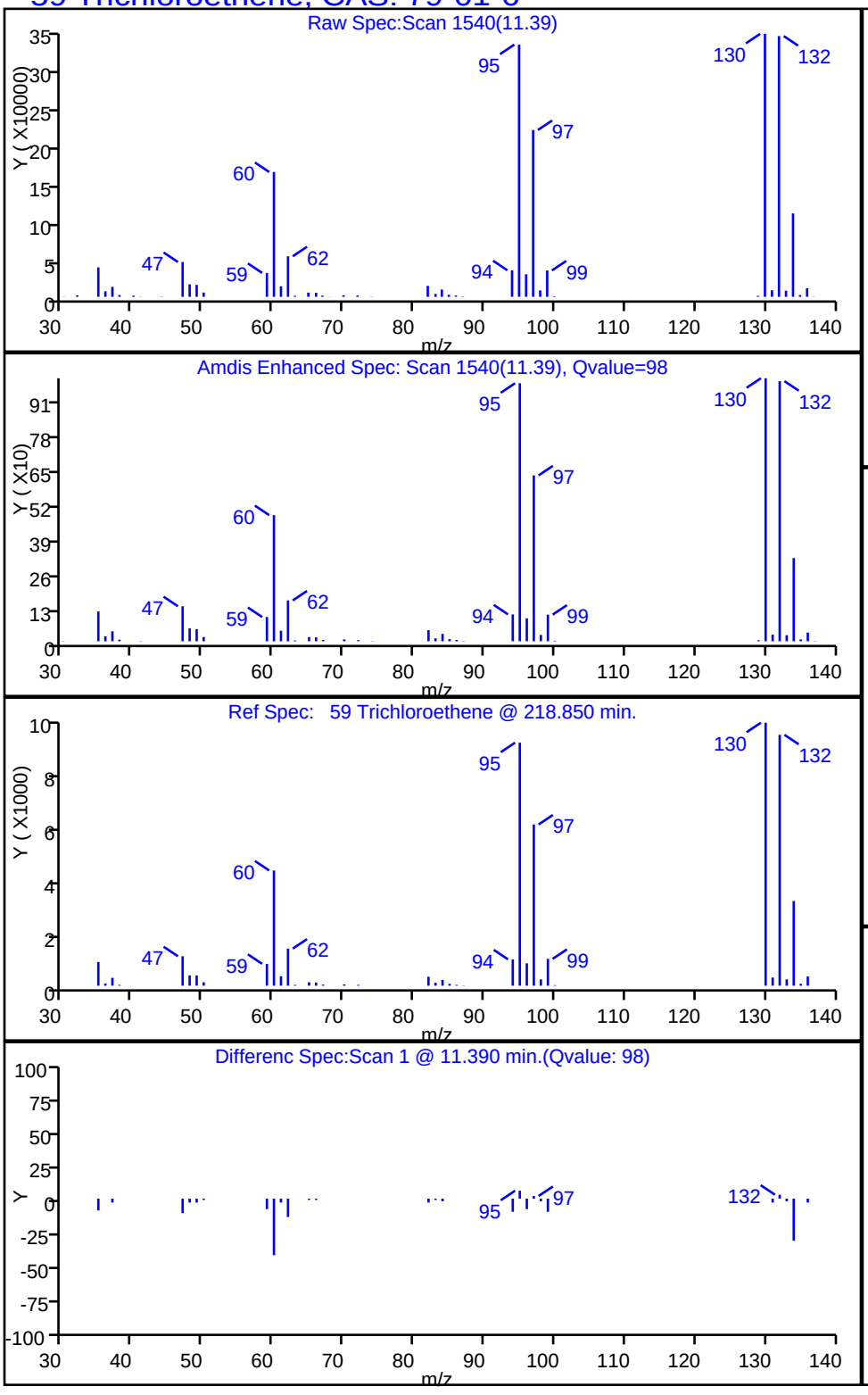
Report Date: 13-Apr-2016 11:15:34 Chrom Revision: 2.2 04-Mar-2016 14:36:24

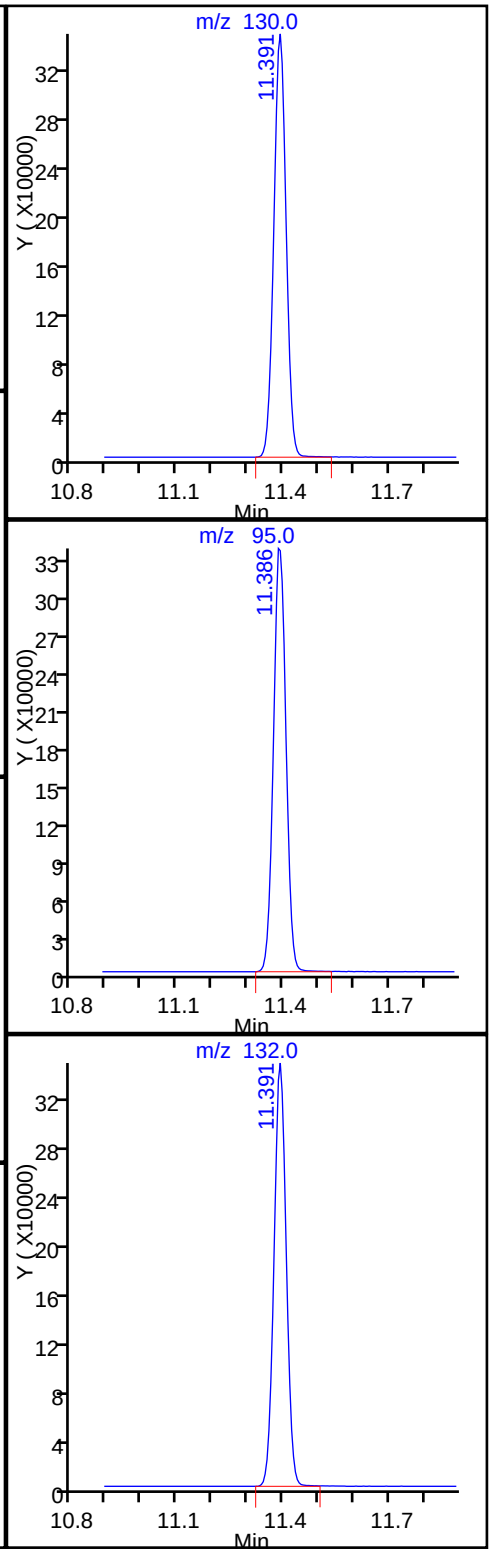
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p103.D

Injection Date:	12-Apr-2016 21:34:30	Instrument ID:	MR		
Lims ID:	140-4736-A-1	Lab Sample ID:	140-4736-1		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	3.0700		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: A-MID-GAC | Lab Sample ID: 140-4736-2

Matrix: Air | Lab File ID: RD12p104.D

Analysis Method: TO 15 LL | Date Collected: 04/07/2016 13:33

Sample wt/vol: 35(mL) | Date Analyzed: 04/12/2016 22:26

Soil Aliquot Vol: | Dilution Factor: 10.16

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		12	3.3
56-23-5	Carbon tetrachloride	153.81	ND		12	2.2
75-45-6	Chlorodifluoromethane	86.47	ND		12	2.2
67-66-3	Chloroform	119.38	ND		12	2.2
156-59-2	cis-1,2-Dichloroethene	96.94	160		12	3.5
75-71-8	Dichlorodifluoromethane	120.91	ND		12	3.9
75-34-3	1,1-Dichloroethane	98.96	22		12	1.5
107-06-2	1,2-Dichloroethane	98.96	ND		12	2.8
75-35-4	1,1-Dichloroethene	96.94	73		12	2.0
100-41-4	Ethylbenzene	106.17	ND		12	3.9
75-09-2	Methylene Chloride	84.93	ND		29	19
1634-04-4	Methyl tert-butyl ether	88.15	ND		58	9.9
91-20-3	Naphthalene	128.17	ND		5.8	5.8
127-18-4	Tetrachloroethene	165.83	ND		12	2.3
108-88-3	Toluene	92.14	ND		17	17
156-60-5	trans-1,2-Dichloroethene	96.94	ND		12	2.9
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		12	5.7
71-55-6	1,1,1-Trichloroethane	133.41	500		12	1.7
79-00-5	1,1,2-Trichloroethane	133.41	ND		12	3.0
79-01-6	Trichloroethene	131.39	98		5.8	2.0
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		12	4.9
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		12	3.6
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		12	3.8
75-01-4	Vinyl chloride	62.50	ND		5.8	4.2
1330-20-7	Xylenes, Total	106.17	ND		23	3.5

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: A-MID-GAC | Lab Sample ID: 140-4736-2

Matrix: Air | Lab File ID: RD12p104.D

Analysis Method: TO 15 LL | Date Collected: 04/07/2016 13:33

Sample wt/vol: 35(mL) | Date Analyzed: 04/12/2016 22:26

Soil Aliquot Vol: | Dilution Factor: 10.16

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		37	11
56-23-5	Carbon tetrachloride	153.81	ND		73	14
75-45-6	Chlorodifluoromethane	86.47	ND		41	7.7
67-66-3	Chloroform	119.38	ND		57	11
156-59-2	cis-1,2-Dichloroethene	96.94	650		46	14
75-71-8	Dichlorodifluoromethane	120.91	ND		57	19
75-34-3	1,1-Dichloroethane	98.96	90		47	5.9
107-06-2	1,2-Dichloroethane	98.96	ND		47	11
75-35-4	1,1-Dichloroethene	96.94	290		46	8.1
100-41-4	Ethylbenzene	106.17	ND		50	17
75-09-2	Methylene Chloride	84.93	ND		100	66
1634-04-4	Methyl tert-butyl ether	88.15	ND		210	36
91-20-3	Naphthalene	128.17	ND		30	30
127-18-4	Tetrachloroethene	165.83	ND		79	16
108-88-3	Toluene	92.14	ND		66	66
156-60-5	trans-1,2-Dichloroethene	96.94	ND		46	12
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		86	42
71-55-6	1,1,1-Trichloroethane	133.41	2700		63	9.5
79-00-5	1,1,2-Trichloroethane	133.41	ND		63	17
79-01-6	Trichloroethene	131.39	530		31	11
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		57	24
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		57	18
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		57	19
75-01-4	Vinyl chloride	62.50	ND		15	11
1330-20-7	Xylenes, Total	106.17	ND		100	15

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D				
Lims ID:	140-4736-A-2	Lab Sample ID:	140-4736-2		
Client ID:	A-MID-GAC				
Sample Type:	Client				
Inject. Date:	12-Apr-2016 22:26:30	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	10.1600		
Sample Info:	140-0002734-011				
Misc. Info.:	140-4736-A-2@10.16				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Apr-2016 11:13:20	Calib Date:	29-Oct-2015 21:11:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK020				
First Level Reviewer: tajh		Date:	13-Apr-2016 10:01:20		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.409	8.425	-0.016	99	245362	4.00	
* 2 1,4-Difluorobenzene	114	10.593	10.604	-0.011	95	1247860	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.810	16.816	-0.006	88	1109769	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.560	-0.005	94	794390	3.88	
27 1,1-Dichloroethene	96	5.767	5.772	-0.005	97	42832	0.5016	
31 Methylene Chloride	84	6.063	6.074	-0.011	98	5853	0.0708	
37 1,1-Dichloroethane	63	7.180	7.201	-0.021	100	24364	0.1532	
42 cis-1,2-Dichloroethene	96	8.102	8.123	-0.021	97	103539	1.13	
47 1,1,1-Trichloroethane	97	9.428	9.439	-0.011	98	601136	3.47	
59 Trichloroethene	130	11.380	11.396	-0.016	97	84137	0.6740	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

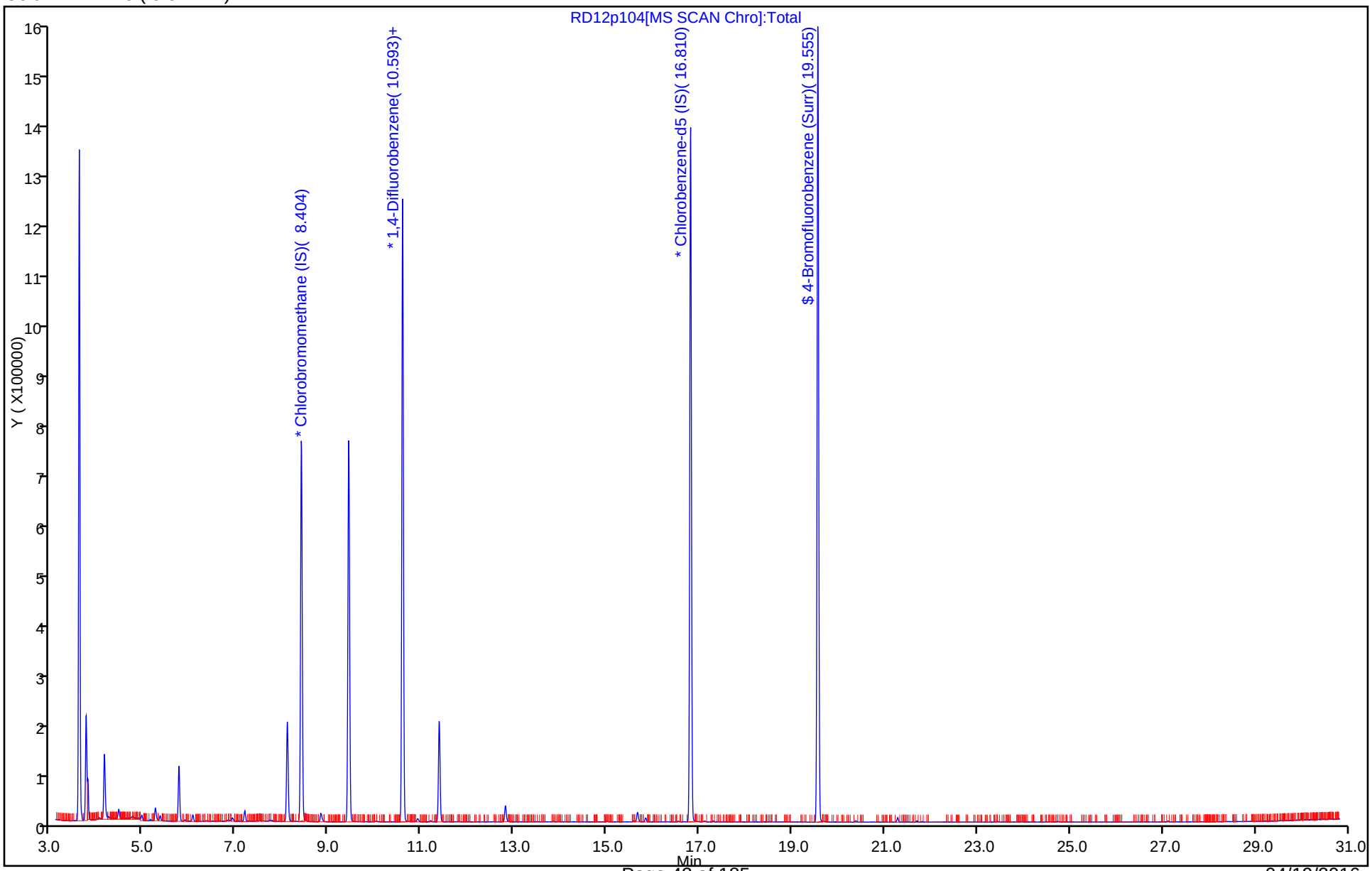
Report Date: 13-Apr-2016 11:15:39 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D

Injection Date:	12-Apr-2016 22:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-4736-A-2	Lab Sample ID:	140-4736-2	Worklist Smp#:	11
Client ID:	A-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	10.1600	ALS Bottle#:	4
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

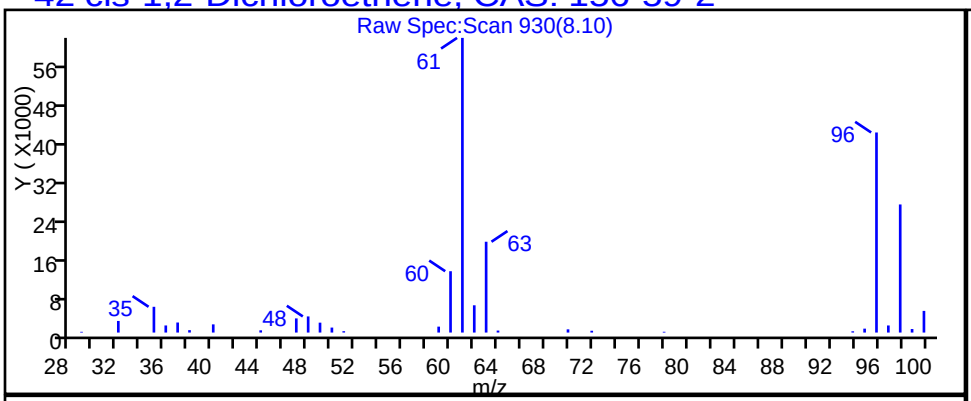
Column: RTX-5 (0.32 mm)

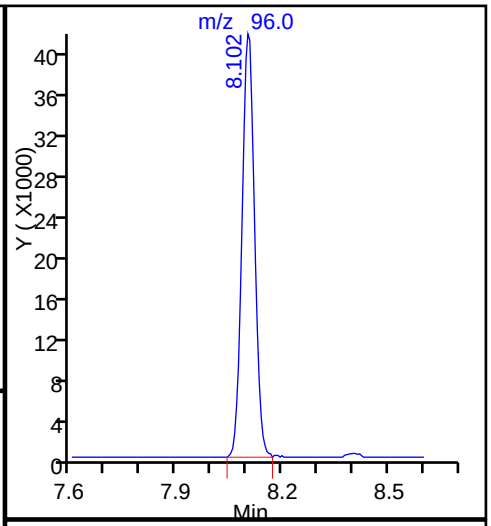


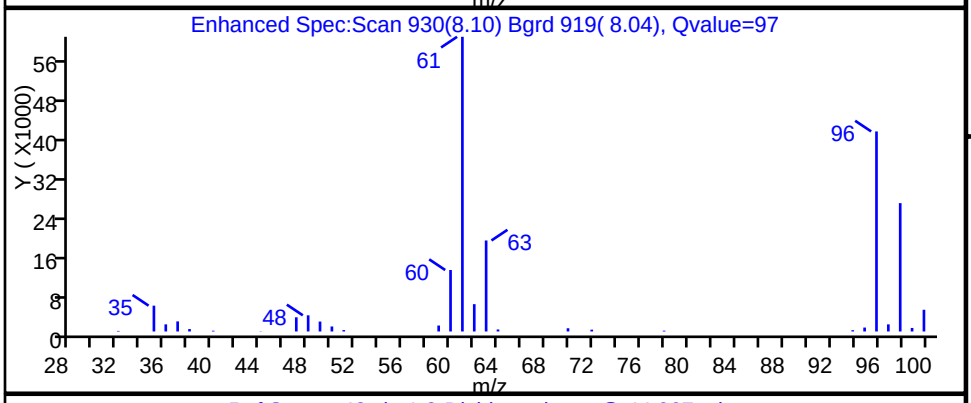
TestAmerica Knoxville

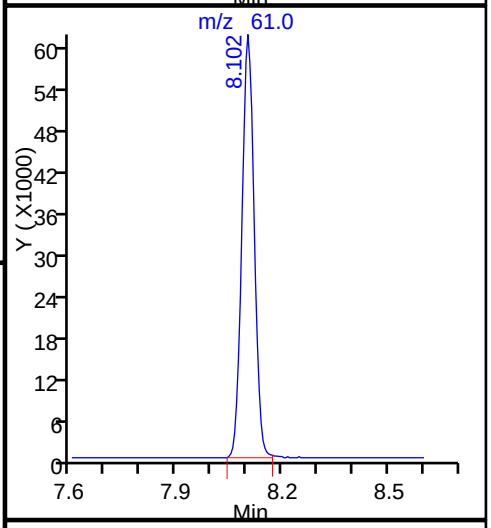
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D		
Injection Date:	12-Apr-2016 22:26:30	Instrument ID:	MR
Lims ID:	140-4736-A-2	Lab Sample ID:	140-4736-2
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	10.1600
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

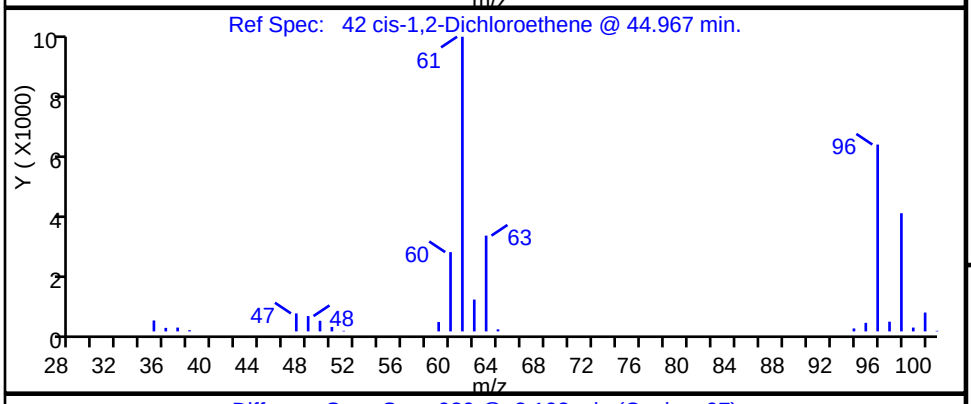
42 cis-1,2-Dichloroethene, CAS: 156-59-2

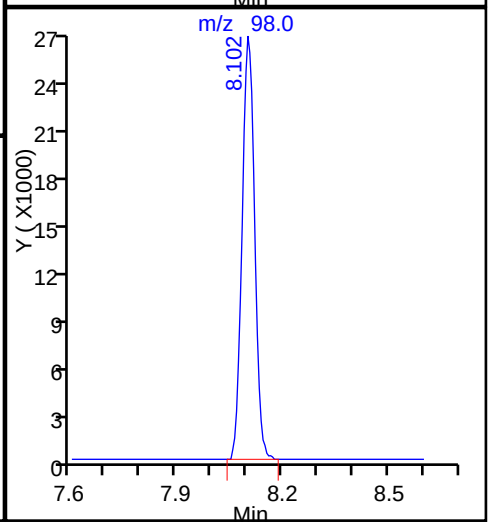


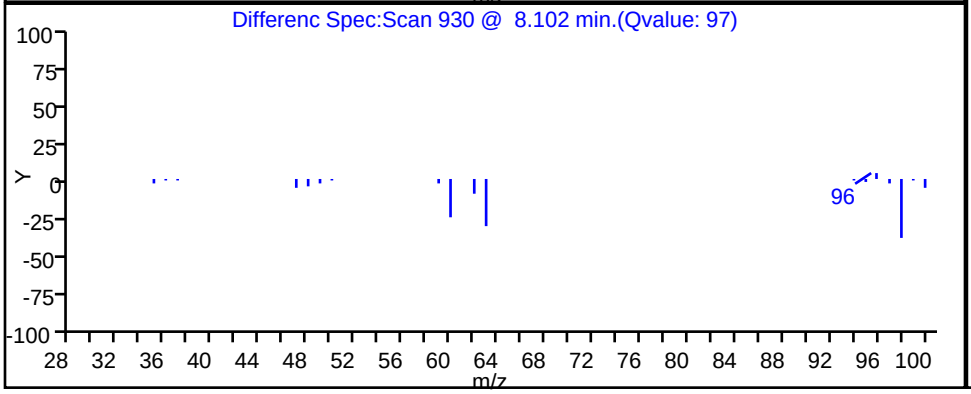






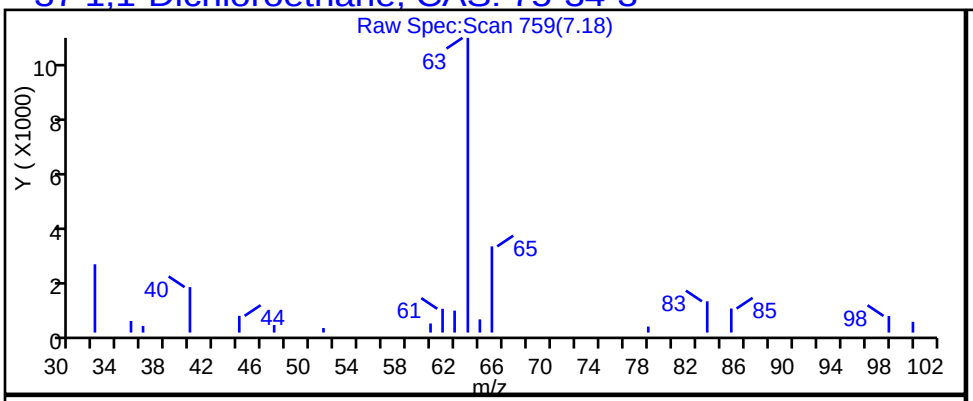


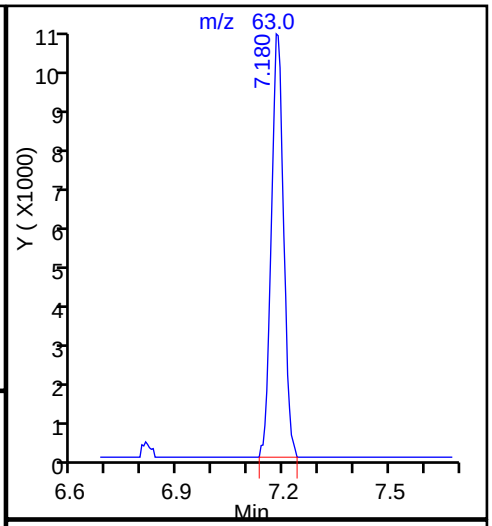


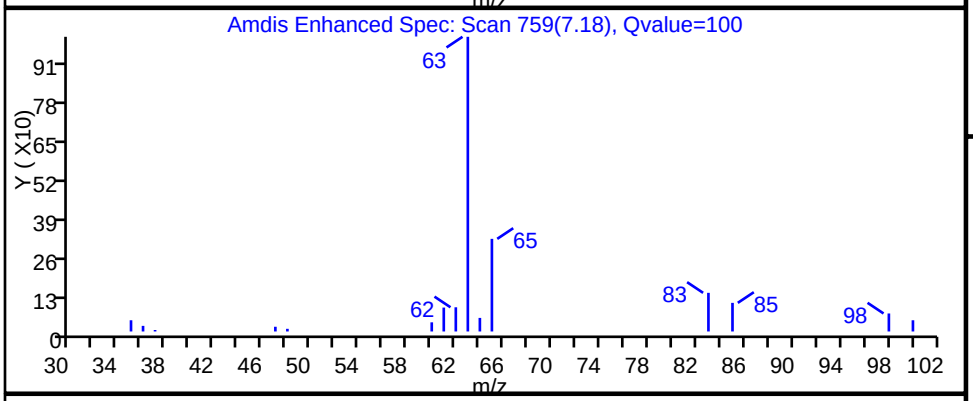


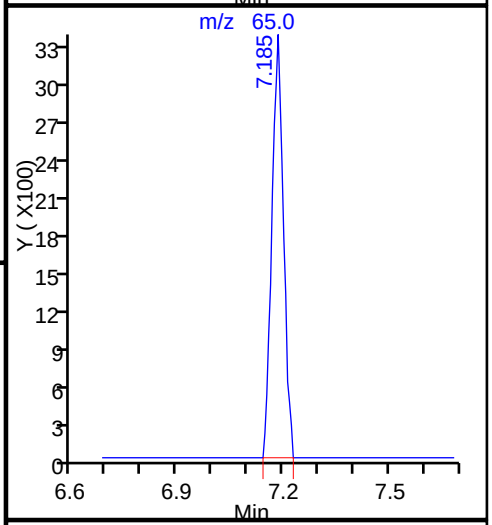
Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D
Injection Date: 12-Apr-2016 22:26:30 Instrument ID: MR
Lims ID: 140-4736-A-2 Lab Sample ID: 140-4736-2
Client ID: A-MID-GAC
Operator ID: ALS Bottle#: 4 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 10.1600
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

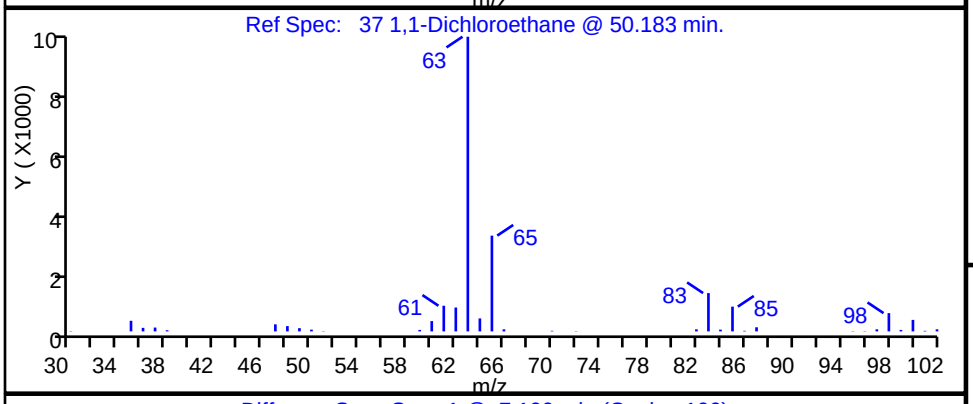
37 1,1-Dichloroethane, CAS: 75-34-3

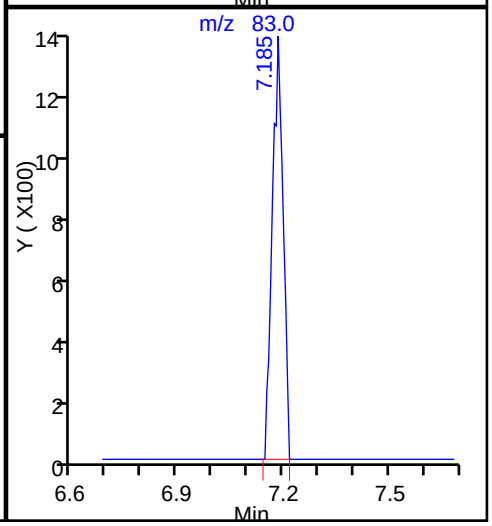


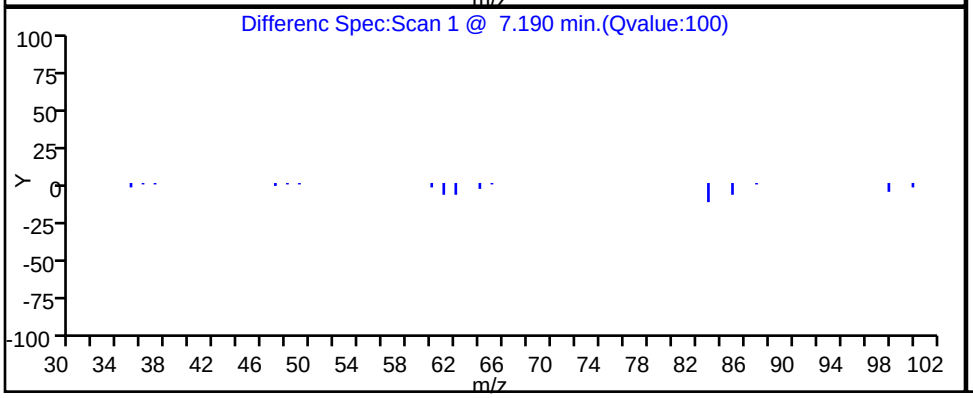






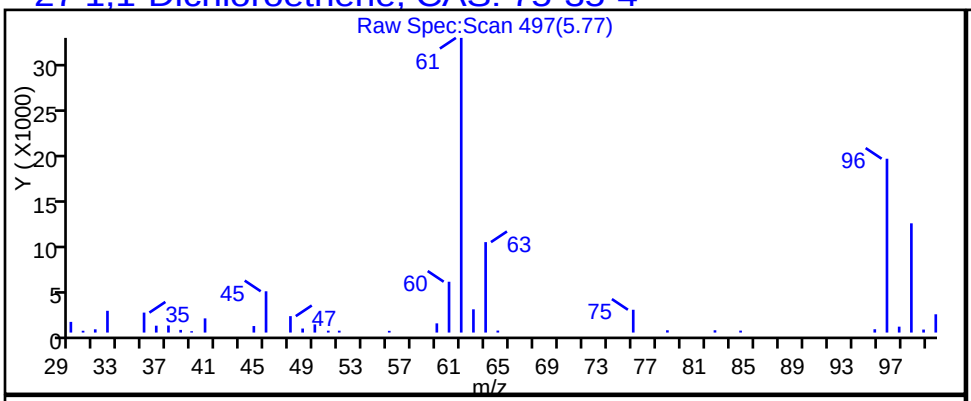


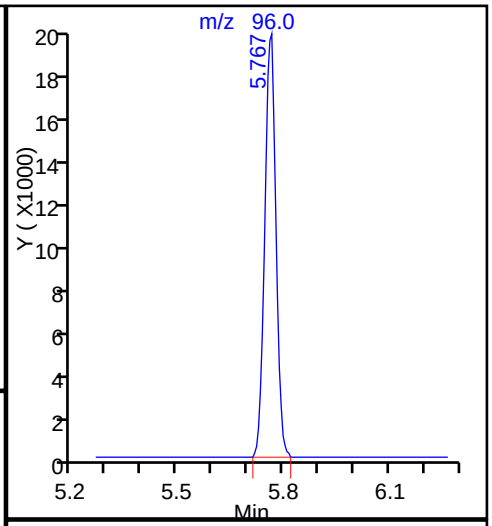


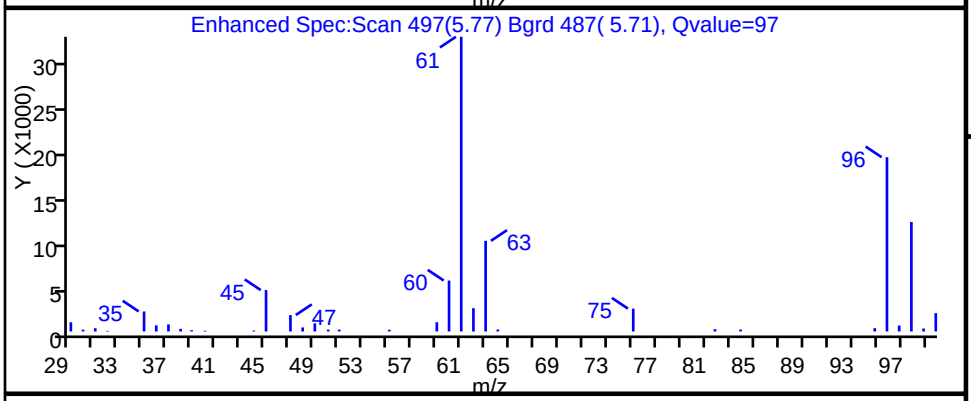


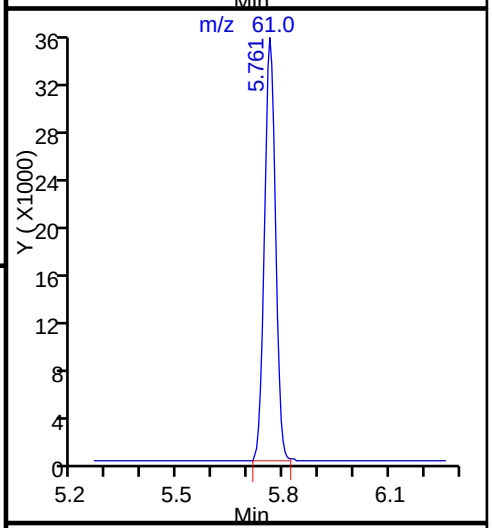
Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D
Injection Date: 12-Apr-2016 22:26:30 Instrument ID: MR
Lims ID: 140-4736-A-2 Lab Sample ID: 140-4736-2
Client ID: A-MID-GAC
Operator ID: ALS Bottle#: 4 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 10.1600
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

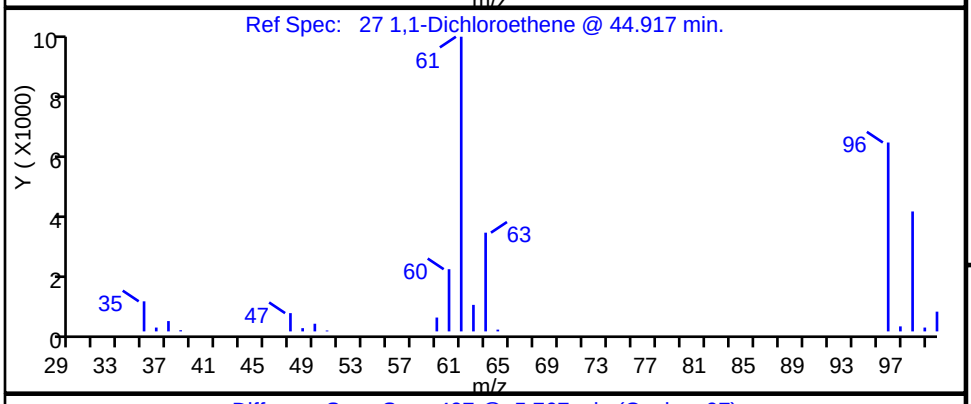
27 1,1-Dichloroethene, CAS: 75-35-4

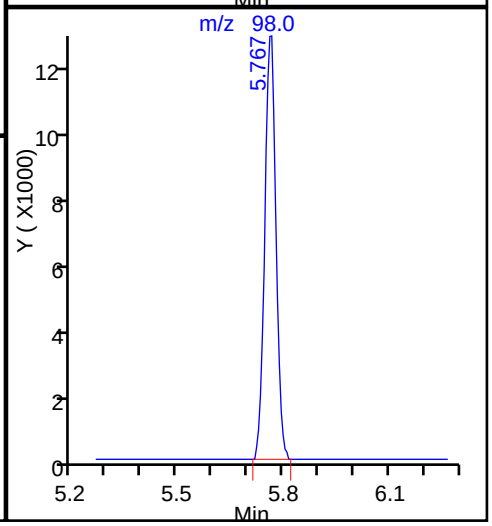


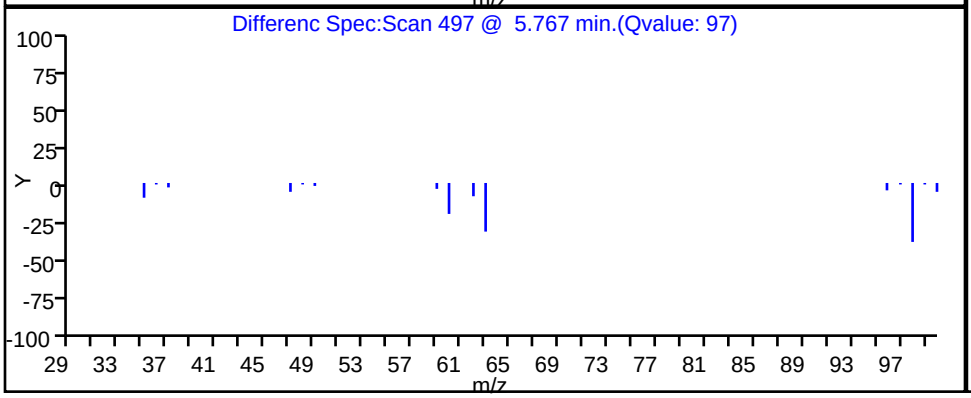






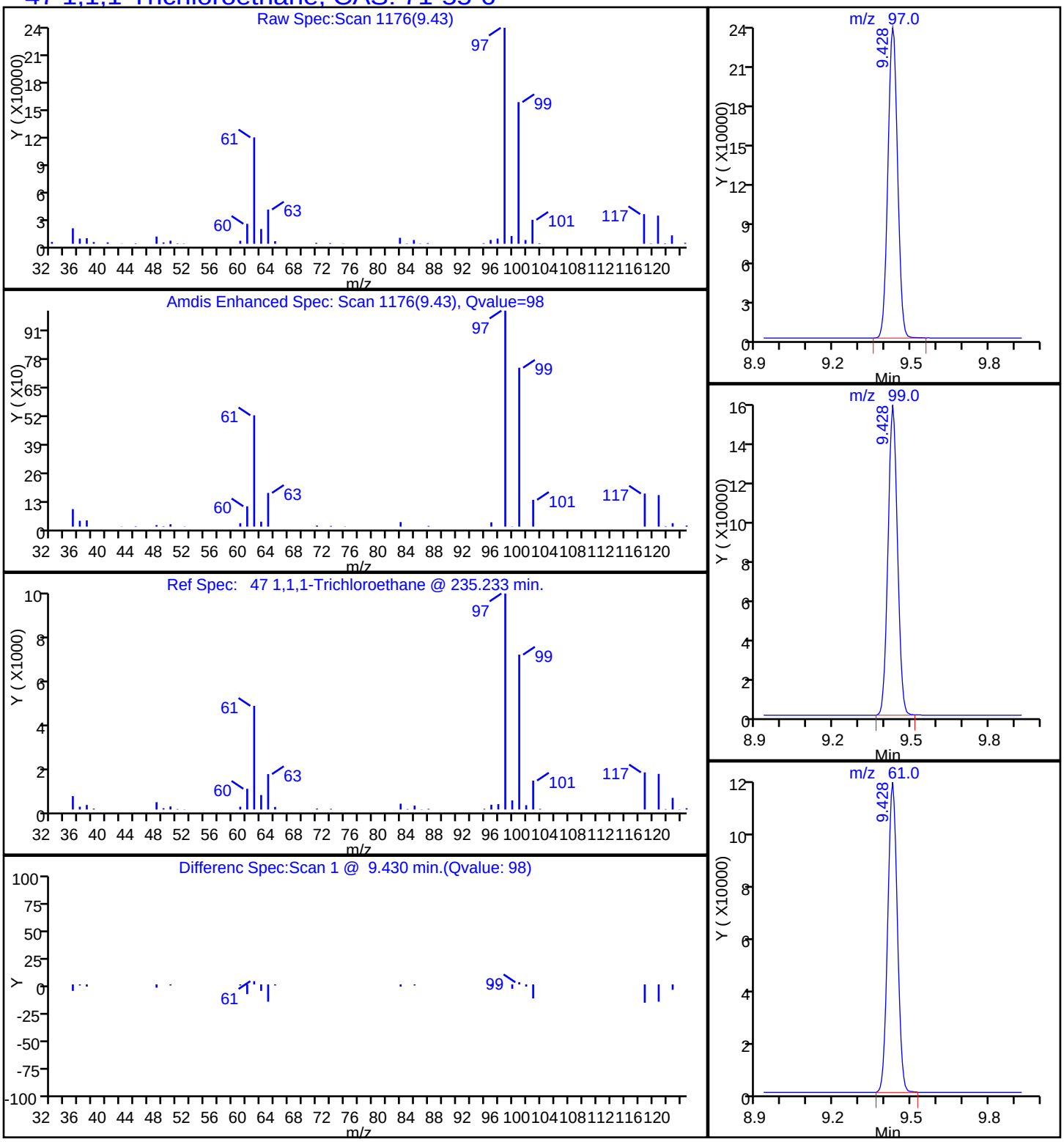






Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D
Injection Date: 12-Apr-2016 22:26:30 Instrument ID: MR
Lims ID: 140-4736-A-2 Lab Sample ID: 140-4736-2
Client ID: A-MID-GAC
Operator ID: ALS Bottle#: 4 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 10.1600
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



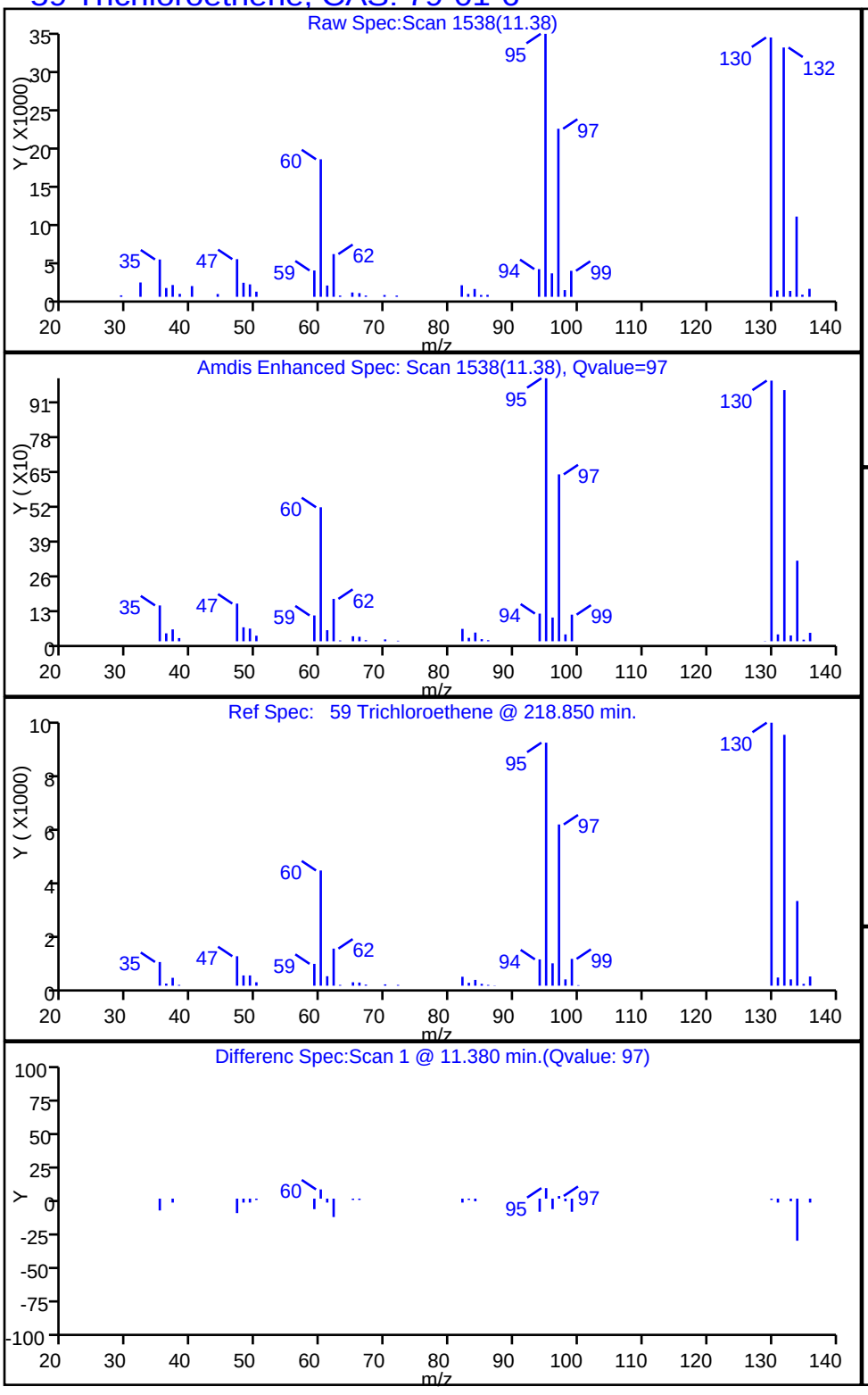
Report Date: 13-Apr-2016 11:15:40 Chrom Revision: 2.2 04-Mar-2016 14:36:24

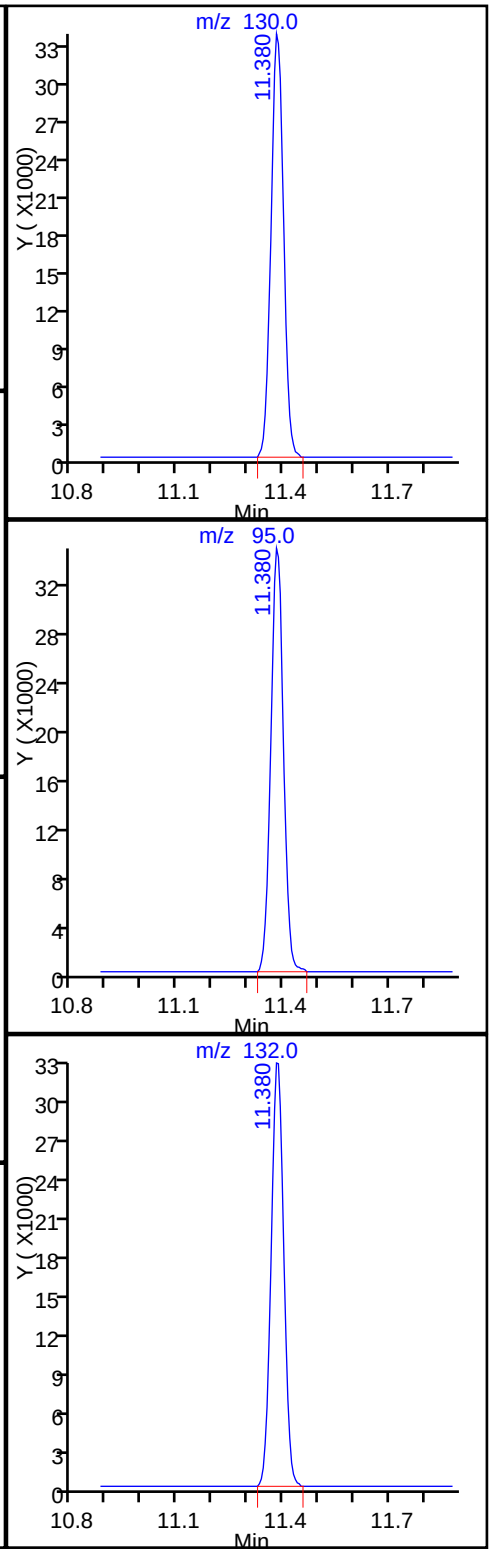
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p104.D

Injection Date:	12-Apr-2016 22:26:30	Instrument ID:	MR
Lims ID:	140-4736-A-2	Lab Sample ID:	140-4736-2
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	10.1600
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: A-EFFLUENT | Lab Sample ID: 140-4736-3

Matrix: Air | Lab File ID: RD12p105.D

Analysis Method: TO 15 LL | Date Collected: 04/07/2016 13:31

Sample wt/vol: 30(mL) | Date Analyzed: 04/12/2016 23:19

Soil Aliquot Vol: | Dilution Factor: 10.44

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		14	4.0
56-23-5	Carbon tetrachloride	153.81	ND		14	2.6
75-45-6	Chlorodifluoromethane	86.47	ND		14	2.6
67-66-3	Chloroform	119.38	8.3	J	14	2.6
156-59-2	cis-1,2-Dichloroethene	96.94	170		14	4.2
75-71-8	Dichlorodifluoromethane	120.91	ND		14	4.7
75-34-3	1,1-Dichloroethane	98.96	56		14	1.7
107-06-2	1,2-Dichloroethane	98.96	ND		14	3.3
75-35-4	1,1-Dichloroethene	96.94	130		14	2.4
100-41-4	Ethylbenzene	106.17	ND		14	4.7
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		70	12
91-20-3	Naphthalene	128.17	ND		7.0	7.0
127-18-4	Tetrachloroethene	165.83	ND		14	2.8
108-88-3	Toluene	92.14	ND		21	21
156-60-5	trans-1,2-Dichloroethene	96.94	ND		14	3.5
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		14	6.8
71-55-6	1,1,1-Trichloroethane	133.41	730		14	2.1
79-00-5	1,1,2-Trichloroethane	133.41	ND		14	3.7
79-01-6	Trichloroethene	131.39	ND		7.0	2.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		14	5.9
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		14	4.4
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		14	4.5
75-01-4	Vinyl chloride	62.50	ND		7.0	5.0
1330-20-7	Xylenes, Total	106.17	ND		28	4.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: A-EFFLUENT | Lab Sample ID: 140-4736-3

Matrix: Air | Lab File ID: RD12p105.D

Analysis Method: TO 15 LL | Date Collected: 04/07/2016 13:31

Sample wt/vol: 30(mL) | Date Analyzed: 04/12/2016 23:19

Soil Aliquot Vol: | Dilution Factor: 10.44

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		44	13
56-23-5	Carbon tetrachloride	153.81	ND		88	16
75-45-6	Chlorodifluoromethane	86.47	ND		49	9.2
67-66-3	Chloroform	119.38	41	J	68	13
156-59-2	cis-1,2-Dichloroethene	96.94	670		55	17
75-71-8	Dichlorodifluoromethane	120.91	ND		69	23
75-34-3	1,1-Dichloroethane	98.96	230		56	7.0
107-06-2	1,2-Dichloroethane	98.96	ND		56	13
75-35-4	1,1-Dichloroethene	96.94	530		55	9.7
100-41-4	Ethylbenzene	106.17	ND		60	20
75-09-2	Methylene Chloride	84.93	ND		120	79
1634-04-4	Methyl tert-butyl ether	88.15	ND		250	43
91-20-3	Naphthalene	128.17	ND		36	36
127-18-4	Tetrachloroethene	165.83	ND		94	19
108-88-3	Toluene	92.14	ND		79	79
156-60-5	trans-1,2-Dichloroethene	96.94	ND		55	14
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		100	50
71-55-6	1,1,1-Trichloroethane	133.41	4000		76	11
79-00-5	1,1,2-Trichloroethane	133.41	ND		76	20
79-01-6	Trichloroethene	131.39	ND		37	13
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		68	29
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		68	21
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		68	22
75-01-4	Vinyl chloride	62.50	ND		18	13
1330-20-7	Xylenes, Total	106.17	ND		120	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D
Lims ID: 140-4736-A-3 Lab Sample ID: 140-4736-3
Client ID: A-EFFLUENT
Sample Type: Client
Inject. Date: 12-Apr-2016 23:19:30 ALS Bottle#: 5 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 10.4400
Sample Info: 140-0002734-012
Misc. Info.: 140-4736-A-3@10.44
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Apr-2016 11:13:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: tajh Date: 13-Apr-2016 10:01:37

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.409	8.425	-0.016	98	225476	4.00	
* 2 1,4-Difluorobenzene	114	10.593	10.604	-0.011	96	1153104	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.810	16.816	-0.006	95	1024784	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.560	-0.005	95	728663	3.85	
27 1,1-Dichloroethene	96	5.767	5.772	-0.005	97	60342	0.7690	
31 Methylene Chloride	84	6.069	6.074	-0.005	98	5428	0.0715	
37 1,1-Dichloroethane	63	7.185	7.201	-0.016	100	47379	0.3243	
42 cis-1,2-Dichloroethene	96	8.107	8.123	-0.016	96	81446	0.9667	
44 Chloroform	83	8.436	8.452	-0.016	93	7892	0.0477	
47 1,1,1-Trichloroethane	97	9.434	9.439	-0.005	97	671316	4.22	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

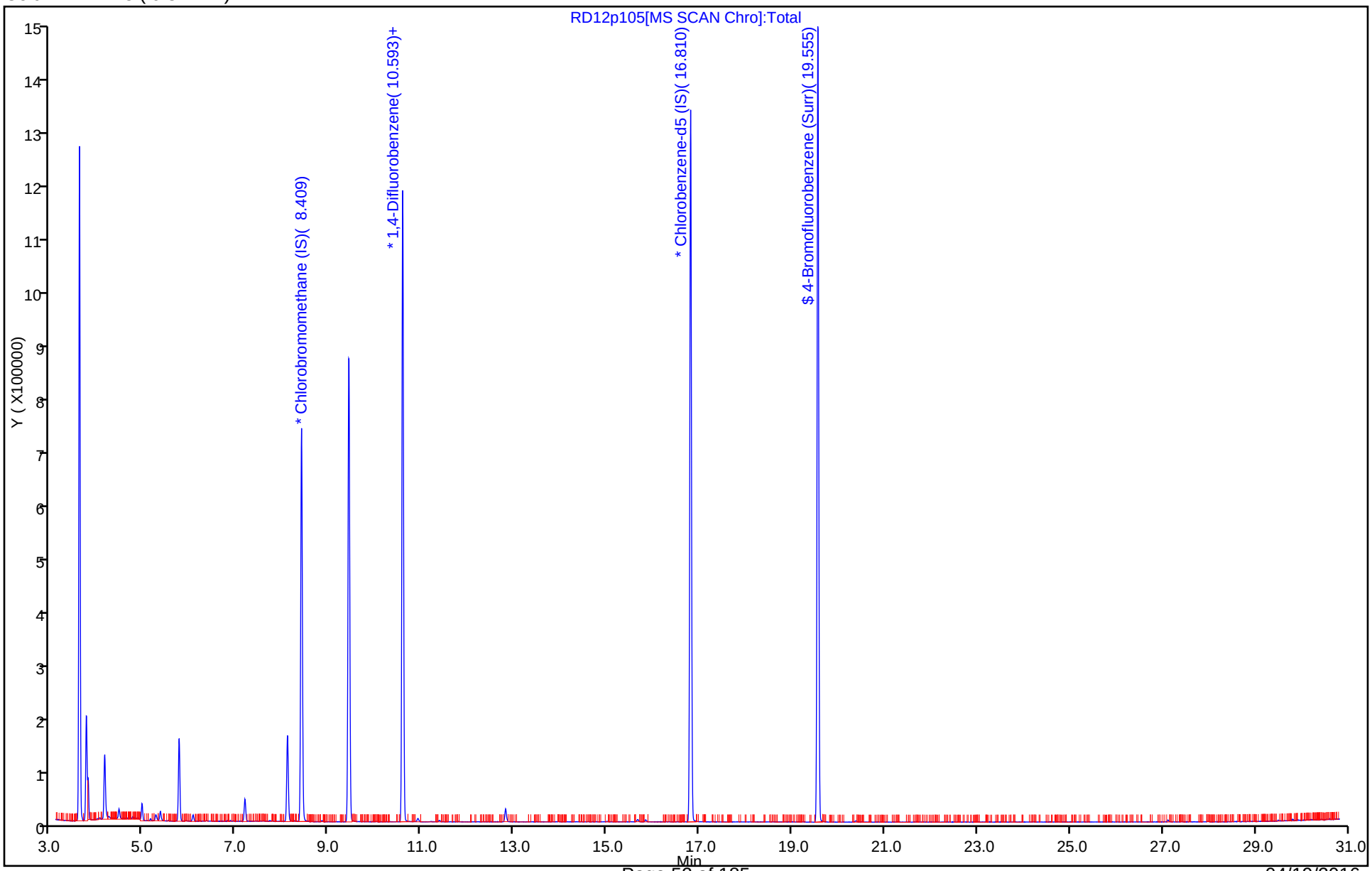
Report Date: 13-Apr-2016 11:15:44 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D

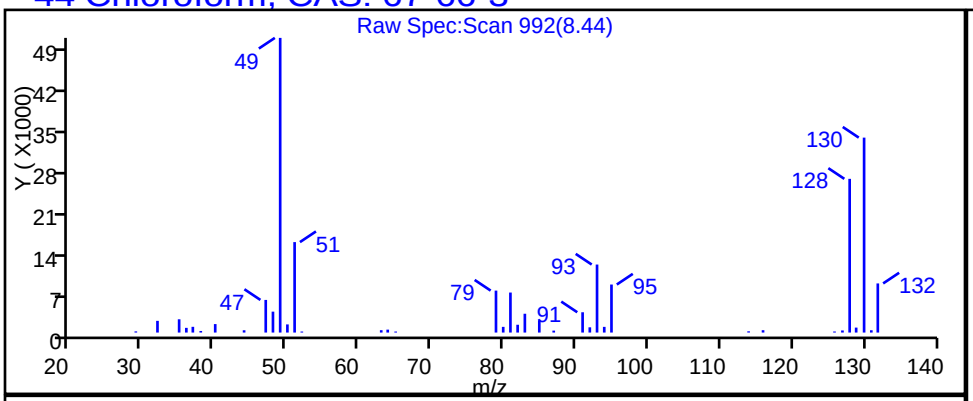
Injection Date:	12-Apr-2016 23:19:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-4736-A-3	Lab Sample ID:	140-4736-3	Worklist Smp#:	12
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	10.4400	ALS Bottle#:	5
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

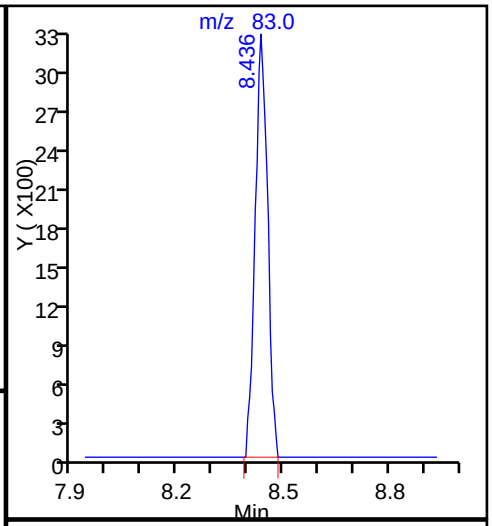
Column: RTX-5 (0.32 mm)

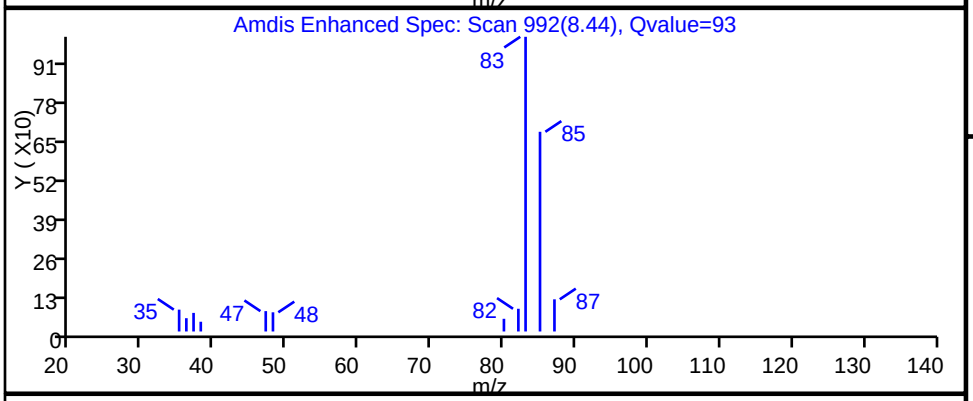


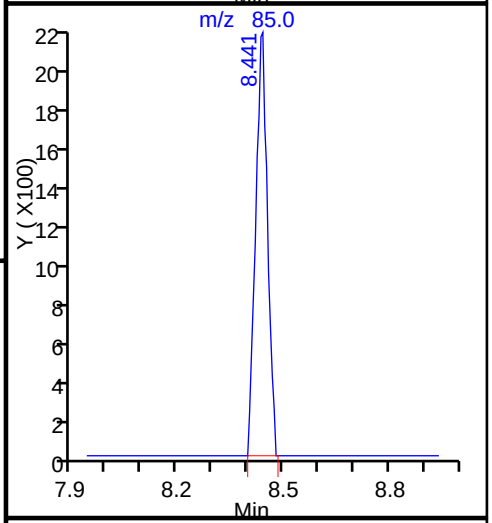
Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D
Injection Date: 12-Apr-2016 23:19:30 Instrument ID: MR
Lims ID: 140-4736-A-3 Lab Sample ID: 140-4736-3
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 5 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 10.4400
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

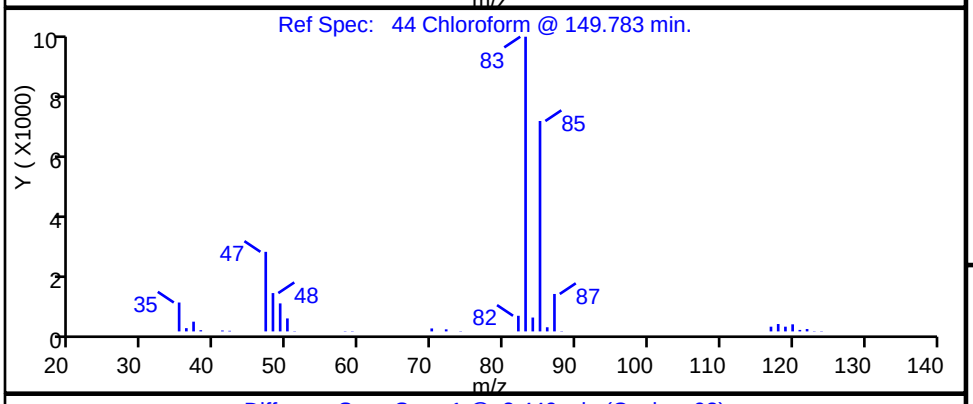
44 Chloroform, CAS: 67-66-3

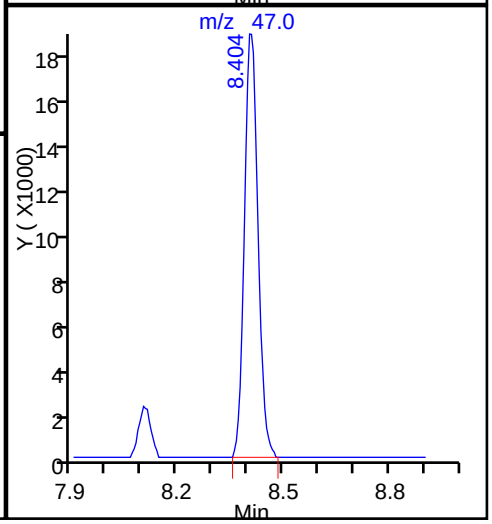


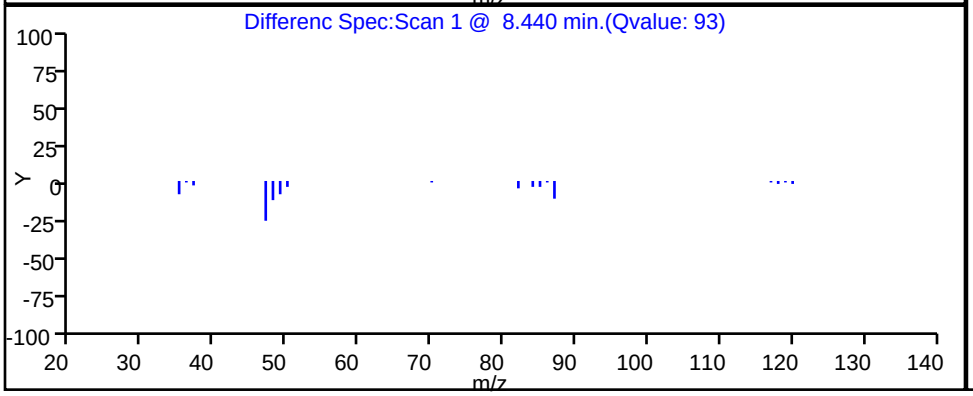








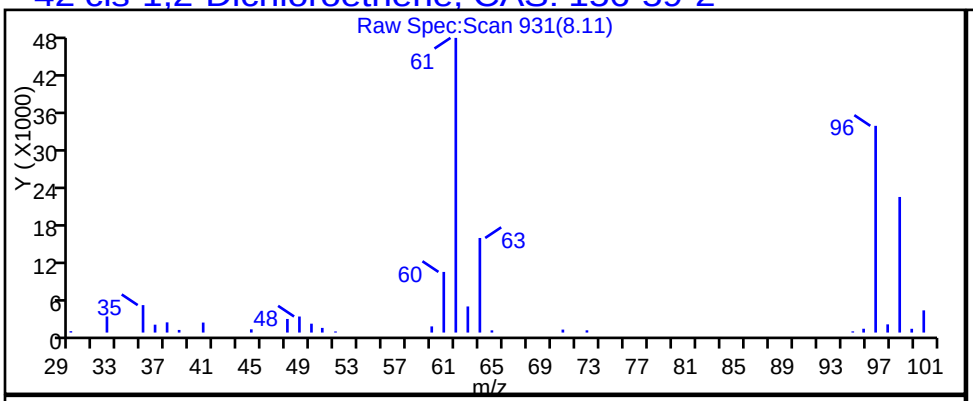


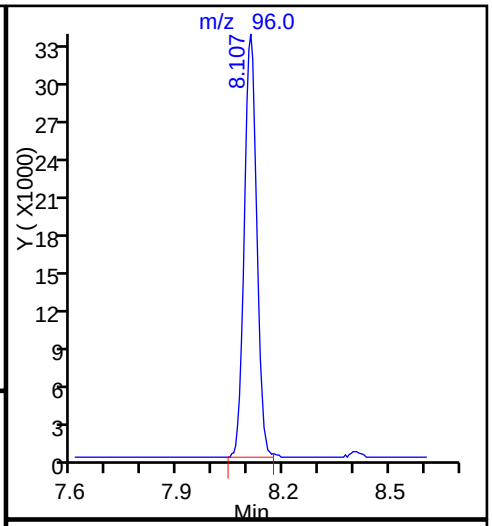


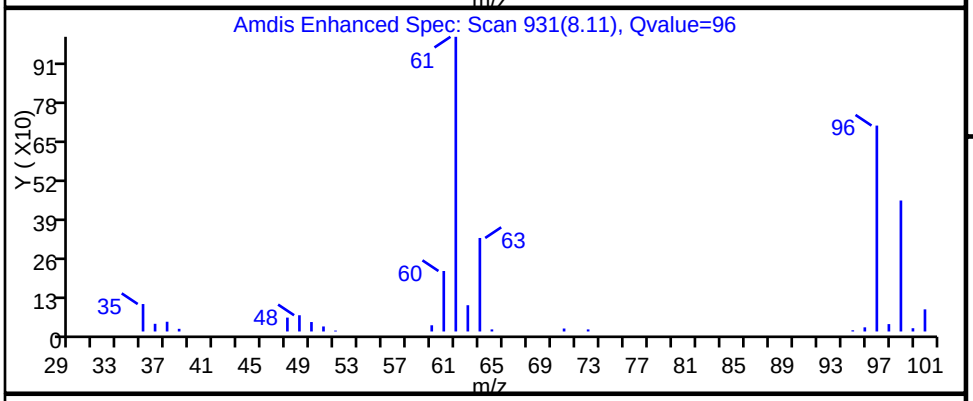
TestAmerica Knoxville

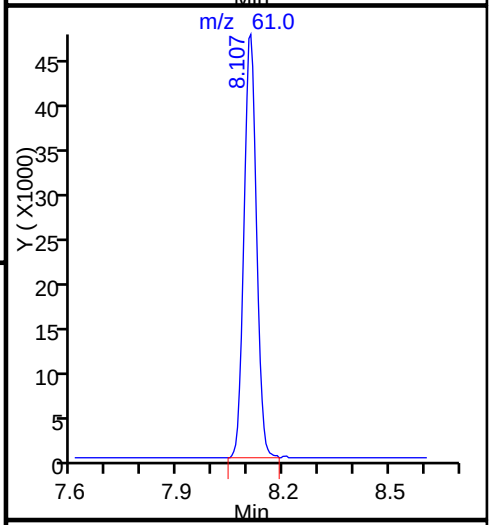
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D		
Injection Date:	12-Apr-2016 23:19:30	Instrument ID:	MR
Lims ID:	140-4736-A-3	Lab Sample ID:	140-4736-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	10.4400
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

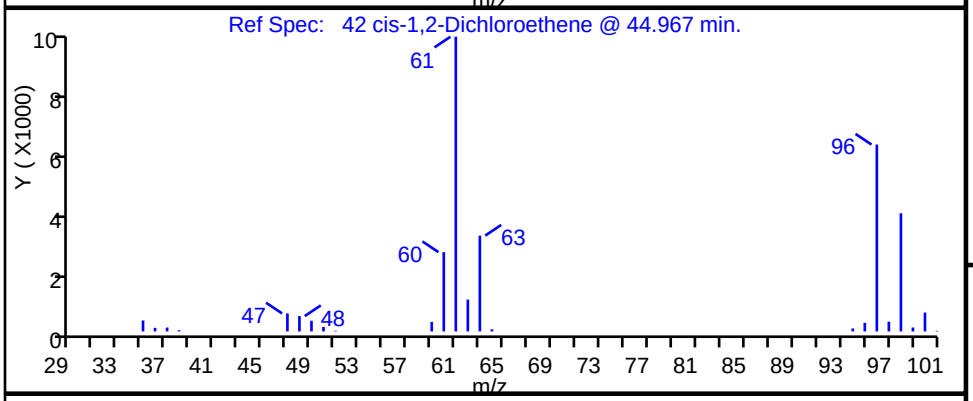
42 cis-1,2-Dichloroethene, CAS: 156-59-2

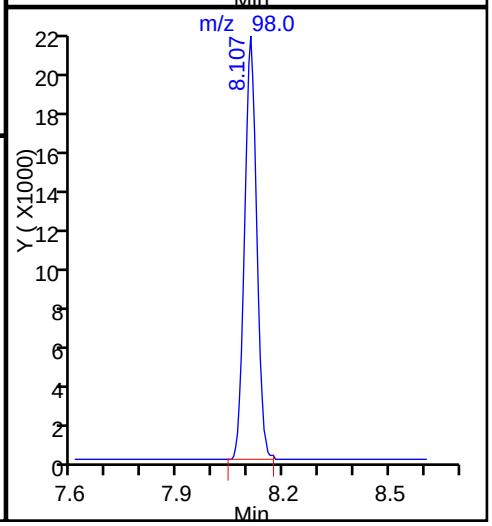


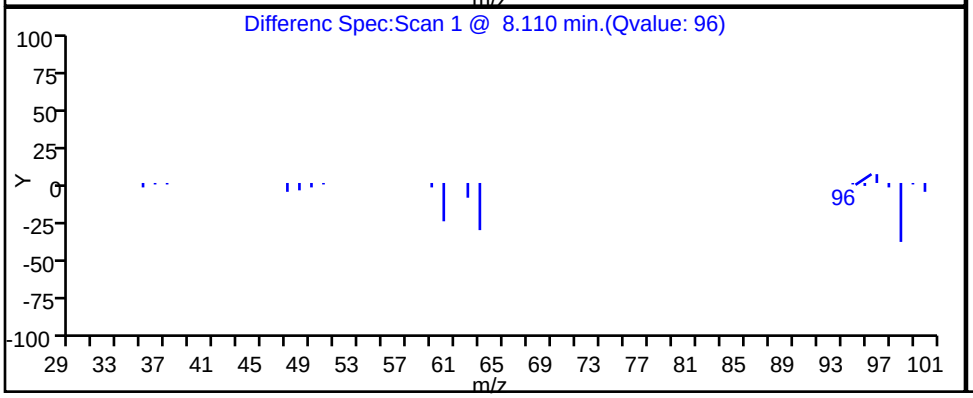








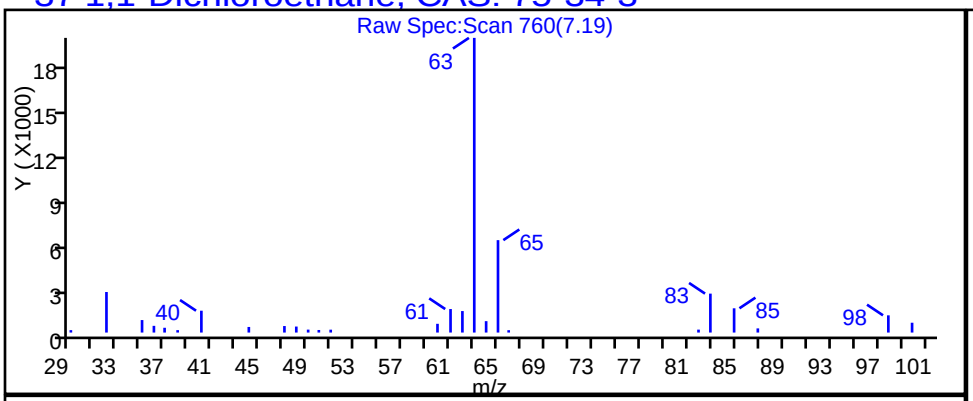


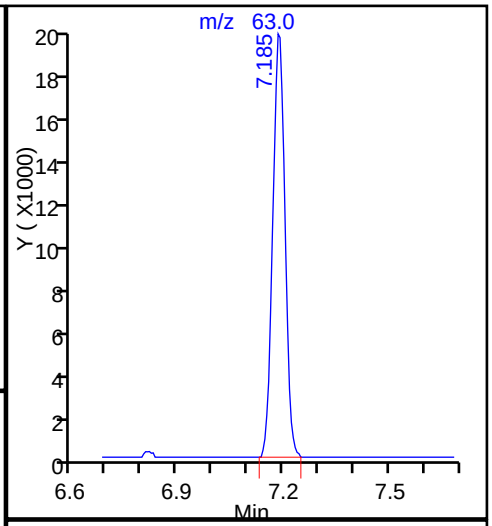


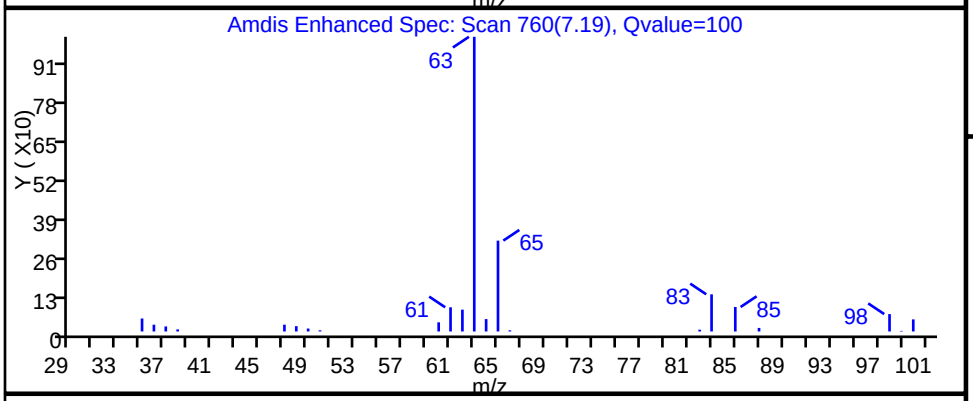
TestAmerica Knoxville

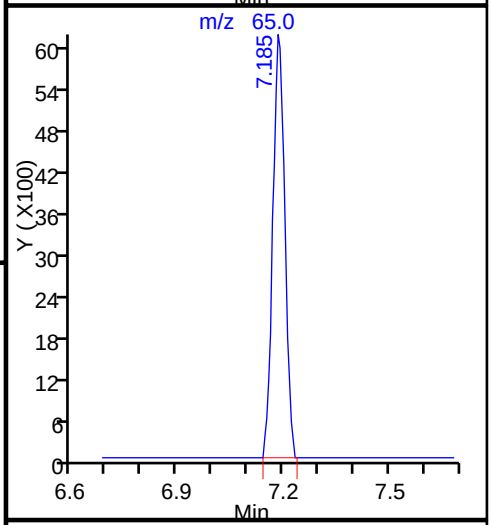
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D		
Injection Date:	12-Apr-2016 23:19:30	Instrument ID:	MR
Lims ID:	140-4736-A-3	Lab Sample ID:	140-4736-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	10.4400
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

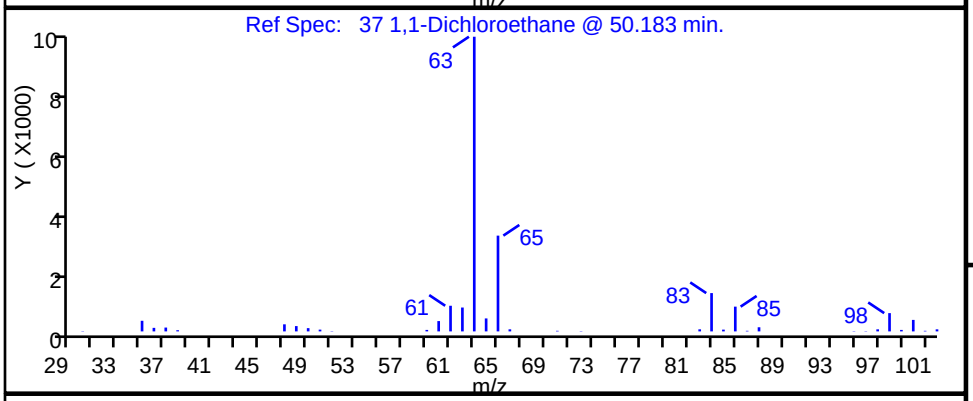
37 1,1-Dichloroethane, CAS: 75-34-3

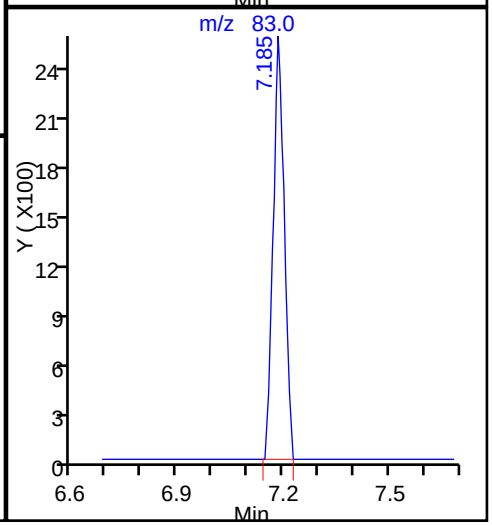


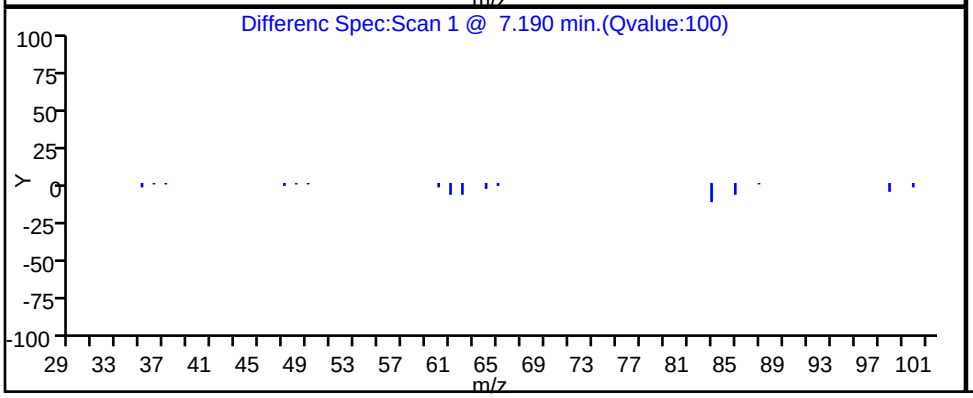








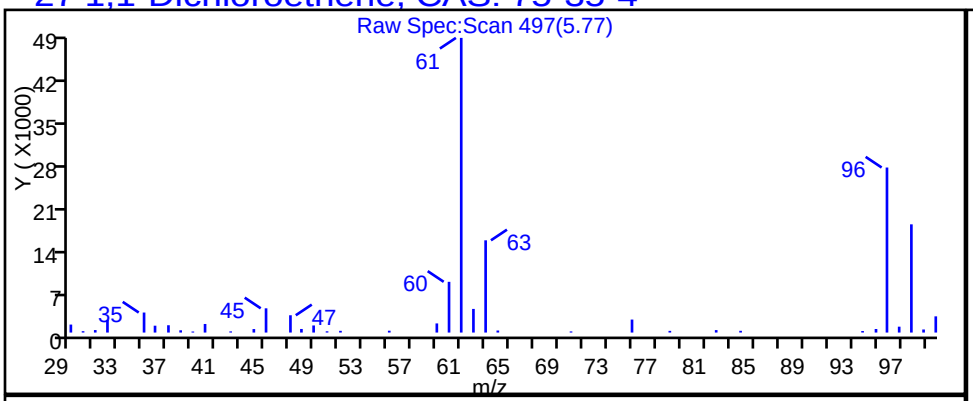


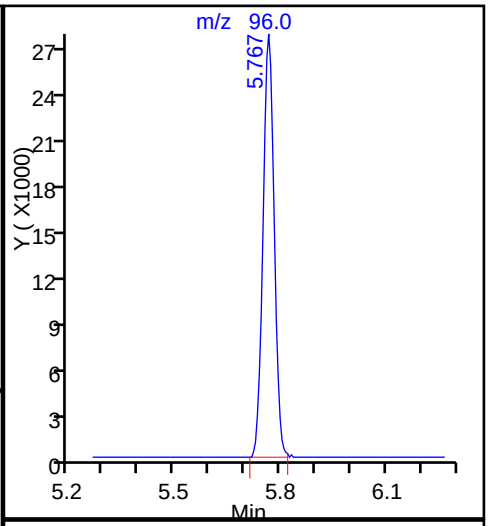


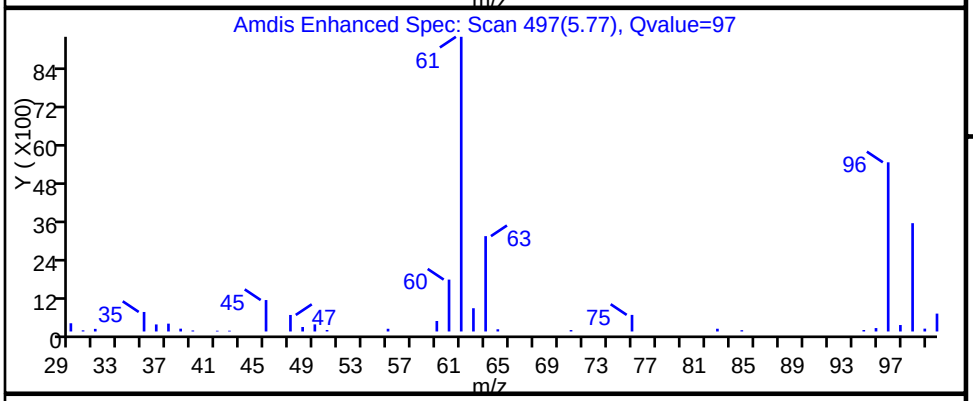
TestAmerica Knoxville

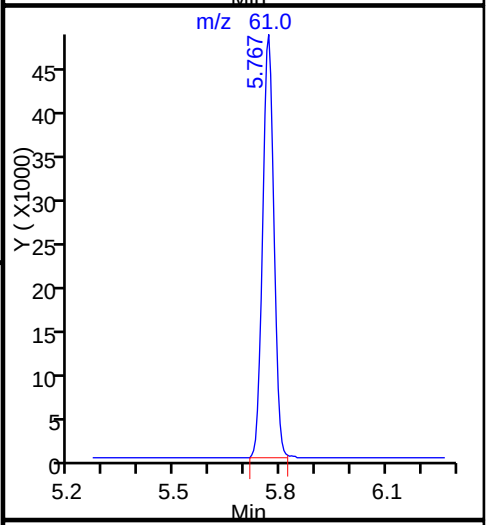
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D		
Injection Date:	12-Apr-2016 23:19:30	Instrument ID:	MR
Lims ID:	140-4736-A-3	Lab Sample ID:	140-4736-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	10.4400
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

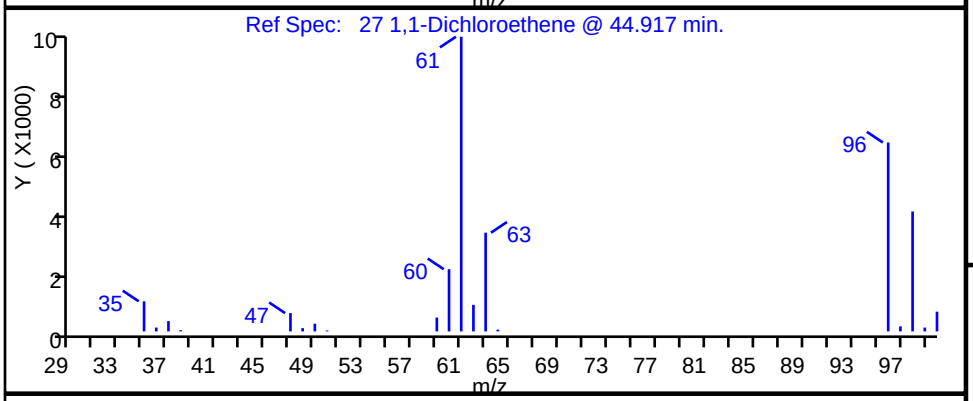
27 1,1-Dichloroethene, CAS: 75-35-4

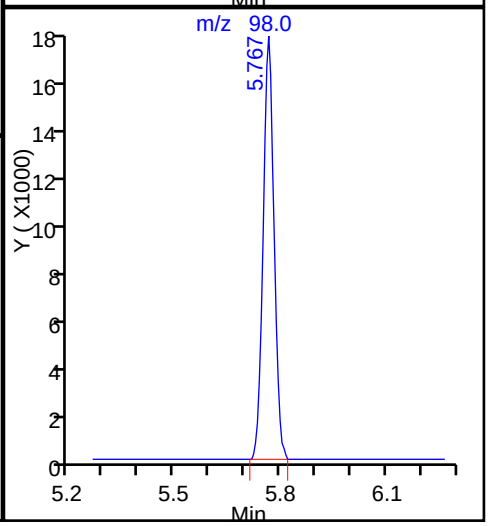


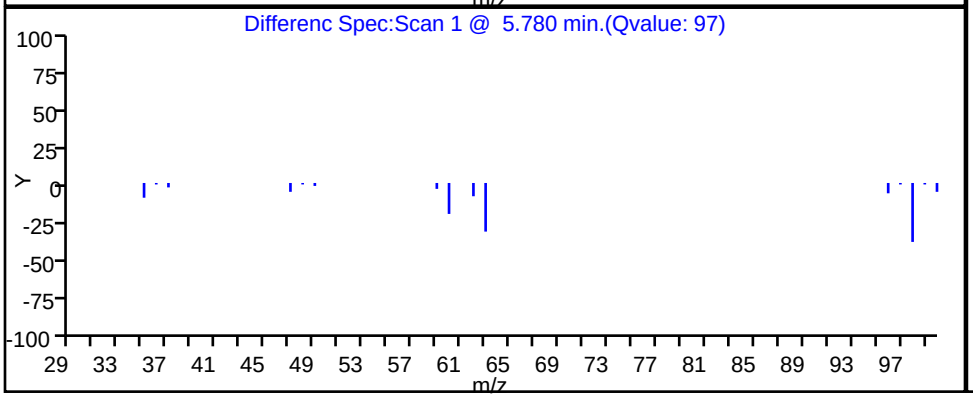






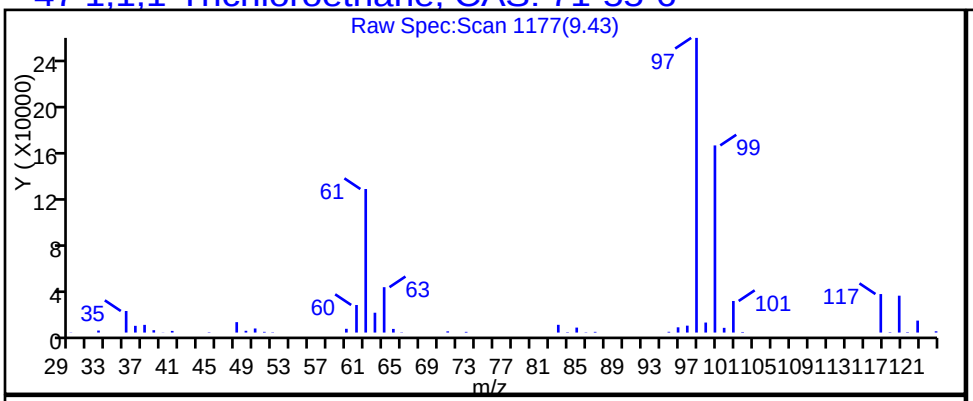


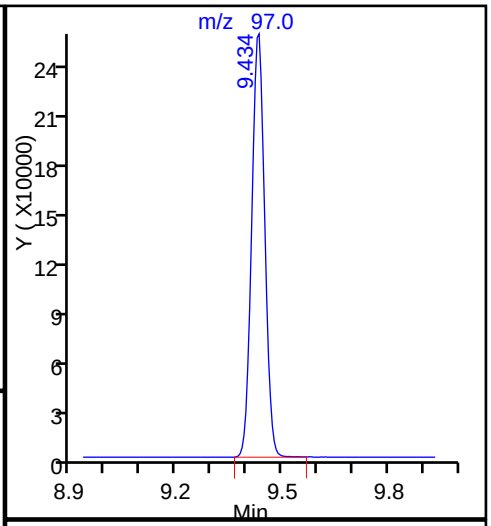


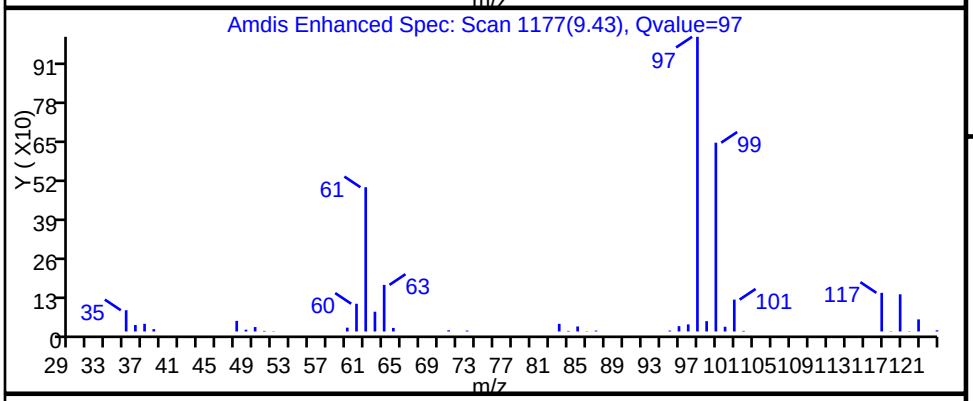


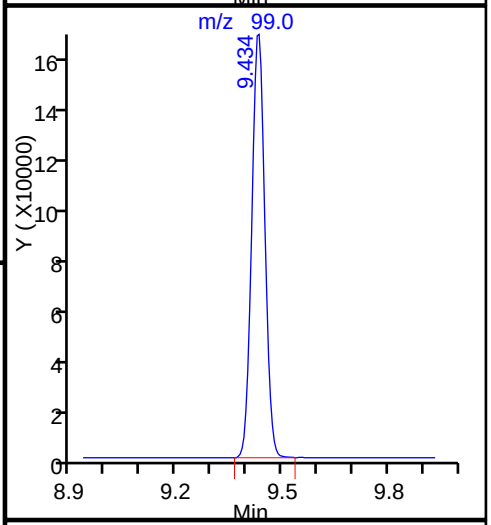
Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RD12p105.D
Injection Date: 12-Apr-2016 23:19:30 Instrument ID: MR
Lims ID: 140-4736-A-3 Lab Sample ID: 140-4736-3
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 5 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 10.4400
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

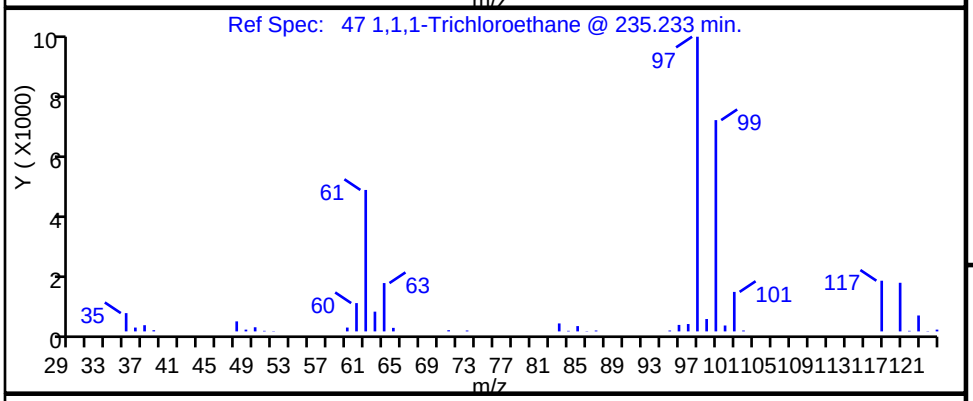
47 1,1,1-Trichloroethane, CAS: 71-55-6

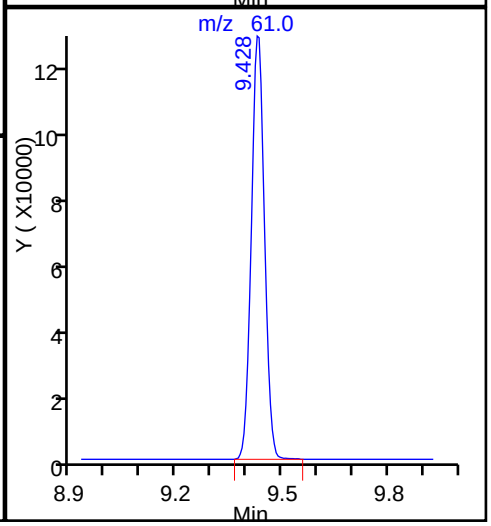


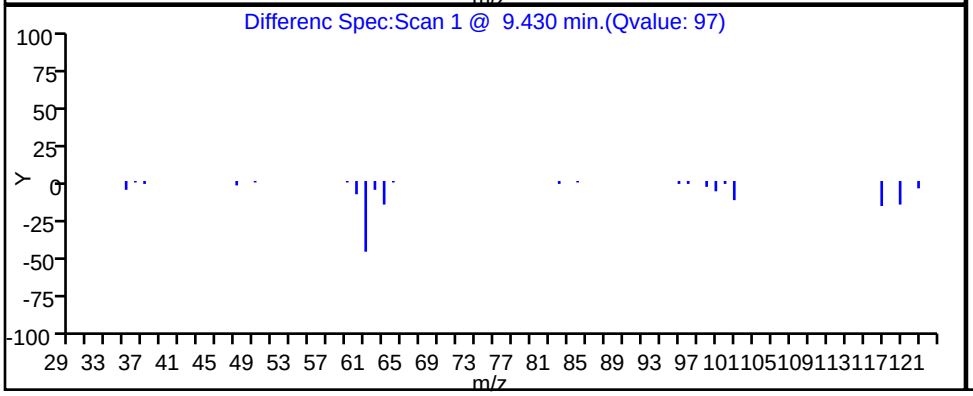












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-3621/2	RJ29IC01.D
Level 2	IC 140-3621/3	RJ29IC02.D
Level 3	IC 140-3621/4	RJ29IC03.D
Level 4	IC 140-3621/5	RJ29IC04.D
Level 5	IC 140-3621/6	RJ29IC05.D
Level 6	ICIS 140-3621/7	RJ29ICIS06.D
Level 7	IC 140-3621/8	RJ29IC07.D
Level 8	IC 140-3621/9	RJ29IC08.D
Level 9	IC 140-3621/10	RJ29IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Propene	+++++ 1.1943	+++++ 1.0932	2.1003 0.9972	1.5543 +++++	1.3495	Ave		1.3815				29.2		30.0			
Chlorodifluoromethane	0.4031 0.3381	0.4052 0.3175	0.3723 0.2996	0.3571 0.2647	0.3637	Ave		0.3468				13.5		30.0			
Dichlorodifluoromethane	+++++ 2.8321	3.3201 2.7901	3.7462 2.6298	3.1733 2.4628	3.5041	Ave		3.0573				14.7		30.0			
Chloromethane	+++++ 0.4515	+++++ 0.4186	0.5504 0.3905	0.4948 0.3403	0.4858	Ave		0.4474				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9120 2.8287	2.9379 2.6523	2.8208 2.5560	2.7396 2.3179	2.9344	Ave		2.7444				7.5		30.0			
Acetaldehyde	+++++ 0.7362	+++++ 0.5717	+++++ +++++	1.1675 +++++	0.8522	Ave		0.8319				30.2	*	30.0			
Vinyl chloride	1.6810 1.4558	1.6687 1.3449	1.5943 1.2563	1.5350 1.1136	1.6456	Ave		1.4772				13.6		30.0			
1,3-Butadiene	+++++ 1.1740	1.3144 1.0722	1.3072 1.0196	1.2173 0.9152	1.3087	Ave		1.1661				12.9		30.0			
Butane	+++++ 1.9986	+++++ 1.8195	2.3128 1.6842	2.2153 1.4724	2.3130	Ave		1.9737				16.7		30.0			
Bromomethane	+++++ 1.3914	1.7367 1.2804	1.5171 1.2490	1.4727 1.1460	1.5307	Ave		1.4155				13.3		30.0			
Chloroethane	+++++ 0.7194	0.8921 0.6685	0.8013 0.6488	0.7674 0.6015	0.8188	Ave		0.7397				13.2		30.0			
Ethanol	+++++ 0.3851	+++++ 0.3363	0.5233 0.3041	0.4839 0.2590	0.4546	Ave		0.3923				25.1		30.0			
Vinyl bromide	1.4813 1.3753	1.4858 1.2910	1.4030 1.2735	1.3838 1.2166	1.4813	Ave		1.3768				7.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.5804	+++++ 1.4725	1.7301 1.4604	1.6326 1.3280	1.6797	Ave		1.5548				9.1		30.0			
Acrolein	+++++ 0.5517	+++++ 0.5297	0.4552 0.5130	0.4235 0.4730	0.5813	Ave		0.5039				11.1		30.0			
Trichlorofluoromethane	3.8568 3.4728	3.7263 3.3742	3.6422 3.3439	3.5126 3.1098	3.7264	Ave		3.5294				6.6		30.0			
Acetonitrile	+++++ 0.6013	+++++ 0.5648	+++++ 0.5413	0.6859 0.4966	0.6531	Ave		0.5905				12.0		30.0			
Acetone	+++++ 0.9653	+++++ 0.7936	+++++ 0.6814	1.5069 0.6218	1.0294	Ave		0.9331				34.5	*	30.0			
Pentane	+++++ 0.2694	0.2761 0.2618	0.2753 0.2603	0.2737 0.2438	0.2885	Ave		0.2686				5.0		30.0			
Isopropyl alcohol	+++++ 1.9805	2.1183 1.8753	2.0751 1.7948	2.0391 1.5630	2.0918	Ave		1.9422				9.8		30.0			
Ethyl ether	+++++ 1.3598	+++++ 1.2853	1.4470 1.2371	1.4329 1.1011	1.4804	Ave		1.3348				10.2		30.0			
1,1-Dichloroethene	1.5222 1.3640	1.4729 1.3353	1.3978 1.3420	1.3641 1.2885	1.4410	Ave		1.3920				5.3		30.0			
Acrylonitrile	1.1062 1.0584	1.1288 1.0291	1.0867 1.0385	1.0417 0.9873	1.1046	Ave		1.0646				4.3		30.0			
tert-Butyl alcohol	2.7378 2.5788	2.7440 2.5194	2.6057 2.4858	2.5536 2.3195	2.6999	Ave		2.5827				5.3		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.1516 2.9590	3.1042 2.9023	3.0721 2.9045	2.9660 2.7288	3.1030	Ave		2.9879				4.5		30.0			
Methylene Chloride	+++++ 1.2754	+++++ 1.2272	1.7623 1.1961	1.4553 1.1290	1.3878	Ave		1.3476				15.9		30.0			
3-Chloropropene	+++++ 1.1393	1.6869 1.0789	1.3121 1.0344	1.2119 0.9046	1.2149	Ave		1.1979				19.5		30.0			
Carbon disulfide	4.2867 3.9057	4.2861 3.8195	4.0695 3.8044	3.9875 3.5966	4.1714	Ave		3.9919				5.9		30.0			
trans-1,2-Dichloroethene	1.5832 1.4297	1.5104 1.3896	1.4643 1.4012	1.4167 1.3399	1.5075	Ave		1.4492				5.2		30.0			
2-Methylpentane	+++++ 2.8429	3.0961 2.7352	3.0068 2.6326	2.9012 2.3970	3.0124	Ave		2.8280				8.2		30.0			
Methyl tert-butyl ether	3.9015 3.6537	3.7790 3.5833	3.6513 3.5632	3.5940 3.3577	3.8420	Ave		3.6584				4.5		30.0			
1,1-Dichloroethane	2.7755 2.5564	2.7282 2.4845	2.6794 2.4620	2.5959 2.3104	2.7366	Ave		2.5921				5.9		30.0			
Vinyl acetate	3.7056 3.7777	3.6479 3.7019	3.5205 3.6757	3.4969 3.4008	3.8463	Ave		3.6415				3.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	0.8084 0.7840	0.8596 0.7212	1.0144 0.6770	1.0123 0.6426	0.8106	Ave		0.8144				16.2		30.0			
Hexane	+++++ 1.1487	1.2590 1.1299	1.1904 1.1238	1.1536 1.0504	1.2014	Ave		1.1572				5.3		30.0			
C6 Range	+++++ 1.8390	+++++ 1.7975	+++++ 1.7835	1.9377 1.6454	1.9967	Ave		1.8333				6.8		30.0			
Isopropyl ether	5.3180 4.9070	5.1843 4.7640	5.0675 4.6421	4.9881 4.1667	5.1783	Ave		4.9129				7.2		30.0			
cis-1,2-Dichloroethene	1.5671 1.4703	1.5680 1.4488	1.5139 1.4569	1.4801 1.3905	1.5569	Ave		1.4947				4.1		30.0			
Ethyl acetate	+++++ 3.1406	3.2296 3.0553	3.2587 3.0012	3.0939 2.7514	3.2866	Ave		3.1022				5.6		30.0			
Chloroform	3.1827 2.9083	3.1492 2.8184	2.9994 2.7531	2.9471 2.5704	3.0641	Ave		2.9325				6.7		30.0			
Tert-butyl ethyl ether	4.2930 4.2782	4.3134 4.2198	4.2038 4.1452	4.1511 3.8468	4.4336	Ave		4.2094				3.9		30.0			
Tetrahydrofuran	+++++ 1.5513	+++++ 1.5015	1.6182 1.4780	1.5622 1.3764	1.6457	Ave		1.5333				5.9		30.0			
1,1,1-Trichloroethane	+++++ 2.8838	2.8868 2.8063	2.8235 2.7974	2.8024 2.6272	2.9563	Ave		2.8230				3.4		30.0			
1,2-Dichloroethane	0.3828 0.3735	0.3891 0.3635	0.3820 0.3581	0.3769 0.3379	0.3987	Ave		0.3736				4.9		30.0			
1-Butanol	+++++ 0.0951	+++++ 0.0948	+++++ 0.0921	0.1030 0.0831	0.0958	Ave		0.0940				6.9		30.0			
Benzene	+++++ 0.8271	0.9614 0.8238	0.8642 0.8185	0.8518 0.7643	0.8795	Ave		0.8488				6.8		30.0			
Cyclohexane	0.1322 0.1284	0.1307 0.1292	0.1247 0.1263	0.1291 0.1176	0.1351	Ave		0.1281				3.9		30.0			
Carbon tetrachloride	0.5759 0.5120	0.5620 0.6130	0.4691 0.5841	0.4790 0.5998	0.5275	Ave		0.5469				9.6		30.0			
2,3-Dimethylpentane	0.1920 0.1892	0.1954 0.1872	0.1854 0.1869	0.1843 0.1802	0.2002	Ave		0.1890				3.2		30.0			
Thiophene	0.4668 0.4678	0.4815 0.4636	0.4629 0.4678	0.4639 0.4516	0.4954	Ave		0.4690				2.7		30.0			
Tert-amyl methyl ether	+++++ 0.7842	0.7372 0.7698	0.7974 0.7695	0.8389 0.7363	0.8304	Ave		0.7829				4.9		30.0			
2,2,4-Trimethylpentane	1.4927 1.4165	1.4490 1.4024	1.4025 1.3971	1.3962 1.2994	1.4856	Ave		1.4157				4.1		30.0			
Heptane	0.3008 0.3010	0.2923 0.3007	0.2843 0.2991	0.2929 0.2825	0.3140	Ave		0.2964				3.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.3498 0.3319	0.3348 0.3297	0.3301 0.3260	0.3302 0.3040	0.3480	Ave		0.3316				4.0		30.0			
Trichloroethene	0.4004 0.3972	0.3966 0.4006	0.3869 0.4085	0.3958 0.4051	0.4101	Ave		0.4001				1.8		30.0			
Dibromomethane	+++++ 0.3394	0.3782 0.3353	0.3388 0.3351	0.3316 0.3207	0.3509	Ave		0.3413				5.0		30.0			
Bromodichloromethane	0.5615 0.5910	0.5566 0.5929	0.5458 0.5900	0.5529 0.5622	0.6074	Ave		0.5734				3.8		30.0			
1,4-Dioxane	0.1414 0.1314	0.1311 0.1310	0.1220 0.1297	0.1239 0.1236	0.1347	Ave		0.1299				4.7		30.0			
Methyl methacrylate	+++++ 0.3658	0.3574 0.3653	0.3366 0.3583	0.3474 0.3315	0.3728	Ave		0.3544				4.1		30.0			
Methylcyclohexane	0.6225 0.6136	0.6064 0.6143	0.5987 0.6153	0.6019 0.5921	0.6390	Ave		0.6115				2.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.7326	+++++ 0.6922	1.2268 0.6622	0.9195 0.6091	0.8130	Ave		0.8079				26.1		30.0			
cis-1,3-Dichloropropene	0.4624 0.4902	0.4548 0.4907	0.4447 0.4978	0.4612 0.4750	0.5058	Ave		0.4758				4.5		30.0			
trans-1,3-Dichloropropene	0.4492 0.4808	0.4424 0.4805	0.4242 0.4829	0.4435 0.4659	0.4858	Ave		0.4617				4.9		30.0			
Toluene Range	+++++ 2.4309	+++++ 2.4075	+++++ +++++	+++++ +++++	2.5663	Ave		2.4682				3.5		30.0			
Toluene	+++++ 1.0900	1.1498 1.0851	1.0755 1.0686	1.0620 1.0261	1.1274	Ave		1.0856				3.5		30.0			
1,1,2-Trichloroethane	0.3348 0.3200	0.3334 0.3154	0.3168 0.3108	0.3205 0.2984	0.3293	Ave		0.3200				3.6		30.0			
2-Methylthiophene	0.8829 0.8994	0.8741 0.8944	0.8582 0.8931	0.8599 0.8603	0.9243	Ave		0.8830				2.5		30.0			
3-Methylthiophene	0.8699 0.8867	0.8726 0.8871	0.8331 0.8850	0.8488 0.8528	0.9135	Ave		0.8722				2.8		30.0			
2-Hexanone	+++++ 0.3894	+++++ 0.3953	0.3569 0.3932	0.3792 0.3745	0.3885	Ave		0.3824				3.5		30.0			
Dibromochloromethane	+++++ 0.6753	0.5114 0.7089	0.5261 0.7183	0.5694 0.7037	0.6590	Ave		0.6340				13.4		30.0			
Octane	+++++ 0.3749	0.3601 0.3704	0.3360 0.3658	0.3541 0.3453	0.3763	Ave		0.3604				4.0		30.0			
C8 Range	+++++ 5.0502	+++++ 5.0470	+++++ +++++	+++++ +++++	5.2063	Ave		5.1012				1.8		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.6124	0.5766 0.6156	0.5549 0.6159	0.5714 0.5968	0.6167	Ave		0.5950				4.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Tetrachloroethene	0.3971 0.3995	0.3928 0.4002	0.3851 0.4033	0.3843 0.3920	0.4088	Ave		0.3959				2.1		30.0			
Chlorobenzene	0.9393 0.8677	0.9128 0.8698	0.8677 0.8865	0.8606 0.8618	0.9084	Ave		0.8860				3.1		30.0			
2,3-Dimethylheptane	+++++ 0.9253	0.9785 0.9113	0.9431 0.8829	0.9331 0.7873	0.9644	Ave		0.9157				6.5		30.0			
Ethylbenzene	1.5124 1.4048	1.4482 1.4107	1.3721 1.4202	1.3726 1.3474	1.4661	Ave		1.4172				3.7		30.0			
2-Ethylthiophene	+++++ 1.0542	1.0224 1.0612	0.9779 1.0778	1.0058 1.0424	1.0868	Ave		1.0411				3.6		30.0			
m-Xylene & p-Xylene	1.1245 1.0955	1.1094 1.1095	1.0386 1.1046	1.0655 1.0209	1.1403	Ave		1.0899				3.7		30.0			
Bromoform	+++++ 0.6400	0.3628 0.7240	0.4080 0.7656	0.4505 0.7824	0.6029	Ave		0.5920				28.0		30.0			
Styrene	+++++ 0.8391	0.6948 0.8637	0.6625 0.8905	0.7392 0.8772	0.8414	Ave		0.8010				11.1		30.0			
Nonane	0.7208 0.7483	0.7068 0.7515	0.7075 0.7219	0.7361 0.6316	0.7707	Ave		0.7217				5.5		30.0			
o-Xylene	1.1532 1.1450	1.1382 1.1514	1.0821 1.1365	1.1188 1.0525	1.1900	Ave		1.1297				3.6		30.0			
1,1,2,2-Tetrachloroethane	0.8259 0.8267	0.8297 0.8241	0.7562 0.8296	0.7761 0.7913	0.8492	Ave		0.8121				3.7		30.0			
1,2,3-Trichloropropane	+++++ 0.2474	+++++ 0.2484	0.2362 0.2521	0.2385 0.2456	0.2585	Ave		0.2467				3.1		30.0			
Isopropylbenzene	+++++ 1.6328	+++++ 1.6324	1.5839 1.6190	1.5672 1.5234	1.6766	Ave		1.6050				3.2		30.0			
Propylbenzene	+++++ 0.4672	0.4292 0.4827	0.4170 0.4952	0.4375 0.4783	0.4736	Ave		0.4601				6.2		30.0			
2-Chlorotoluene	0.4100 0.4185	0.4087 0.4296	0.3903 0.4380	0.4018 0.4207	0.4312	Ave		0.4165				3.7		30.0			
4-Ethyltoluene	+++++ 1.6101	1.5474 1.6429	1.4566 1.6620	1.5315 1.5921	1.6526	Ave		1.5869				4.5		30.0			
1,3,5-Trimethylbenzene	0.7187 0.7777	0.7113 0.7970	0.6955 0.8244	0.7275 0.8058	0.7906	Ave		0.7610				6.3		30.0			
Alpha Methyl Styrene	+++++ 0.6579	+++++ 0.7024	0.4692 0.7580	0.5596 0.7584	0.6326	Ave		0.6483				16.3		30.0			
Decane	+++++ 0.9516	+++++ 0.9628	+++++ 0.9433	0.9086 0.8616	0.9639	Ave		0.9320				4.3		30.0			
tert-Butylbenzene	1.4055 1.4834	1.3862 1.5168	1.3321 1.5455	1.3958 1.4825	1.5085	Ave		1.4507				5.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	1.2839 1.3828	1.3201 1.4095	1.2415 1.4188	1.3158 1.3450	1.4011	Ave		1.3465				4.6		30.0			
1,3-Dichlorobenzene	0.9595 0.9791	0.9581 0.9978	0.8819 1.0255	0.9184 1.0237	0.9763	Ave		0.9689				4.8		30.0			
sec-Butylbenzene	1.8610 2.0133	1.9102 2.0376	1.8456 2.0400	1.9205 1.9259	2.0431	Ave		1.9552				4.0		30.0			
Benzyl chloride	+++++ 1.2770	+++++ 1.3199	1.0354 1.3225	1.1309 1.2254	1.2503	Ave		1.2231				8.6		30.0			
1,4-Dichlorobenzene	1.0034 1.0108	0.9995 1.0377	0.9021 1.0595	0.9396 1.0367	1.0092	Ave		0.9998				5.0		30.0			
4-Isopropyltoluene	+++++ 1.8150	1.6520 1.8610	1.5813 1.8766	1.6914 1.8013	1.8050	Ave		1.7605				6.0		30.0			
1,2,3-Trimethylbenzene	1.0626 1.1049	1.0737 1.1152	1.0216 1.1178	1.0629 1.0924	1.1205	Ave		1.0857				3.1		30.0			
Butylcyclohexane	+++++ 1.0670	1.0218 1.0697	0.9793 1.0536	1.0397 0.9991	1.0732	Ave		1.0379				3.4		30.0			
1,2-Dichlorobenzene	0.9738 0.9580	0.9459 0.9816	0.8646 0.9993	0.9117 0.9851	0.9554	Ave		0.9528				4.4		30.0			
Indane	1.2739 1.3483	1.2717 1.3850	1.2079 1.4008	1.2806 1.3384	1.3482	Ave		1.3172				4.7		30.0			
Indene	0.8884 0.9624	0.9075 1.0226	0.8242 1.0669	0.9346 1.0700	0.9299	Ave		0.9563				8.7		30.0			
Butylbenzene	1.5687 1.7017	1.6043 1.6927	1.5380 1.6389	1.6477 1.5387	1.7078	Ave		1.6265				4.2		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.3413	1.2020 1.3742	1.1415 1.3660	1.2786 1.3600	1.2858	Ave		1.2937				6.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.4642	0.2975 0.5025	0.2979 0.5032	0.3571 0.5178	0.4232	Ave		0.4204				21.9		30.0			
Undecane	+++++ 1.1449	+++++ 1.1531	+++++ 1.0437	1.0819 0.9185	1.0961	Ave		1.0730				8.0		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.5415	1.4441 1.5827	1.3383 1.5453	1.4793 1.5214	1.4444	Ave		1.4871				5.2		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.9309	0.9025 0.9465	0.8151 0.9215	0.9066 0.9347	0.8658	Ave		0.9029				4.8		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 1.2721	1.2768 1.3119	1.1198 1.2621	1.2503 1.2700	1.1457	Ave		1.2386				5.5		30.0			
Dodecane	+++++ 1.0804	+++++ 1.1477	+++++ 0.9888	1.0511 0.9094	0.8525	Ave		1.0050				11.0		30.0			
1,2,4-Trichlorobenzene	0.8403 0.9230	0.9017 0.9750	0.7190 0.9388	0.8283 0.9457	0.7593	Ave		0.8701				10.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Naphthalene	2.3324 2.0463	2.5317 2.1120	1.7261 1.9763	1.9936 1.9355	1.6842	Ave		2.0375				13.2		30.0			
Benzo(b)thiophene	+++++ 1.2397	+++++ 1.2840	1.1013 1.2172	1.3036 1.2405	0.9576	Ave		1.1920				10.2		30.0			
Hexachlorobutadiene	0.5517 0.7334	0.5845 0.7978	0.5529 0.7579	0.6243 0.7629	0.5970	Ave		0.6625				15.0		30.0			
1,2,3-Trichlorobenzene	0.8737 0.8823	0.9509 0.9564	0.6710 0.8969	0.7762 0.8456	0.6454	Ave		0.8332				13.6		30.0			
2-Methylnaphthalene	+++++ 0.3082	+++++ 0.3771	0.2184 0.3543	0.2862 0.2213	0.1492	Ave		0.2735				29.8		50.0			
1-Methylnaphthalene	+++++ 0.2480	+++++ 0.2970	0.1846 0.2786	0.2352 0.1527	0.1149	Ave		0.2158				31.1		50.0			
4-Bromofluorobenzene (Surr)	0.7286 0.7553	0.7264 0.7584	0.7267 0.7475	0.7348 0.7281	0.7429	Ave		0.7387				1.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-3621/2	RJ29IC01.D
Level 2	IC 140-3621/3	RJ29IC02.D
Level 3	IC 140-3621/4	RJ29IC03.D
Level 4	IC 140-3621/5	RJ29IC04.D
Level 5	IC 140-3621/6	RJ29IC05.D
Level 6	ICIS 140-3621/7	RJ29ICIS06.D
Level 7	IC 140-3621/8	RJ29IC07.D
Level 8	IC 140-3621/9	RJ29IC08.D
Level 9	IC 140-3621/10	RJ29IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Propene	CBM	Ave	+++++ 228078	+++++ 454322	26500 907376	50053 +++++	115607	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 +++++	0.999
Chlorodifluoromethane	CBM	Ave	1282 64578	2539 131965	4698 272574	11500 540426	31155	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	+++++ 540865	20804 1159472	47268 2392864	102193 5027990	300186	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 86227	+++++ 173952	6945 355318	15934 694820	41615	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	9261 540208	18409 1102238	35592 2325713	88226 4732267	251378	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 703006	+++++ 1187986	+++++ +++++	187996 +++++	365011	+++++ 9.99	+++++ 20.0	+++++ +++++	2.00 +++++	4.99
Vinyl chloride	CBM	Ave	5346 278017	10456 558900	20116 1143088	49431 2273528	140975	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	+++++ 224206	8236 445565	16494 927708	39201 1868473	112114	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Butane	CBM	Ave	+++++ 381680	+++++ 756149	29182 1532407	71340 3006124	198146	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	+++++ 265717	10882 532103	19142 1136498	47427 2339668	131128	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	+++++ 137380	5590 277829	10111 590343	24713 1227936	70143	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	+++++ 367698	+++++ 698718	33014 1383312	77917 2644048	194719	+++++ 9.99	+++++ 20.0	0.800 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	4711 262658	9310 536525	17702 1158727	44562 2483740	126897	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 301828	+++++ 611926	21830 1328810	52575 2711263	143893	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 105359	+++++ 220136	5744 466743	13639 965739	49802	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Trichlorofluoromethane	CBM	Ave	12266 663218	23349 1402228	45955 3042568	113117 6348924	319225	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 114829	+++++ 234702	+++++ 492512	22087 1013753	55951	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 553085	+++++ 989477	+++++ 1860214	145591 3808835	264563	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 51444	1730 108809	3474 236807	8813 497795	24712	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Isopropyl alcohol	CBM	Ave	+++++ 1134762	39822 2338119	78554 4899594	197014 9573808	537637	+++++ 5.99	0.235 12.0	0.480 24.0	1.20 48.0	3.00
Ethyl ether	CBM	Ave	+++++ 259696	+++++ 534142	18257 1125617	46144 2248035	126823	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4841 260494	9229 554923	17637 1221079	43929 2630603	123447	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	3518 202126	7073 427655	13712 944908	33547 2015627	94631	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	8707 492493	17194 1047012	32878 2261803	82234 4735364	231292	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	10023 565102	19451 1206128	38762 2642823	95517 5571061	265820	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 243572	+++++ 509999	22236 1088367	46866 2304869	118891	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	+++++ 217571	10570 448349	16556 941169	39027 1846882	104079	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	13633 745897	26857 1587301	51347 3461632	128411 7342693	357351	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	5035 273041	9464 577470	18476 1274909	45624 2735476	129139	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	+++++ 542930	19400 1136674	37939 2395365	93428 4893654	258059	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	12408 697771	23679 1489106	46070 3242166	115741 6855095	329127	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	8827 488209	17095 1032486	33808 2240128	83597 4716818	234434	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	11785 721457	22858 1538426	44420 3344517	112614 6942989	329497	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	2571 149730	5386 299693	12799 615977	32601 1311844	69440	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	+++++ 219369	7889 469565	15020 1022501	37151 2144501	102921	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFB	Ave	+++++ 1784009	+++++ 3758827	+++++ 8057924	317170 16395428	859008	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Isopropyl ether	CBM	Ave	16913 937118	32485 1979800	63939 4223787	160636 8506719	443603	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4984 280799	9825 602078	19102 1325594	47664 2838815	133371	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	+++++ 599775	20237 1269702	41117 2730736	99634 5617273	281552	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	10122 555413	19733 1171239	37845 2505006	94906 5247650	262490	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	13653 817040	27028 1753657	53042 3771671	133681 7853517	379812	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	+++++ 296262	+++++ 624002	20418 1344781	50309 2810050	140980	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	+++++ 550734	18089 1166223	35625 2545336	90247 5363645	253256	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFB	Ave	6208 362286	12438 760151	24866 1617907	61692 3367163	171547	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1-Butanol	DFB	Ave	+++++ 92235	+++++ 198227	+++++ 415934	16858 828029	41205	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Benzene	DFB	Ave	+++++ 802365	30730 1722684	56249 3697831	139431 7615521	378365	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Cyclohexane	DFB	Ave	2144 124517	4177 270165	8115 570677	21134 1171679	58112	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFB	Ave	9340 496662	17965 1281986	30532 2638814	78407 5976711	226936	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFB	Ave	3114 183567	6246 391395	12067 844188	30174 1795323	86149	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Thiophene	DFB	Ave	7571 453857	15392 969518	30129 2113673	75936 4499652	213138	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	DFB	Ave	+++++ 760733	23564 1609788	51899 3476380	137313 7336251	357259	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFB	Ave	24211 1374170	46317 2932690	91291 6312213	228529 12947237	639131	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Heptane	DFB	Ave	4879 292044	9342 628890	18503 1351309	47947 2814638	135077	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFB	Ave	5674 321938	10703 689377	21488 1473064	54043 3028775	149722	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Trichloroethene	DFB	Ave	6494 385332	12677 837826	25186 1845788	64777 4036727	176433	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Dibromomethane	DFB	Ave	+++++ 329232	12089 701252	22054 1514037	54275 3195717	150967	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFB	Ave	9107 573340	17791 1239764	35529 2665437	90502 5602203	261330	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,4-Dioxane	DFB	Ave	2294 127486	4191 273976	7938 586133	20281 1231880	57942	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methyl methacrylate	DFB	Ave	+++++ 354887	11424 763818	21910 1618663	56861 3303219	160388	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methylcyclohexane	DFB	Ave	10096 595284	19382 1284697	38968 2779758	98524 5899945	274918	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFB	Ave	+++++ 710656	+++++ 1447462	79853 2991645	150500 6069313	349766	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFB	Ave	7500 475494	14538 1026102	28948 2248978	75486 4732844	217599	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZ	Ave	6675 433670	13034 939379	25591 2065343	67814 4383688	197119	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Toluene Range	DFB	Ave	+++++ 2358213	+++++ 5034457	+++++ +++++	+++++ +++++	1104100	+++++ 2.00	+++++ 4.00	+++++ +++++	+++++ +++++	0.999
Toluene	CBZ	Ave	+++++ 983177	33877 2121413	64875 4570212	162397 9654968	457420	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZ	Ave	4976 288635	9824 616596	19112 1329359	49013 2808159	133607	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZ	Ave	13121 811250	25754 1748453	51768 3819634	131497 8094755	375013	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZ	Ave	12928 799773	25709 1734194	50253 3785045	129795 8024092	370606	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Hexanone	CBZ	Ave	+++++ 351277	+++++ 772835	21531 1681654	57979 3524101	157606	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZ	Ave	+++++ 609154	15067 1385964	31734 3071816	87069 6621514	267388	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Octane	CBZ	Ave	+++++ 338144	10609 724178	20268 1564530	54155 3249197	152689	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
C8 Range	DFB	Ave	+++++ 4899211	+++++ 10554153	+++++ +++++	+++++ +++++	2239894	+++++ 2.00	+++++ 4.00	+++++ +++++	+++++ +++++	0.999
1,2-Dibromoethane (EDB)	CBZ	Ave	+++++ 552400	16990 1203466	33474 2633951	87383 5615191	250202	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZ	Ave	5901 360384	11573 782310	23230 1724895	58771 3688597	165846	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chlorobenzene	CBZ	Ave	13959 782617	26893 1700375	52338 3791193	131595 8108986	368572	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZ	Ave	+++++ 834570	28831 1781528	56891 3775786	142689 7408213	391276	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Ethylbenzene	CBZ	Ave	22476 1267112	42670 2757851	82766 6073848	209893 12678164	594816	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
2-Ethylthiophene	CBZ	Ave	+++++ 950899	30122 2074575	58991 4609501	153800 9807914	440948	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
m-Xylene & p-Xylene	CBZ	Ave	33423 1976245	65372 4338191	125298 9448325	325857 19211149	925273	0.0784 3.99	0.157 8.00	0.320 16.0	0.800 32.0	2.00
Bromoform	CBZ	Ave	+++++ 577227	10689 1415345	24614 3274328	68888 7361637	244609	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Styrene	CBZ	Ave	+++++ 756830	20472 1688445	39965 3808385	113039 8253951	341358	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Nonane	CBZ	Ave	10711 674919	20824 1469256	42675 3087316	112566 5942521	312693	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
o-Xylene	CBZ	Ave	17137 1032792	33536 2250949	65272 4860434	171088 9903343	482802	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZ	Ave	12274 745634	24445 1611027	45618 3547918	118678 7445066	344528	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZ	Ave	+++++ 223126	+++++ 485577	14247 1078212	36471 2311190	104894	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZ	Ave	+++++ 1472720	+++++ 3191338	95540 6924078	239652 14334362	680222	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Propylbenzene	CBZ	Ave	+++++ 421420	12646 943679	25153 2117797	66901 4500545	192151	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZ	Ave	6093 377459	12042 839846	23541 1873215	61434 3958594	174955	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZ	Ave	+++++ 1452257	45593 3211936	87866 7108118	234195 14980816	670475	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZ	Ave	10681 701459	20957 1558212	41951 3525676	111250 7582349	320773	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZ	Ave	+++++ 593385	+++++ 1373255	28301 3241964	85565 7136341	256646	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Decane	CBZ	Ave	+++++ 858341	+++++ 1882295	+++++ 4034285	138933 8106520	391086	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZ	Ave	20887 1337992	40843 2965326	80357 6609661	213437 13949432	612021	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZ	Ave	19080 1247281	38895 2755463	74888 6067725	201199 12655271	568468	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZ	Ave	14259 883117	28229 1950664	53198 4385579	140434 9631974	396116	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZ	Ave	27656 1815931	56281 3983536	111330 8724571	293675 18121323	828918	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Benzyl chloride	CBZ	Ave	+++++ 1151872	+++++ 2580331	62456 5656118	172934 11530116	507273	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZ	Ave	14912 911694	29450 2028767	54414 4531126	143679 9754192	409445	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Isopropyltoluene	CBZ	Ave	+++++ 1637122	48674 3638174	95385 8025529	258646 16948735	732338	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3-Trimethylbenzene	CBZ	Ave	15791 996580	31634 2180123	61626 4780460	162536 10278175	454623	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Butylcyclohexane	CBZ	Ave	+++++ 962444	30105 2091186	59075 4506164	158981 9400588	435406	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZ	Ave	14472 864059	27869 1918912	52152 4273803	139420 9269460	387634	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Indane	CBZ	Ave	18931 1216111	37470 2707647	72864 5991009	195828 12593037	546977	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Indene	CBZ	Ave	13202 868075	26737 1999122	49715 4563045	142914 10067376	377268	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Butylbenzene	CBZ	Ave	23312 1534953	47268 3309124	92774 7009088	251957 14478085	692899	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZ	Ave	+++++ 1209859	35416 2686511	68855 5841893	195517 12796605	521679	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dibromo-3-Chloropropane	CBZ	Ave	+++++ 418662	8766 982347	17972 2152032	54604 4871923	171681	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Undecane	CBZ	Ave	+++++ 1032668	+++++ 2254200	+++++ 4463670	165440 8642784	444720	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZ	Ave	+++++ 1390405	42547 3094196	80726 6608938	226206 14315531	586026	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZ	Ave	+++++ 839658	26590 1850400	49169 3940832	138635 8794750	351280	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZ	Ave	+++++ 1147426	37618 2564680	67546 5397558	191192 11949321	464848	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Dodecane	CBZ	Ave	+++++ 974504	+++++ 2243771	+++++ 4228844	160737 8556466	345871	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZ	Ave	12487 832514	26566 1906085	43373 4015190	126661 8897824	308083	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Naphthalene	CBZ	Ave	34661 1845704	74592 4128915	104119 8451930	304848 18211095	683319	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZ	Ave	+++++ 1118151	+++++ 2510290	66434 5205487	199335 11672515	388506	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZ	Ave	8199 661538	17221 1559597	33353 3241421	95459 7178125	242214	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZ	Ave	12984 795841	28016 1869754	40473 3835748	118695 7956596	261864	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZ	Ave	+++++ 868802	+++++ 2303688	41161 4734820	136777 6507661	189201	+++++ 6.24	+++++ 12.5	0.500 25.0	1.25 50.0	3.12
1-Methylnaphthalene	CBZ	Ave	+++++ 699077	+++++ 1814582	34797 3723019	112376 4488346	145609	+++++ 6.24	+++++ 12.5	0.500 25.0	1.25 50.0	3.12

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Bromofluorobenzene (Surr)	CBZ	Ave	1104870 1364359	1091970 1482255	1095591 1598369	1123330 1712632	1207289	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Oct-2015 14:14:30 ALS Bottle#: 9 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-002
Misc. Info.: 031531
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 29-Oct-2015 15:00:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.420	8.431	-0.011	93	324522	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.609	10.619	-0.010	95	1655031	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1516417	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.587	19.590	-0.003	89	1104870	4.00	3.95	
6 Chlorodifluoromethane	67	3.782	3.777	0.005	69	1282	0.0392	0.0456	
7 Propene	41	3.782	3.780	0.002	85	14030	0.0392	0.1252	
8 Dichlorodifluoromethane	85	3.831	3.831	0.000	99	12761	0.0392	0.0514	
9 Chloromethane	52	3.982	3.984	-0.002	98	2300	0.0392	0.0634	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.014	4.011	0.003	93	9261	0.0392	0.0416	
11 Acetaldehyde	44	4.127	4.134	-0.007	81	25415	0.1960	0.3766	
12 Vinyl chloride	62	4.144	4.143	0.001	32	5346	0.0392	0.0446	
14 Butadiene	54	4.225	4.224	0.000	66	4533	0.0392	0.0479	
13 Butane	43	4.230	4.228	0.002	84	8550	0.0392	0.0534	
15 Bromomethane	94	4.500	4.498	0.002	98	6075	0.0392	0.0529	
16 Chloroethane	64	4.624	4.627	-0.003	94	3018	0.0392	0.0503	
17 Ethanol	31	4.753	4.758	-0.005	91	11819	0.1960	0.3713	
18 Vinyl bromide	106	4.882	4.895	-0.013	95	4711	0.0392	0.0422	
19 2-Methylbutane	43	4.952	4.957	-0.005	88	6192	0.0392	0.0491	
21 Acrolein	56	5.141	5.139	0.002	44	4504	0.0392	0.1102	
20 Trichlorofluoromethane	101	5.141	5.144	-0.003	98	12266	0.0392	0.0428	
22 Acetonitrile	40	5.195	5.199	-0.004	98	2482	0.0392	0.0518	
23 Acetone	58	5.249	5.246	0.003	97	13070	0.1176	0.1727	
24 Pentane	72	5.346	5.349	-0.003	94	898	0.0392	0.0412	
25 Isopropyl alcohol	45	5.362	5.358	0.004	93	20912	0.1176	0.1327	
26 Ethyl ether	31	5.508	5.493	0.015	95	4918	0.0392	0.0454	
27 1,1-Dichloroethene	96	5.767	5.767	0.000	56	4841	0.0392	0.0429	
28 Acrylonitrile	53	5.842	5.847	-0.005	92	3518	0.0392	0.0407	
29 2-Methyl-2-propanol	59	5.891	5.885	0.006	96	8707	0.0392	0.0416	
30 1,1,2-Trichloro-1,2,2-trif	101	5.945	5.950	-0.005	96	10023	0.0392	0.0413	
31 Methylene Chloride	84	6.063	6.069	-0.006	94	10512	0.0392	0.0961	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	95	6169	0.0392	0.0635	
33 Carbon disulfide	76	6.209	6.212	-0.003	98	13633	0.0392	0.0421	
34 trans-1,2-Dichloroethene	96	6.807	6.822	-0.015	96	5035	0.0392	0.0428	
35 2-Methylpentane	43	6.867	6.870	-0.003	94	10348	0.0392	0.0451	
36 Methyl tert-butyl ether	73	6.964	6.954	0.010	97	12408	0.0392	0.0418	
37 1,1-Dichloroethane	63	7.190	7.200	-0.010	99	8827	0.0392	0.0420	
38 Vinyl acetate	43	7.304	7.310	-0.006	99	11785	0.0392	0.0399	
39 2-Butanone (MEK)	72	7.719	7.715	0.004	99	2571	0.0392	0.0389	
40 Hexane	56	7.783	7.791	-0.008	87	4241	0.0392	0.0452	
141 Isopropyl ether	45	7.940	7.935	0.005	97	16913	0.0392	0.0424	
41 cis-1,2-Dichloroethene	96	8.112	8.125	-0.013	94	4984	0.0392	0.0411	
42 Ethyl acetate	43	8.317	8.316	0.001	99	11006	0.0392	0.0437	
43 Chloroform	83	8.447	8.461	-0.014	91	10122	0.0392	0.0425	
144 Tert-butyl ethyl ether	59	8.587	8.579	0.008	95	13653	0.0392	0.0400	
44 Tetrahydrofuran	42	8.846	8.833	0.013	92	6018	0.0392	0.0484	
45 1,1,1-Trichloroethane	97	9.439	9.451	-0.012	95	9772	0.0392	0.0427	
46 1,2-Dichloroethane	62	9.520	9.530	-0.010	95	6208	0.0392	0.0402	
49 n-Butanol	31	10.043	10.023	0.020	67	1968	0.0392	0.0506	
47 Benzene	78	10.032	10.041	-0.009	97	16262	0.0392	0.0463	
48 Cyclohexane	69	10.059	10.062	-0.003	89	2144	0.0392	0.0404	
50 Carbon tetrachloride	117	10.064	10.077	-0.013	93	9340	0.0392	0.0413	
51 2,3-Dimethylpentane	71	10.210	10.217	-0.007	90	3114	0.0392	0.0398	
52 Thiophene	84	10.307	10.313	-0.006	95	7571	0.0392	0.0390	
53 Isooctane	57	10.906	10.911	-0.005	97	24211	0.0392	0.0413	
54 n-Heptane	71	11.337	11.340	-0.003	80	4879	0.0392	0.0398	
55 1,2-Dichloropropane	63	11.342	11.346	-0.004	69	5674	0.0392	0.0414	
56 Trichloroethene	130	11.402	11.410	-0.008	95	6494	0.0392	0.0392	
57 Dibromomethane	93	11.461	11.467	-0.006	92	6602	0.0392	0.0468	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	98	9107	0.0392	0.0384	
59 1,4-Dioxane	88	11.677	11.668	0.009	87	2294	0.0392	0.0427	
60 Methyl methacrylate	41	11.801	11.801	0.000	91	6261	0.0392	0.0427	
61 Methylcyclohexane	83	12.340	12.347	-0.007	94	10096	0.0392	0.0399	
62 4-Methyl-2-pentanone (MIBK	43	12.836	12.831	0.005	96	47436	0.0392	0.1419	
63 cis-1,3-Dichloropropene	75	12.879	12.891	-0.012	87	7500	0.0392	0.0381	
64 trans-1,3-Dichloropropene	75	13.796	13.804	-0.008	97	6675	0.0392	0.0381	
65 Toluene	91	13.979	13.983	-0.004	94	17891	0.0392	0.0435	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	98	4976	0.0392	0.0410	
67 2-Methylthiophene	97	14.173	14.179	-0.006	97	13121	0.0392	0.0392	
68 3-Methylthiophene	97	14.454	14.457	-0.003	98	12928	0.0392	0.0391	
69 2-Hexanone	58	14.643	14.637	0.006	93	4946	0.0392	0.0341	
71 Chlorodibromomethane	129	15.015	15.023	-0.008	95	7408	0.0392	0.0308	
70 n-Octane	85	15.047	15.053	-0.006	92	5072	0.0392	0.0371	
72 Ethylene Dibromide	107	15.424	15.432	-0.008	98	8592	0.0392	0.0381	
73 Tetrachloroethene	129	15.597	15.602	-0.005	94	5901	0.0392	0.0393	
74 Chlorobenzene	112	16.913	16.918	-0.005	94	13959	0.0392	0.0416	
75 2,3-Dimethylheptane	43	17.101	17.100	0.001	94	15511	0.0392	0.0447	
76 Ethylbenzene	91	17.420	17.426	-0.006	99	22476	0.0392	0.0418	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	15230	0.0392	0.0386	
78 m-Xylene & p-Xylene	91	17.705	17.703	0.002	98	33423	0.0784	0.0809	
79 Bromoform	173	18.326	18.330	-0.004	92	5596	0.0392	0.0249	
80 Styrene	104	18.450	18.457	-0.007	97	10029	0.0392	0.0330	
81 n-Nonane	57	18.547	18.547	0.000	91	10711	0.0392	0.0391	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	18.557	18.559	-0.002	98	17137	0.0392	0.0400	
83 1,1,2,2-Tetrachloroethane	83	19.091	19.088	0.003	98	12274	0.0392	0.0399	
84 1,2,3-Trichloropropane	110	19.345	19.352	-0.007	95	3919	0.0392	0.0419	
85 Isopropylbenzene	105	19.587	19.589	-0.002	47	26270	0.0392	0.0432	
86 N-Propylbenzene	120	20.553	20.554	-0.001	96	6399	0.0392	0.0367	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	89	6093	0.0392	0.0386	
88 4-Ethyltoluene	105	20.838	20.844	-0.006	98	22318	0.0392	0.0371	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	93	10681	0.0392	0.0370	
90 Alpha Methyl Styrene	118	21.421	21.426	-0.005	89	6947	0.0392	0.0283	
91 n-Decane	57	21.723	21.726	-0.003	91	12753	0.0392	0.0361	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	20887	0.0392	0.0380	
93 1,2,4-Trimethylbenzene	105	21.825	21.832	-0.007	95	19080	0.0392	0.0374	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	14259	0.0392	0.0388	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	98	27656	0.0392	0.0373	
96 Benzyl chloride	91	22.462	22.469	-0.007	86	15092	0.0392	0.0325	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	93	14912	0.0392	0.0393	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	96	24298	0.0392	0.0364	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	96	15791	0.0392	0.0384	
100 Butylcyclohexane	83	22.974	22.980	-0.006	94	14749	0.0392	0.0375	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	94	14472	0.0392	0.0401	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	18931	0.0392	0.0379	
103 Indene	116	23.524	23.527	-0.003	97	13202	0.0392	0.0364	
104 n-Butylbenzene	91	23.669	23.674	-0.005	99	23312	0.0392	0.0378	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.521	24.528	-0.007	97	17341	0.0392	0.0354	
143 1,2-Dibromo-3-Chloropropan	157	24.575	24.582	-0.007	90	4134	0.0392	0.0259	
106 Undecane	57	24.602	24.605	-0.003	95	13974	0.0392	0.0344	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	97	20409	0.0392	0.0362	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	12699	0.0392	0.0371	
109 1,2,3,4-Tetramethylbenzene	119	26.484	26.489	-0.005	98	17799	0.0392	0.0379	
110 Dodecane	57	27.142	27.145	-0.003	96	13280	0.0392	0.0349	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	95	12487	0.0392	0.0379	
112 Naphthalene	128	27.422	27.426	-0.004	99	34661	0.0392	0.0449	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	24021	0.0392	0.0532	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	90	8199	0.0392	0.0326	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	93	12984	0.0392	0.0411	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	22932	0.1225	0.2211	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	22962	0.1225	0.2806	
A 118 C6 Range	1	7.789	(7.740-7.837)		0	34835	0.0392	0.0459	
A 119 Toluene Range	1	13.954	(13.920-13.988)		0	39946	0.0392	0.0391	
A 120 C8 Range	1	15.052	(15.015-15.090)		0	70730	0.0392	0.0335	
S 124 Xylenes, Total	100				0		0.1176	0.1209	
S 145 1,2-Dichloroethene, Total	1				0		0.0784	0.0839	

Reagents:

CDN2C20X0.2_00001	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

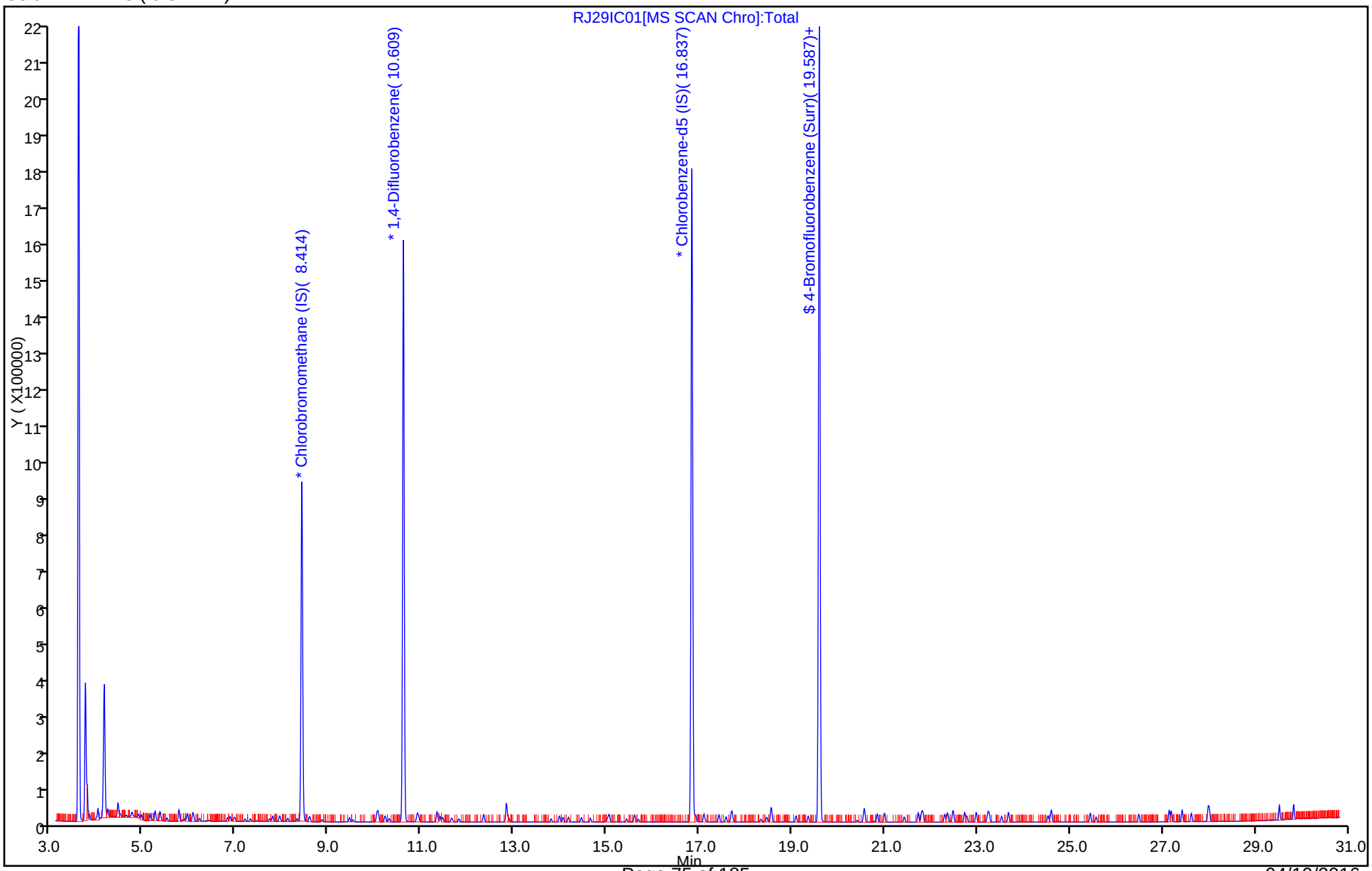
Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D

Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

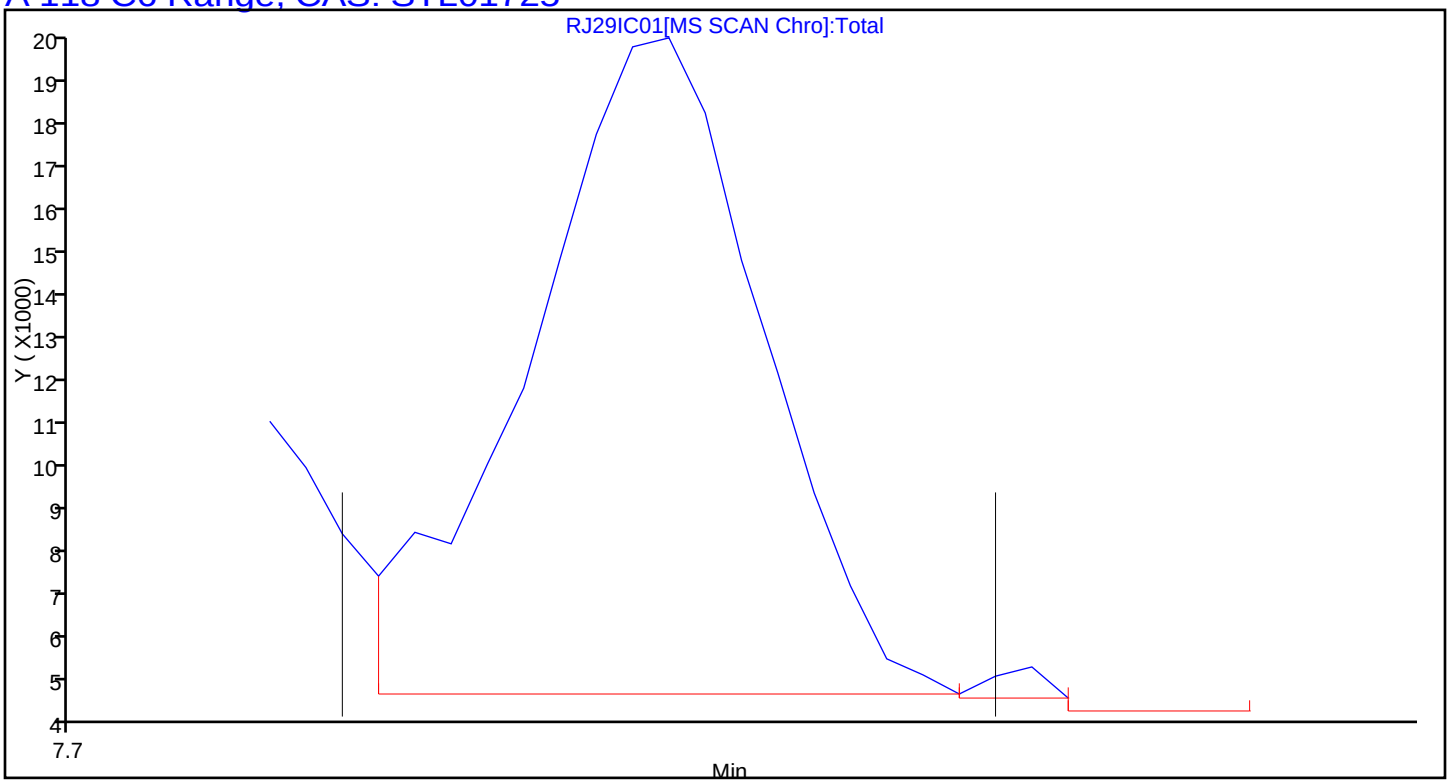


Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D				
Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

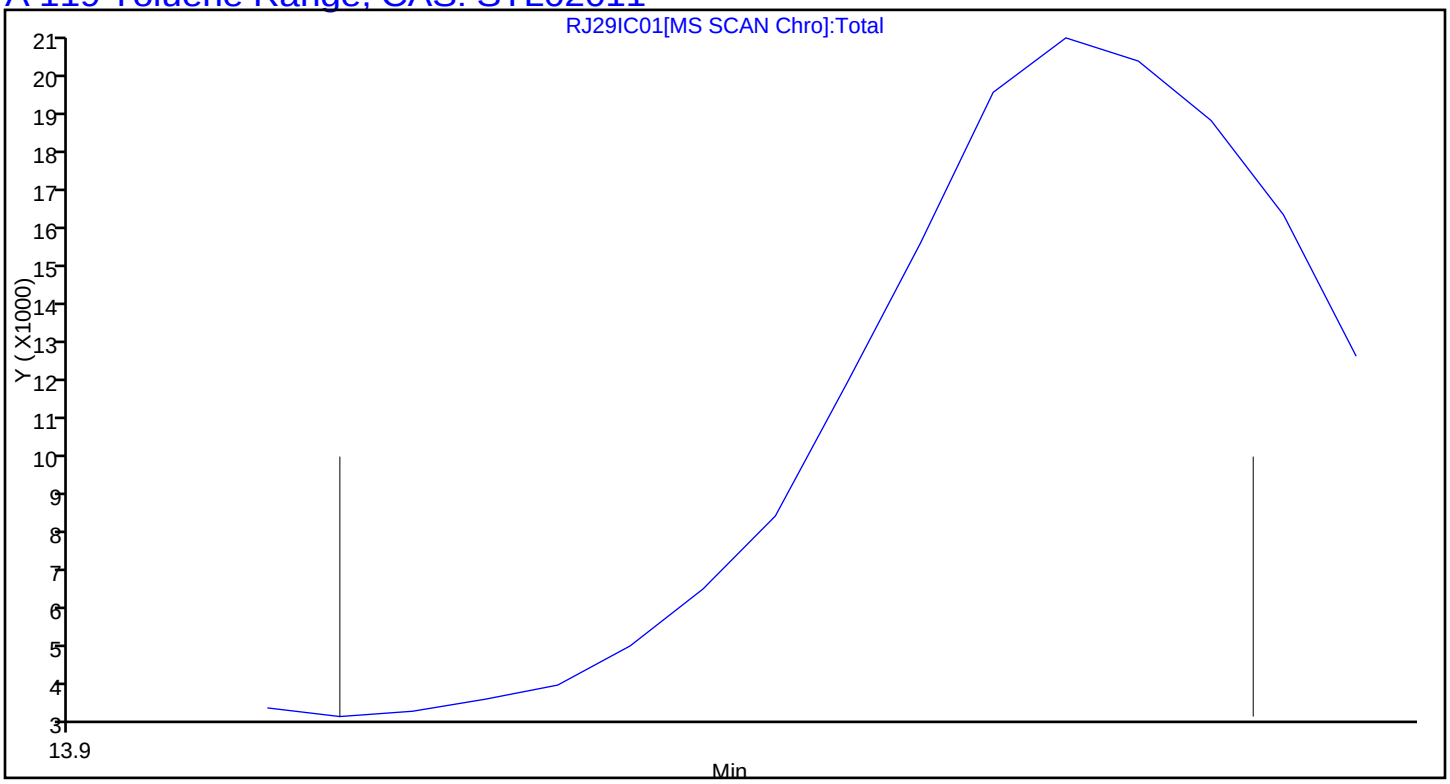


Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D				
Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

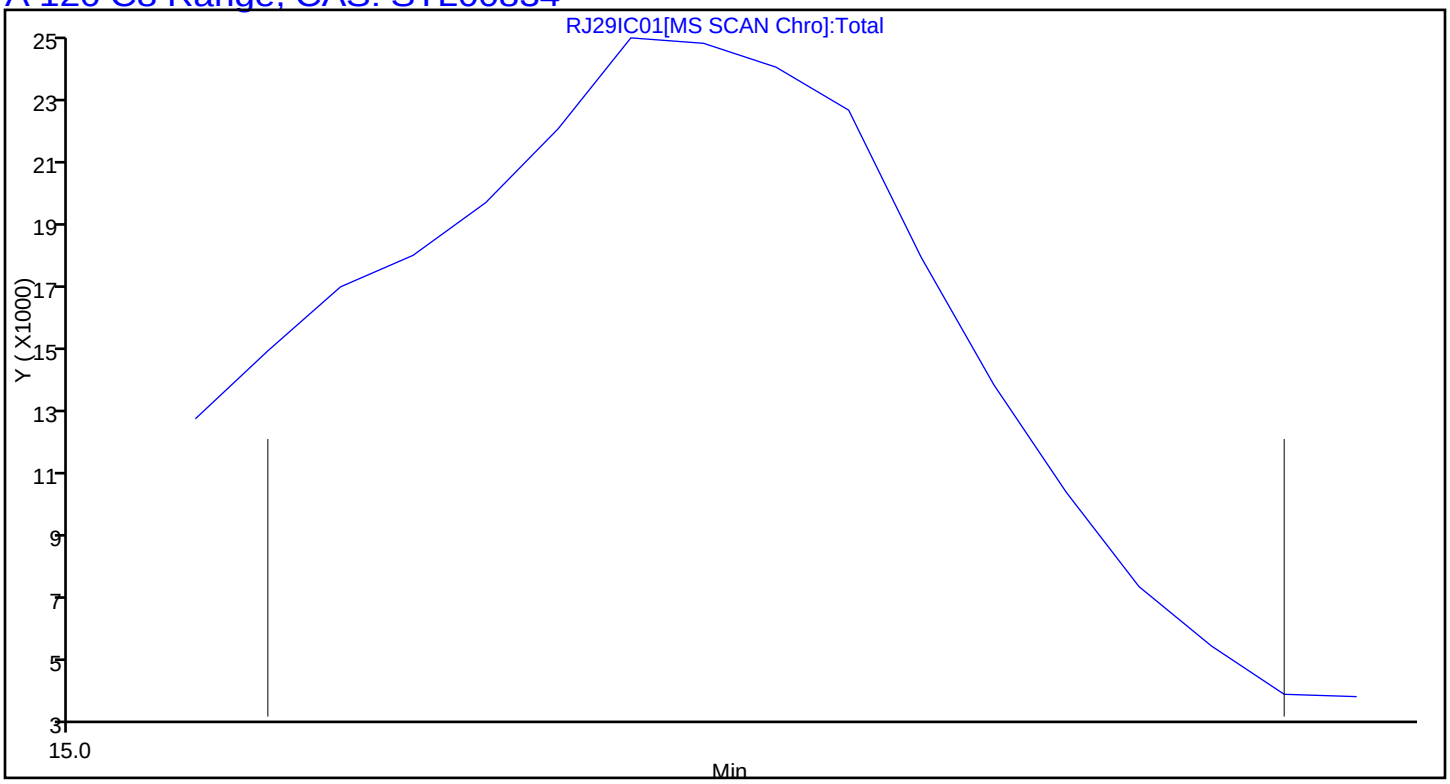


Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D				
Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Oct-2015 15:07:30 ALS Bottle#: 9 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-003
Misc. Info.: 031531
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:28 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 10:52:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.431	-0.006	94	319695	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.615	10.619	-0.004	94	1630818	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1503238	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.587	19.590	-0.003	89	1091970	4.00	3.93	
6 Chlorodifluoromethane	67	3.799	3.777	0.022	94	2539	0.0784	0.0916	
7 Propene	41	3.799	3.780	0.019	92	18478	0.0784	0.1674	
8 Dichlorodifluoromethane	85	3.847	3.831	0.016	99	20804	0.0784	0.0851	
9 Chloromethane	52	3.998	3.984	0.014	99	3857	0.0784	0.1079	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.025	4.011	0.014	92	18409	0.0784	0.0839	
11 Acetaldehyde	44	4.138	4.134	0.004	93	45735	0.3920	0.6878	
12 Vinyl chloride	62	4.160	4.143	0.017	38	10456	0.0784	0.0886	
14 Butadiene	54	4.235	4.224	0.011	90	8236	0.0784	0.0884	
13 Butane	43	4.241	4.228	0.013	92	15481	0.0784	0.0981	
15 Bromomethane	94	4.510	4.498	0.012	98	10882	0.0784	0.0962	
16 Chloroethane	64	4.634	4.627	0.007	92	5590	0.0784	0.0946	
17 Ethanol	31	4.753	4.758	-0.005	91	21603	0.3920	0.6890	
18 Vinyl bromide	106	4.904	4.895	0.009	98	9310	0.0784	0.0846	
19 2-Methylbutane	43	4.969	4.957	0.012	90	11563	0.0784	0.0930	
21 Acrolein	56	5.147	5.139	0.008	45	8622	0.0784	0.2141	
20 Trichlorofluoromethane	101	5.152	5.144	0.008	99	23349	0.0784	0.0828	
22 Acetonitrile	40	5.206	5.199	0.007	97	3597	0.0784	0.0762	
23 Acetone	58	5.255	5.246	0.008	97	23626	0.2352	0.3168	
24 Pentane	72	5.352	5.349	0.003	78	1730	0.0784	0.0806	
25 Isopropyl alcohol	45	5.362	5.358	0.004	92	39822	0.2352	0.2565	
26 Ethyl ether	31	5.508	5.493	0.015	95	9392	0.0784	0.0880	
27 1,1-Dichloroethene	96	5.772	5.767	0.005	78	9229	0.0784	0.0830	
28 Acrylonitrile	53	5.842	5.847	-0.005	97	7073	0.0784	0.0831	
29 2-Methyl-2-propanol	59	5.896	5.885	0.011	94	17194	0.0784	0.0833	
30 1,1,2-Trichloro-1,2,2-trif	101	5.956	5.950	0.006	95	19451	0.0784	0.0815	
31 Methylene Chloride	84	6.069	6.069	0.000	96	14506	0.0784	0.1347	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.096	6.090	0.006	96	10570	0.0784	0.1104	
33 Carbon disulfide	76	6.220	6.212	0.008	98	26857	0.0784	0.0842	
34 trans-1,2-Dichloroethene	96	6.824	6.822	0.002	98	9464	0.0784	0.0817	
35 2-Methylpentane	43	6.872	6.870	0.002	93	19400	0.0784	0.0858	
36 Methyl tert-butyl ether	73	6.964	6.954	0.010	97	23679	0.0784	0.0810	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	17095	0.0784	0.0825	
38 Vinyl acetate	43	7.309	7.310	-0.001	100	22858	0.0784	0.0785	
39 2-Butanone (MEK)	72	7.724	7.715	0.009	99	5386	0.0784	0.0827	
40 Hexane	56	7.789	7.791	-0.002	89	7889	0.0784	0.0853	
141 Isopropyl ether	45	7.940	7.935	0.005	97	32485	0.0784	0.0827	
41 cis-1,2-Dichloroethene	96	8.118	8.125	-0.007	94	9825	0.0784	0.0822	
42 Ethyl acetate	43	8.317	8.316	0.001	100	20237	0.0784	0.0816	
43 Chloroform	83	8.452	8.461	-0.009	95	19733	0.0784	0.0842	
144 Tert-butyl ethyl ether	59	8.582	8.579	0.003	96	27028	0.0784	0.0803	
44 Tetrahydrofuran	42	8.840	8.833	0.007	89	10588	0.0784	0.0864	
45 1,1,1-Trichloroethane	97	9.444	9.451	-0.007	98	18089	0.0784	0.0802	
46 1,2-Dichloroethane	62	9.525	9.530	-0.005	95	12438	0.0784	0.0817	
49 n-Butanol	31	10.032	10.023	0.009	66	4238	0.0784	0.1106	
47 Benzene	78	10.038	10.041	-0.003	97	30730	0.0784	0.0888	
48 Cyclohexane	69	10.054	10.062	-0.008	95	4177	0.0784	0.0800	
50 Carbon tetrachloride	117	10.070	10.077	-0.007	97	17965	0.0784	0.0806	
51 2,3-Dimethylpentane	71	10.215	10.217	-0.002	89	6246	0.0784	0.0811	
52 Thiophene	84	10.302	10.313	-0.011	96	15392	0.0784	0.0805	
142 Tert-amyl methyl ether	73	10.571	10.568	0.003	96	23564	0.0784	0.0738	
53 Isooctane	57	10.911	10.911	0.000	99	46317	0.0784	0.0802	
54 n-Heptane	71	11.332	11.340	-0.008	92	9342	0.0784	0.0773	
55 1,2-Dichloropropane	63	11.343	11.346	-0.004	82	10703	0.0784	0.0792	
56 Trichloroethene	130	11.402	11.410	-0.008	97	12677	0.0784	0.0777	
57 Dibromomethane	93	11.461	11.467	-0.006	91	12089	0.0784	0.0869	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	99	17791	0.0784	0.0761	
59 1,4-Dioxane	88	11.677	11.668	0.009	91	4191	0.0784	0.0791	
60 Methyl methacrylate	41	11.801	11.801	0.000	90	11424	0.0784	0.0791	
61 Methylcyclohexane	83	12.345	12.347	-0.002	95	19382	0.0784	0.0777	
62 4-Methyl-2-pentanone (MIBK	43	12.831	12.831	0.000	97	59290	0.0784	0.1800	
63 cis-1,3-Dichloropropene	75	12.885	12.891	-0.006	95	14538	0.0784	0.0749	
64 trans-1,3-Dichloropropene	75	13.801	13.804	-0.003	97	13034	0.0784	0.0751	
65 Toluene	91	13.979	13.983	-0.004	94	33877	0.0784	0.0830	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	97	9824	0.0784	0.0817	
67 2-Methylthiophene	97	14.173	14.179	-0.006	97	25754	0.0784	0.0776	
68 3-Methylthiophene	97	14.454	14.457	-0.003	98	25709	0.0784	0.0784	
69 2-Hexanone	58	14.637	14.637	0.000	94	10612	0.0784	0.0738	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	97	15067	0.0784	0.0632	
70 n-Octane	85	15.052	15.053	-0.001	92	10609	0.0784	0.0783	
72 Ethylene Dibromide	107	15.425	15.432	-0.007	97	16990	0.0784	0.0760	
73 Tetrachloroethene	129	15.602	15.602	0.000	96	11573	0.0784	0.0778	
74 Chlorobenzene	112	16.913	16.918	-0.005	95	26893	0.0784	0.0808	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	94	28831	0.0784	0.0838	
76 Ethylbenzene	91	17.420	17.426	-0.006	98	42670	0.0784	0.0801	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	30122	0.0784	0.0770	
78 m-Xylene & p-Xylene	91	17.695	17.703	-0.008	99	65372	0.1568	0.1596	
79 Bromoform	173	18.326	18.330	-0.004	93	10689	0.0784	0.0480	
80 Styrene	104	18.455	18.457	-0.002	96	20472	0.0784	0.0680	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	93	20824	0.0784	0.0768	
82 o-Xylene	91	18.557	18.559	-0.002	98	33536	0.0784	0.0790	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	24445	0.0784	0.0801	
84 1,2,3-Trichloropropane	110	19.345	19.352	-0.007	96	7542	0.0784	0.0814	
85 Isopropylbenzene	105	19.587	19.589	-0.002	48	49877	0.0784	0.0827	
86 N-Propylbenzene	120	20.547	20.554	-0.007	97	12646	0.0784	0.0731	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	91	12042	0.0784	0.0769	
88 4-Ethyltoluene	105	20.838	20.844	-0.006	98	45593	0.0784	0.0764	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	93	20957	0.0784	0.0733	
90 Alpha Methyl Styrene	118	21.421	21.426	-0.005	89	13981	0.0784	0.0574	
91 n-Decane	57	21.723	21.726	-0.003	91	26126	0.0784	0.0746	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	40843	0.0784	0.0749	
93 1,2,4-Trimethylbenzene	105	21.825	21.832	-0.007	95	38895	0.0784	0.0769	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	28229	0.0784	0.0775	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	56281	0.0784	0.0766	
96 Benzyl chloride	91	22.467	22.469	-0.002	98	30280	0.0784	0.0659	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	94	29450	0.0784	0.0784	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	96	48674	0.0784	0.0736	
99 1,2,3-Trimethylbenzene	105	22.769	22.776	-0.007	97	31634	0.0784	0.0775	
100 Butylcyclohexane	83	22.974	22.980	-0.006	94	30105	0.0784	0.0772	
101 1,2-Dichlorobenzene	146	23.222	23.227	-0.005	95	27869	0.0784	0.0778	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	37470	0.0784	0.0757	
103 Indene	116	23.529	23.527	0.002	93	26737	0.0784	0.0744	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	47268	0.0784	0.0773	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	35416	0.0784	0.0728	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	93	8766	0.0784	0.0555	
106 Undecane	57	24.602	24.605	-0.003	95	29982	0.0784	0.0743	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	97	42547	0.0784	0.0761	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	26590	0.0784	0.0784	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	97	37618	0.0784	0.0808	
110 Dodecane	57	27.142	27.145	-0.003	96	28952	0.0784	0.0767	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	26566	0.0784	0.0812	
112 Naphthalene	128	27.428	27.426	0.002	99	74592	0.0784	0.0974	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	54188	0.0784	0.1210	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	91	17221	0.0784	0.0692	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	94	28016	0.0784	0.0895	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	99	58902	0.2450	0.5730	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	56925	0.2450	0.7018	
A 118 C6 Range	1	7.802	(7.740-7.837)		0	66595	0.0784	0.0891	
A 119 Toluene Range	1	13.964	(13.920-13.999)		0	79027	0.0784	0.0785	
A 120 C8 Range	1	15.052	(15.004-15.101)		0	144129	0.0784	0.0693	
S 124 Xylenes, Total	100				0		0.2352	0.2386	
S 145 1,2-Dichloroethene, Total	1				0		0.1568	0.1640	

Reagents:

CDN2C20X0.2_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

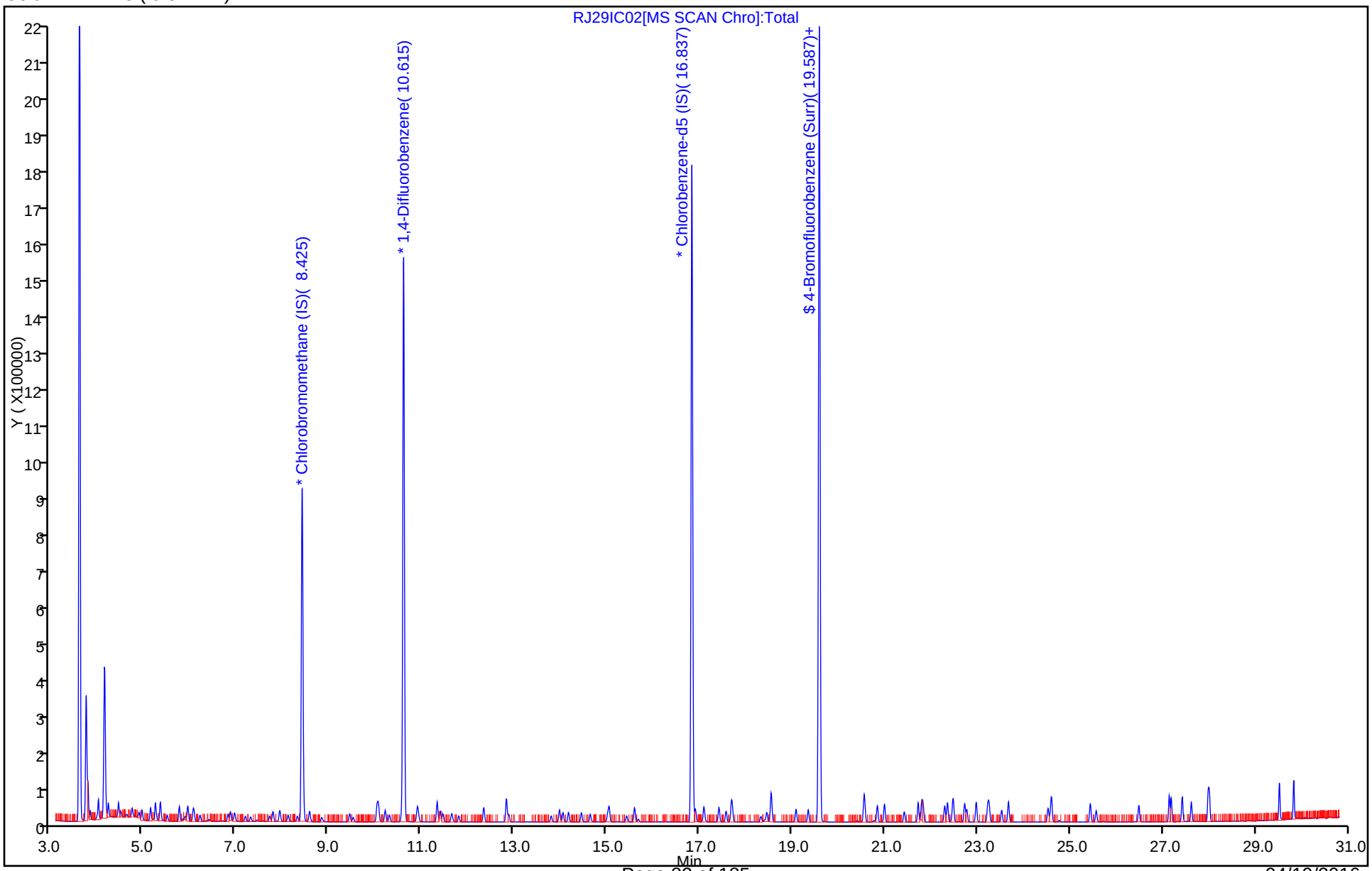
Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D

Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

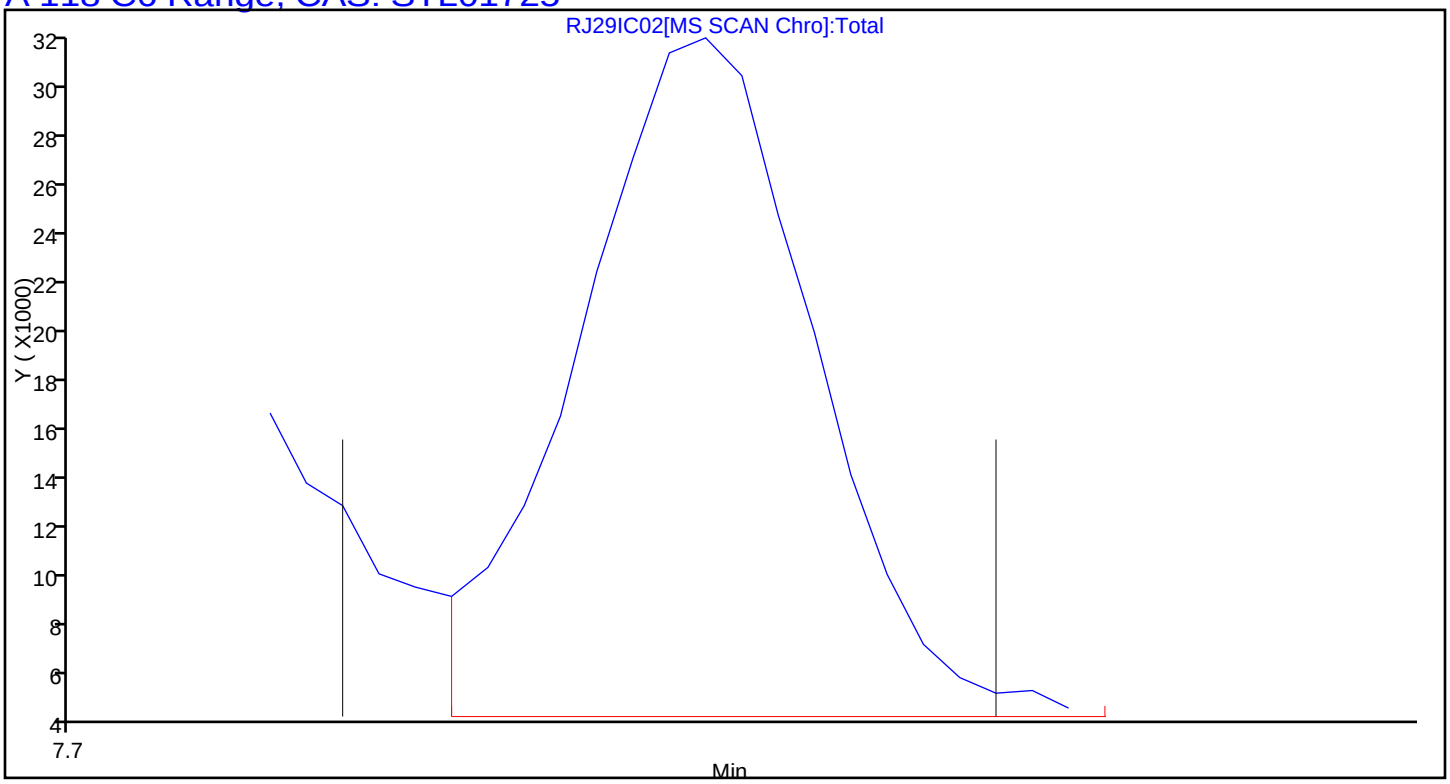


Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D				
Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

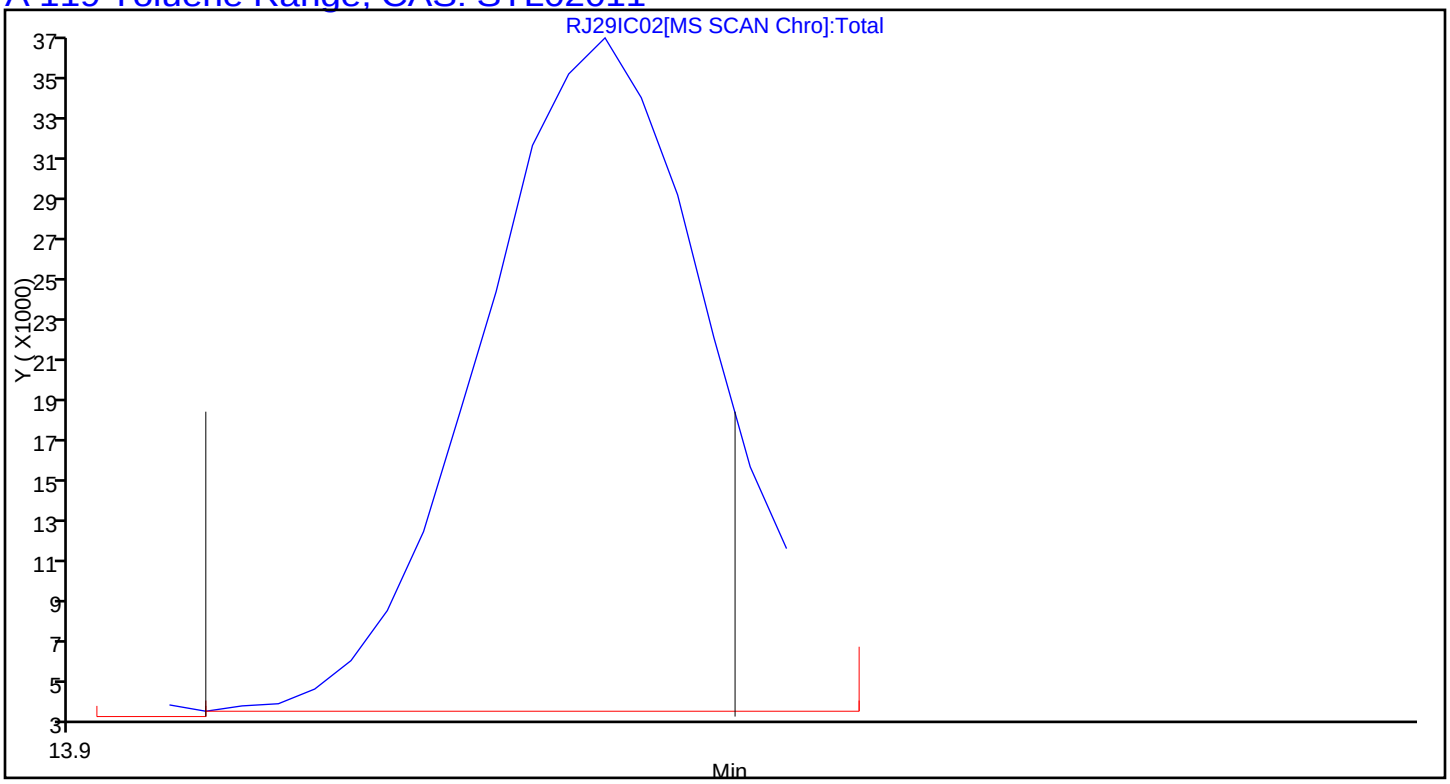


Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D				
Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

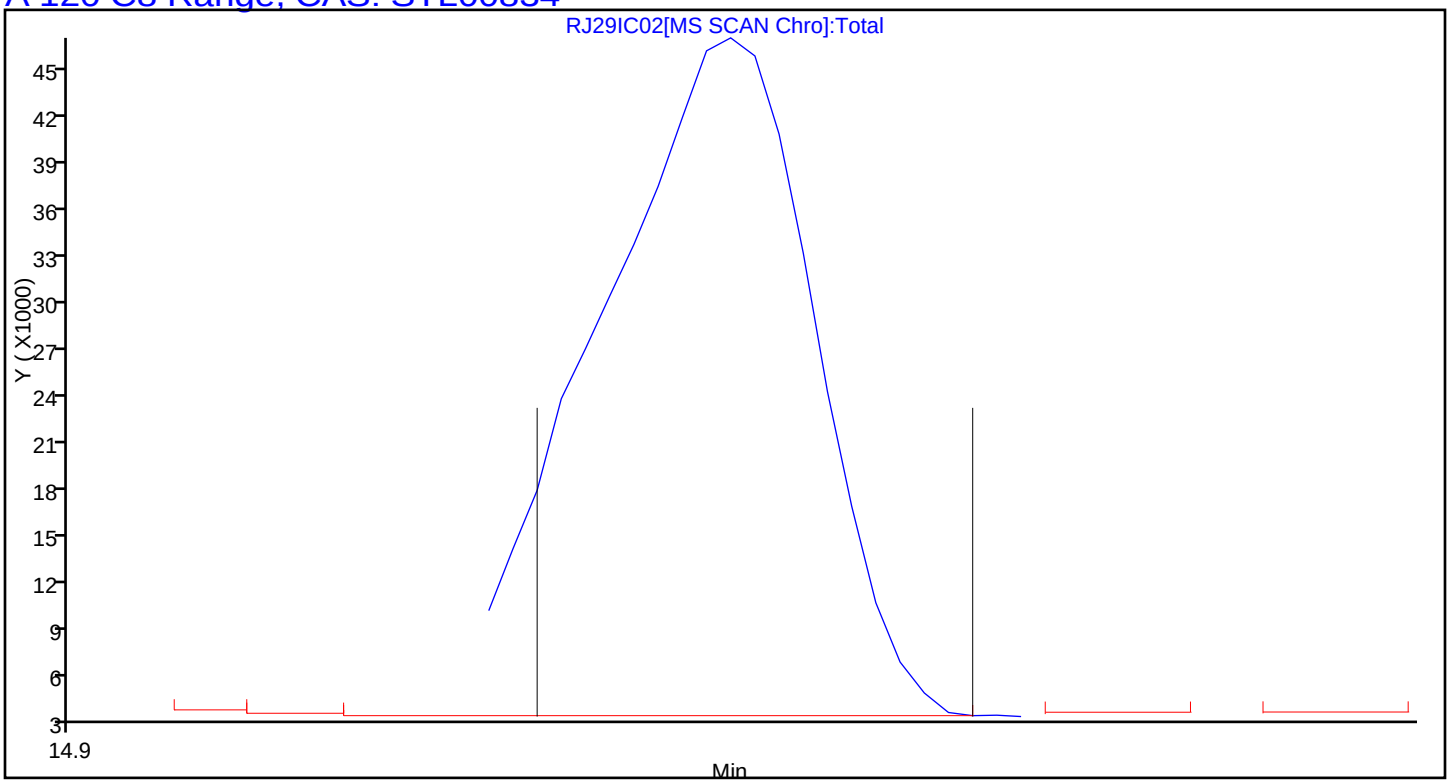


Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D				
Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Oct-2015 15:58:30 ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-004
Misc. Info.: 031530
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:42 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:37:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.431	-0.006	93	315354	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.615	10.619	-0.004	94	1626800	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1507632	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.588	19.590	-0.002	90	1095591	4.00	3.93	
6 Chlorodifluoromethane	67	3.793	3.777	0.016	96	4698	0.1600	0.1718	
7 Propene	41	3.793	3.780	0.013	86	26500	0.1600	0.2433	
8 Dichlorodifluoromethane	85	3.842	3.831	0.011	99	47268	0.1600	0.1961	
9 Chloromethane	52	3.993	3.984	0.009	99	6945	0.1600	0.1969	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.020	4.011	0.009	93	35592	0.1600	0.1645	
11 Acetaldehyde	44	4.138	4.134	0.004	90	81685	0.8002	1.25	M
12 Vinyl chloride	62	4.155	4.143	0.012	58	20116	0.1600	0.1727	
14 Butadiene	54	4.230	4.224	0.006	89	16494	0.1600	0.1794	
13 Butane	43	4.235	4.228	0.007	92	29182	0.1600	0.1875	
15 Bromomethane	94	4.505	4.498	0.007	99	19142	0.1600	0.1715	
16 Chloroethane	64	4.629	4.627	0.002	97	10111	0.1600	0.1734	
17 Ethanol	31	4.748	4.758	-0.010	91	33014	0.8002	1.07	
18 Vinyl bromide	106	4.899	4.895	0.004	99	17702	0.1600	0.1631	
19 2-Methylbutane	43	4.963	4.957	0.006	92	21830	0.1600	0.1781	
21 Acrolein	56	5.141	5.139	0.002	32	5744	0.1600	0.1446	
20 Trichlorofluoromethane	101	5.147	5.144	0.003	99	45955	0.1600	0.1652	
22 Acetonitrile	40	5.201	5.199	0.002	99	6411	0.1600	0.1377	
23 Acetone	58	5.249	5.246	0.003	97	59524	0.4802	0.8092	
24 Pentane	72	5.357	5.349	0.008	78	3474	0.1600	0.1641	
25 Isopropyl alcohol	45	5.352	5.358	-0.006	82	78554	0.4802	0.5130	
26 Ethyl ether	31	5.497	5.493	0.004	96	18257	0.1600	0.1735	
27 1,1-Dichloroethene	96	5.772	5.767	0.005	98	17637	0.1600	0.1607	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	13712	0.1600	0.1634	
29 2-Methyl-2-propanol	59	5.886	5.885	0.001	94	32878	0.1600	0.1615	
30 1,1,2-Trichloro-1,2,2-trif	101	5.956	5.950	0.006	95	38762	0.1600	0.1645	
31 Methylene Chloride	84	6.063	6.069	-0.006	97	22236	0.1600	0.2093	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	96	16556	0.1600	0.1753	
33 Carbon disulfide	76	6.214	6.212	0.002	98	51347	0.1600	0.1632	
34 trans-1,2-Dichloroethene	96	6.818	6.822	-0.004	99	18476	0.1600	0.1617	
35 2-Methylpentane	43	6.872	6.870	0.002	95	37939	0.1600	0.1702	
36 Methyl tert-butyl ether	73	6.959	6.954	0.005	97	46070	0.1600	0.1597	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	33808	0.1600	0.1654	
38 Vinyl acetate	43	7.309	7.310	-0.001	100	44420	0.1600	0.1547	
39 2-Butanone (MEK)	72	7.714	7.715	-0.001	99	12799	0.1600	0.1993	
40 Hexane	56	7.794	7.791	0.003	87	15020	0.1600	0.1646	
141 Isopropyl ether	45	7.935	7.935	0.000	98	63939	0.1600	0.1651	
41 cis-1,2-Dichloroethene	96	8.123	8.125	-0.002	93	19102	0.1600	0.1621	
42 Ethyl acetate	43	8.317	8.316	0.001	99	41117	0.1600	0.1681	
43 Chloroform	83	8.452	8.461	-0.009	94	37845	0.1600	0.1637	
144 Tert-butyl ethyl ether	59	8.576	8.579	-0.003	95	53042	0.1600	0.1598	
44 Tetrahydrofuran	42	8.841	8.833	0.008	94	20418	0.1600	0.1689	
45 1,1,1-Trichloroethane	97	9.445	9.451	-0.007	96	35625	0.1600	0.1601	
46 1,2-Dichloroethane	62	9.520	9.530	-0.010	96	24866	0.1600	0.1636	
49 n-Butanol	31	10.027	10.023	0.004	63	6187	0.1600	0.1619	
47 Benzene	78	10.038	10.041	-0.003	97	56249	0.1600	0.1629	
48 Cyclohexane	69	10.059	10.062	-0.003	97	8115	0.1600	0.1557	
50 Carbon tetrachloride	117	10.070	10.077	-0.007	96	30532	0.1600	0.1373	
51 2,3-Dimethylpentane	71	10.216	10.217	-0.001	91	12067	0.1600	0.1570	
52 Thiophene	84	10.307	10.313	-0.006	95	30129	0.1600	0.1579	
142 Tert-amyl methyl ether	73	10.572	10.568	0.004	97	51899	0.1600	0.1630	
53 Isooctane	57	10.911	10.911	0.000	98	91291	0.1600	0.1586	
54 n-Heptane	71	11.337	11.340	-0.003	89	18503	0.1600	0.1535	
55 1,2-Dichloropropane	63	11.343	11.346	-0.003	91	21488	0.1600	0.1593	
56 Trichloroethene	130	11.402	11.410	-0.008	95	25186	0.1600	0.1548	
57 Dibromomethane	93	11.461	11.467	-0.006	93	22054	0.1600	0.1589	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	99	35529	0.1600	0.1524	
59 1,4-Dioxane	88	11.672	11.668	0.004	90	7938	0.1600	0.1503	
60 Methyl methacrylate	41	11.801	11.801	0.000	94	21910	0.1600	0.1520	
61 Methylcyclohexane	83	12.346	12.347	-0.001	95	38968	0.1600	0.1567	
62 4-Methyl-2-pentanone (MIBK	43	12.831	12.831	0.000	97	79853	0.1600	0.2430	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	93	28948	0.1600	0.1496	
64 trans-1,3-Dichloropropene	75	13.802	13.804	-0.002	99	25591	0.1600	0.1471	
65 Toluene	91	13.979	13.983	-0.004	94	64875	0.1600	0.1586	
66 1,1,2-Trichloroethane	83	14.060	14.060	0.000	98	19112	0.1600	0.1585	
67 2-Methylthiophene	97	14.174	14.179	-0.005	97	51768	0.1600	0.1556	
68 3-Methylthiophene	97	14.454	14.457	-0.003	99	50253	0.1600	0.1529	
69 2-Hexanone	58	14.637	14.637	0.000	94	21531	0.1600	0.1494	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	31734	0.1600	0.1328	
70 n-Octane	85	15.047	15.053	-0.006	93	20268	0.1600	0.1492	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	97	33474	0.1600	0.1493	
73 Tetrachloroethene	129	15.597	15.602	-0.005	96	23230	0.1600	0.1557	
74 Chlorobenzene	112	16.913	16.918	-0.005	94	52338	0.1600	0.1567	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	96	56891	0.1600	0.1648	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	82766	0.1600	0.1550	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	98	58991	0.1600	0.1503	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	98	125298	0.3201	0.3050	
79 Bromoform	173	18.326	18.330	-0.004	94	24614	0.1600	0.1103	
80 Styrene	104	18.455	18.457	-0.002	99	39965	0.1600	0.1324	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	91	42675	0.1600	0.1569	
82 o-Xylene	91	18.558	18.559	-0.001	100	65272	0.1600	0.1533	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	45618	0.1600	0.1490	
84 1,2,3-Trichloropropane	110	19.356	19.352	0.004	97	14247	0.1600	0.1532	
85 Isopropylbenzene	105	19.588	19.589	-0.001	51	95540	0.1600	0.1579	
86 N-Propylbenzene	120	20.553	20.554	-0.001	99	25153	0.1600	0.1450	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	92	23541	0.1600	0.1500	
88 4-Ethyltoluene	105	20.839	20.844	-0.005	98	87866	0.1600	0.1469	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	94	41951	0.1600	0.1463	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	88	28301	0.1600	0.1158	
91 n-Decane	57	21.723	21.726	-0.003	90	51676	0.1600	0.1471	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	94	80357	0.1600	0.1470	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	97	74888	0.1600	0.1476	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	53198	0.1600	0.1457	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	111330	0.1600	0.1511	
96 Benzyl chloride	91	22.467	22.469	-0.002	99	62456	0.1600	0.1355	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	94	54414	0.1600	0.1444	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	96	95385	0.1600	0.1438	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	97	61626	0.1600	0.1506	
100 Butylcyclohexane	83	22.979	22.980	-0.001	93	59075	0.1600	0.1510	
101 1,2-Dichlorobenzene	146	23.222	23.227	-0.005	96	52152	0.1600	0.1452	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	72864	0.1600	0.1468	
103 Indene	116	23.524	23.527	-0.003	92	49715	0.1600	0.1379	
104 n-Butylbenzene	91	23.670	23.674	-0.004	99	92774	0.1600	0.1513	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	98	68855	0.1600	0.1412	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	94	17972	0.1600	0.1134	
106 Undecane	57	24.602	24.605	-0.003	96	60160	0.1600	0.1488	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	98	80726	0.1600	0.1440	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	95	49169	0.1600	0.1445	
109 1,2,3,4-Tetramethylbenzene	119	26.484	26.489	-0.005	97	67546	0.1600	0.1447	
110 Dodecane	57	27.148	27.145	0.003	96	55502	0.1600	0.1465	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	43373	0.1600	0.1323	
112 Naphthalene	128	27.423	27.426	-0.003	99	104119	0.1600	0.1356	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	66434	0.1600	0.1479	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	92	33353	0.1600	0.1336	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	95	40473	0.1600	0.1289	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	41161	0.5001	0.3992	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	34797	0.5001	0.4277	
A 118 C6 Range	1	7.805	(7.741-7.848)		0	128569	0.1600	0.1724	
A 119 Toluene Range	1	13.964	(13.920-14.020)		0	156449	0.1600	0.1559	
A 120 C8 Range	1	15.053	(15.004-15.101)		0	311043	0.1600	0.1499	
S 124 Xylenes, Total	100				0		0.4801	0.4583	
S 145 1,2-Dichloroethene, Total	1				0		0.3201	0.3238	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

CDN2C20X1.0_00001	Amount Added:	80.00	Units: mL	
MAissur1_00002	Amount Added:	40.00	Units: mL	Run Reagent

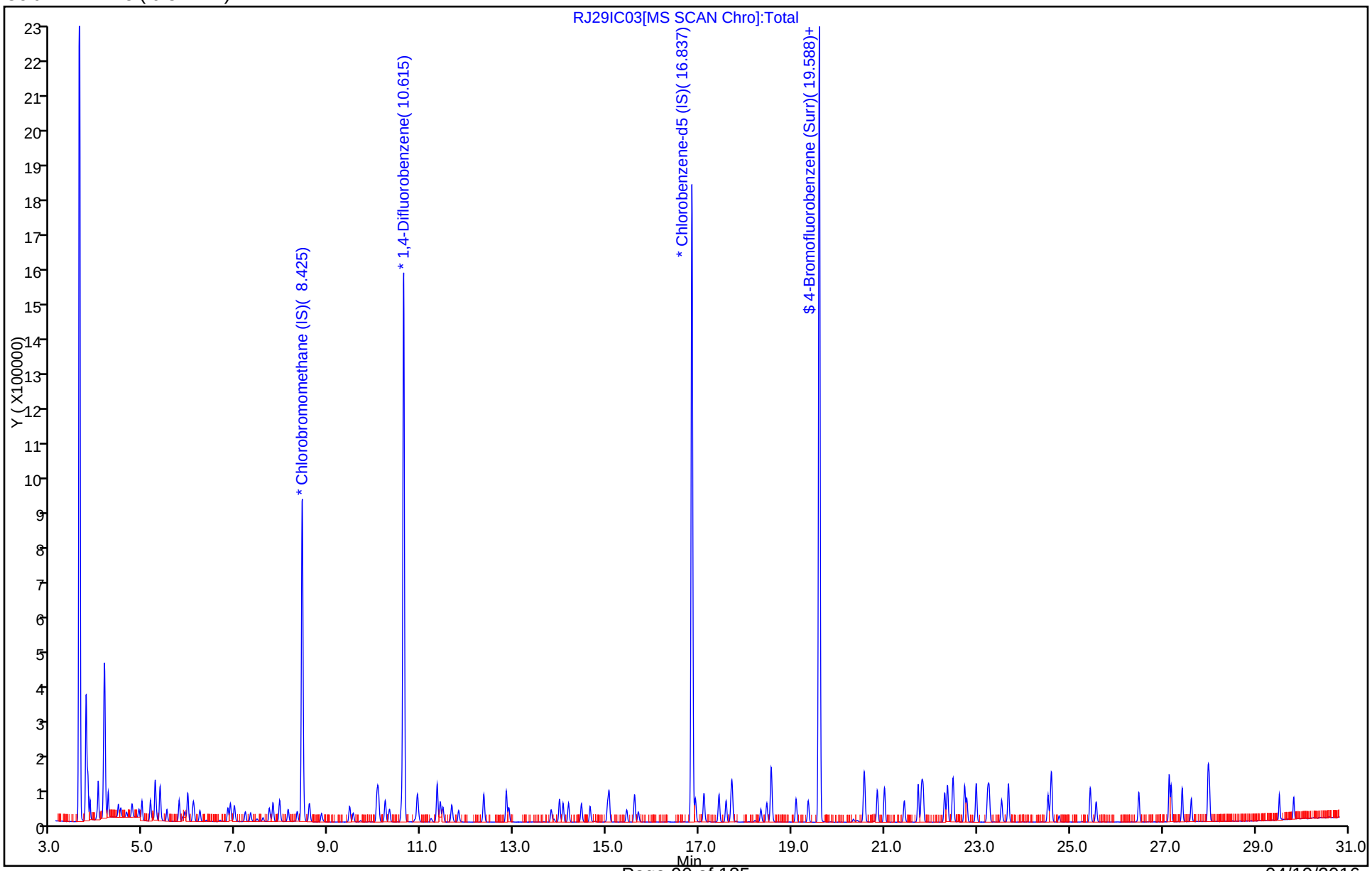
Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D

Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

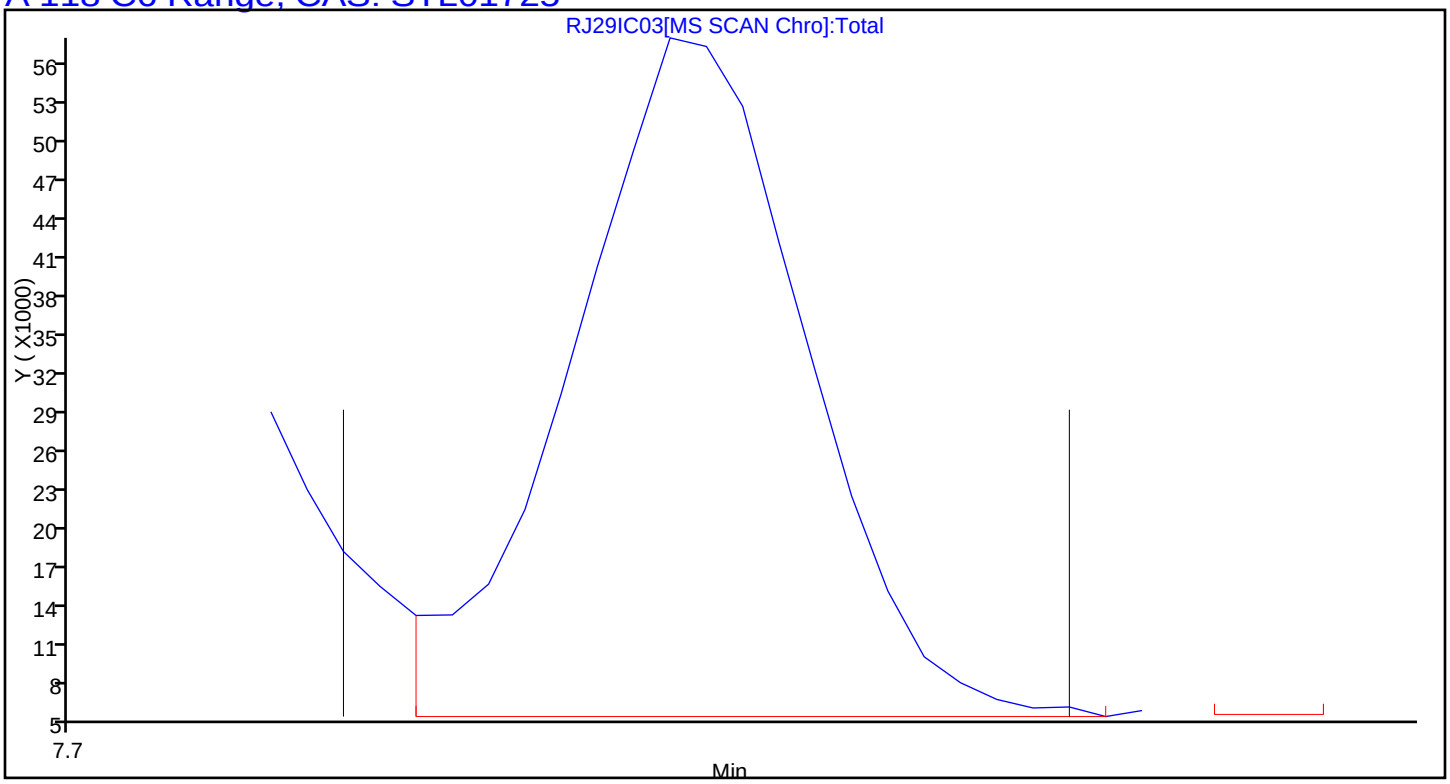


Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

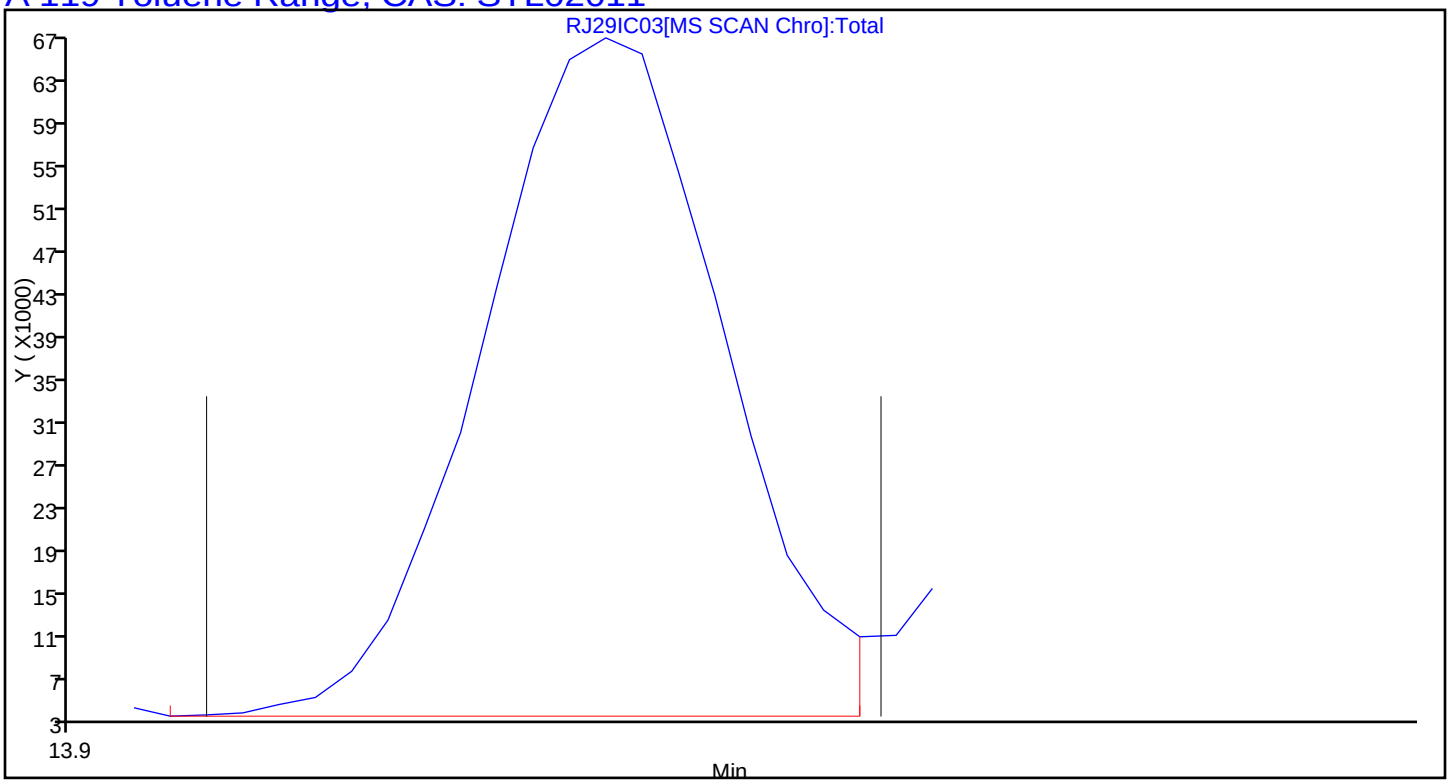


Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

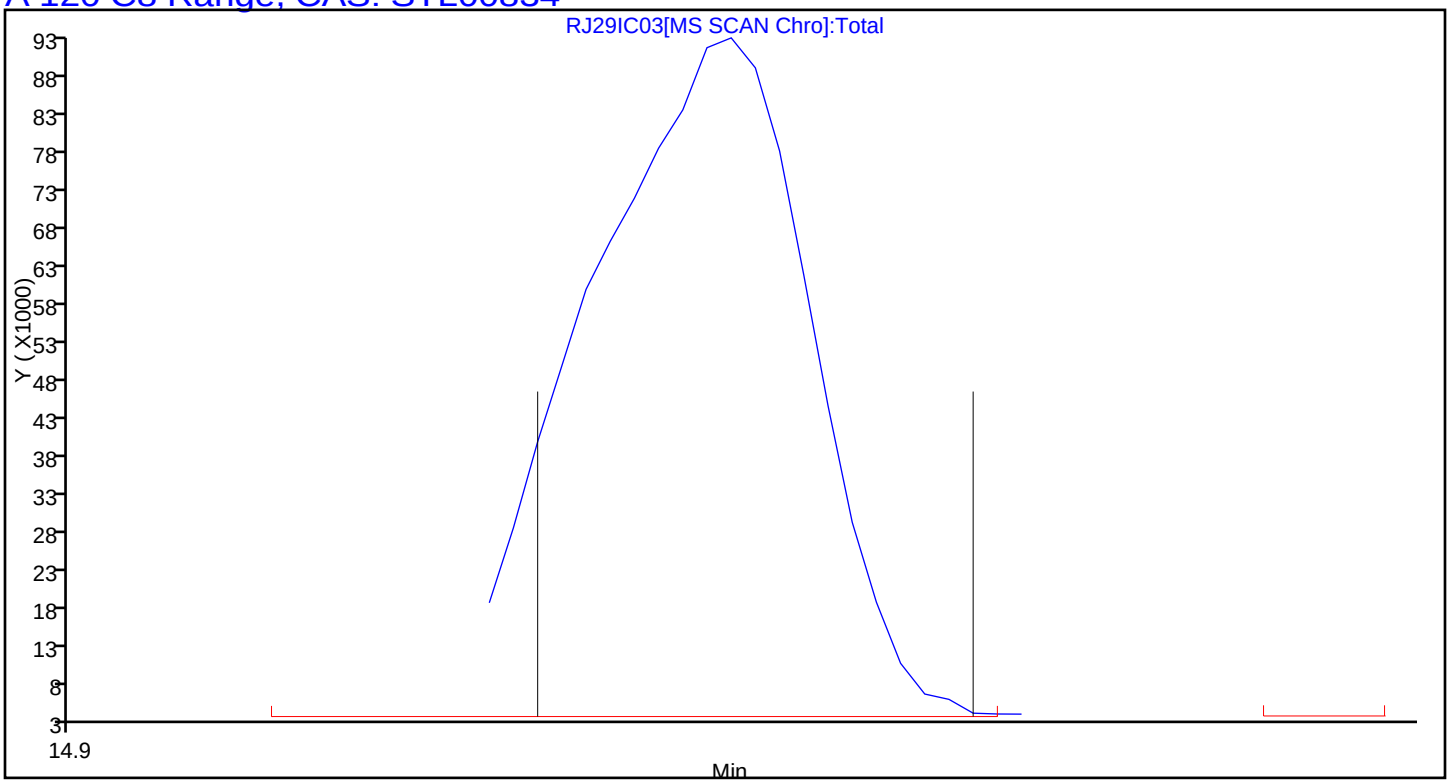


Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

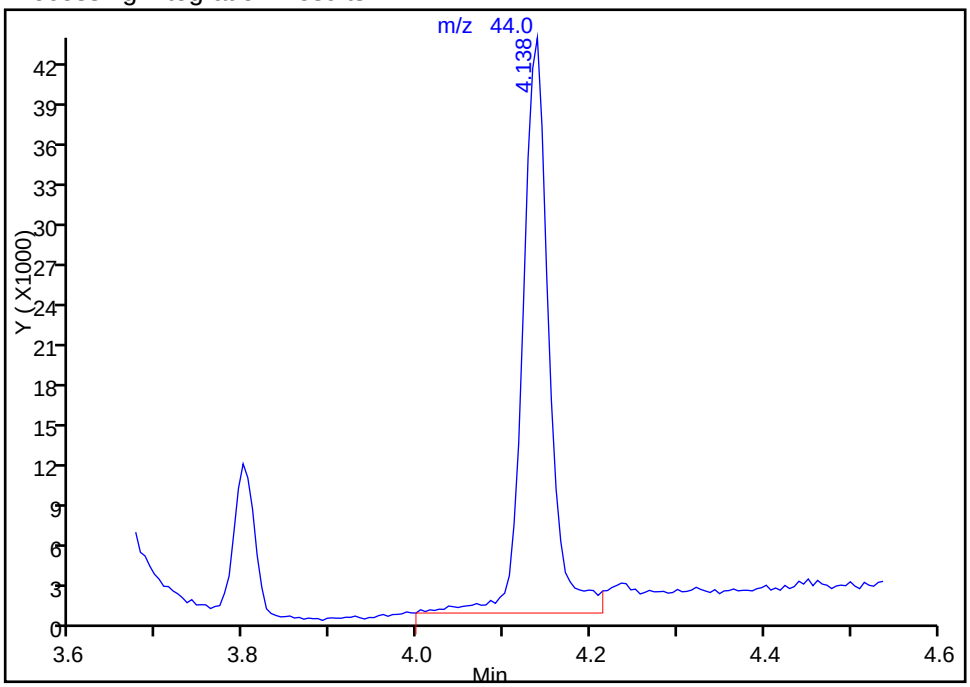
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D
Injection Date: 29-Oct-2015 15:58:30 Instrument ID: MR
Lims ID: IC L3
Client ID:
Operator ID: ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

11 Acetaldehyde, CAS: 75-07-0

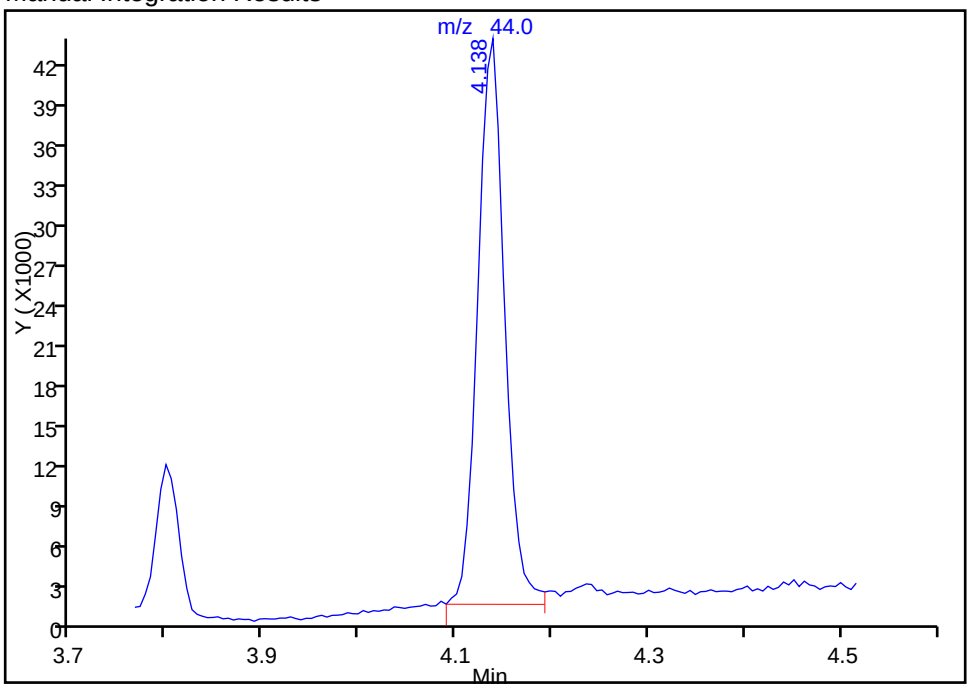
Processing Integration Results

RT: 4.14
Area: 90627
Amount: 1.206423
Amount Units: ppb v/v



Manual Integration Results

RT: 4.14
Area: 81685
Amount: 1.245442
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 04-Nov-2015 12:51:45
Audit Action: Manually Integrated
Audit Reason: Baseline

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Oct-2015 16:50:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-005
Misc. Info.: 031530
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:54 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:37:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.414	8.431	-0.017	96	321950	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.609	10.619	-0.010	95	1636367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1528749	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.587	19.590	-0.003	95	1123330	4.00	3.98	
6 Chlorodifluoromethane	67	3.766	3.777	-0.011	97	11500	0.4001	0.4120	
7 Propene	41	3.772	3.780	-0.008	79	50053	0.4001	0.4502	
8 Dichlorodifluoromethane	85	3.820	3.831	-0.011	99	102193	0.4001	0.4153	
9 Chloromethane	52	3.971	3.984	-0.013	99	15934	0.4001	0.4425	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.998	4.011	-0.013	93	88226	0.4001	0.3994	
11 Acetaldehyde	44	4.122	4.134	-0.012	96	187996	2.00	2.81	
12 Vinyl chloride	62	4.128	4.143	-0.015	99	49431	0.4001	0.4157	
14 Butadiene	54	4.214	4.224	-0.010	98	39201	0.4001	0.4177	
13 Butane	43	4.214	4.228	-0.014	92	71340	0.4001	0.4491	
15 Bromomethane	94	4.483	4.498	-0.015	99	47427	0.4001	0.4163	
16 Chloroethane	64	4.613	4.627	-0.014	95	24713	0.4001	0.4151	
17 Ethanol	31	4.742	4.758	-0.016	91	77917	2.00	2.47	
18 Vinyl bromide	106	4.877	4.895	-0.018	98	44562	0.4001	0.4021	
19 2-Methylbutane	43	4.947	4.957	-0.010	91	52575	0.4001	0.4201	
21 Acrolein	56	5.120	5.139	-0.019	92	13639	0.4001	0.3363	
20 Trichlorofluoromethane	101	5.131	5.144	-0.013	99	113117	0.4001	0.3982	
22 Acetonitrile	40	5.179	5.199	-0.020	99	22087	0.4001	0.4647	
23 Acetone	58	5.233	5.246	-0.013	97	145591	1.20	1.94	
24 Pentane	72	5.335	5.349	-0.014	95	8813	0.4001	0.4076	
25 Isopropyl alcohol	45	5.341	5.358	-0.017	93	197014	1.20	1.26	
26 Ethyl ether	31	5.481	5.493	-0.012	96	46144	0.4001	0.4295	
27 1,1-Dichloroethene	96	5.751	5.767	-0.016	99	43929	0.4001	0.3921	
28 Acrylonitrile	53	5.832	5.847	-0.015	96	33547	0.4001	0.3915	
29 2-Methyl-2-propanol	59	5.869	5.885	-0.016	96	82234	0.4001	0.3956	
30 1,1,2-Trichloro-1,2,2-trif	101	5.939	5.950	-0.011	96	95517	0.4001	0.3972	
31 Methylene Chloride	84	6.053	6.069	-0.016	96	46866	0.4001	0.4321	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.069	6.090	-0.021	96	39027	0.4001	0.4048	
33 Carbon disulfide	76	6.193	6.212	-0.019	98	128411	0.4001	0.3997	
34 trans-1,2-Dichloroethene	96	6.808	6.822	-0.014	99	45624	0.4001	0.3912	
35 2-Methylpentane	43	6.861	6.870	-0.009	95	93428	0.4001	0.4105	
36 Methyl tert-butyl ether	73	6.948	6.954	-0.006	97	115741	0.4001	0.3931	
37 1,1-Dichloroethane	63	7.185	7.200	-0.015	100	83597	0.4001	0.4007	
38 Vinyl acetate	43	7.298	7.310	-0.012	100	112614	0.4001	0.3842	
39 2-Butanone (MEK)	72	7.703	7.715	-0.012	99	32601	0.4001	0.4973	
40 Hexane	56	7.784	7.791	-0.007	88	37151	0.4001	0.3989	
141 Isopropyl ether	45	7.924	7.935	-0.011	98	160636	0.4001	0.4062	
41 cis-1,2-Dichloroethene	96	8.113	8.125	-0.012	94	47664	0.4001	0.3962	
42 Ethyl acetate	43	8.307	8.316	-0.009	99	99634	0.4001	0.3990	
43 Chloroform	83	8.447	8.461	-0.014	96	94906	0.4001	0.4021	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	95	133681	0.4001	0.3946	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	94	50309	0.4001	0.4076	
45 1,1,1-Trichloroethane	97	9.444	9.451	-0.007	96	90247	0.4001	0.3972	
46 1,2-Dichloroethane	62	9.520	9.530	-0.010	97	61692	0.4001	0.4036	
49 n-Butanol	31	10.021	10.023	-0.002	60	16858	0.4001	0.4385	
47 Benzene	78	10.027	10.041	-0.014	97	139431	0.4001	0.4015	
48 Cyclohexane	69	10.054	10.062	-0.008	96	21134	0.4001	0.4032	
50 Carbon tetrachloride	117	10.070	10.077	-0.007	98	78407	0.4001	0.3504	
51 2,3-Dimethylpentane	71	10.210	10.217	-0.007	90	30174	0.4001	0.3903	
52 Thiophene	84	10.302	10.313	-0.011	96	75936	0.4001	0.3957	
142 Tert-amyl methyl ether	73	10.561	10.568	-0.007	97	137313	0.4001	0.4287	
53 Isooctane	57	10.906	10.911	-0.005	99	228529	0.4001	0.3946	
54 n-Heptane	71	11.332	11.340	-0.008	91	47947	0.4001	0.3954	
55 1,2-Dichloropropane	63	11.337	11.346	-0.009	91	54043	0.4001	0.3984	
56 Trichloroethene	130	11.402	11.410	-0.008	98	64777	0.4001	0.3957	
57 Dibromomethane	93	11.461	11.467	-0.006	95	54275	0.4001	0.3888	
58 Dichlorobromomethane	83	11.645	11.655	-0.011	100	90502	0.4001	0.3858	
59 1,4-Dioxane	88	11.661	11.668	-0.007	89	20281	0.4001	0.3817	
60 Methyl methacrylate	41	11.796	11.801	-0.005	92	56861	0.4001	0.3922	
61 Methylcyclohexane	83	12.340	12.347	-0.007	95	98524	0.4001	0.3938	
62 4-Methyl-2-pentanone (MIBK	43	12.825	12.831	-0.006	97	150500	0.4001	0.4554	
63 cis-1,3-Dichloropropene	75	12.885	12.891	-0.006	93	75486	0.4001	0.3878	
64 trans-1,3-Dichloropropene	75	13.796	13.804	-0.008	98	67814	0.4001	0.3843	
65 Toluene	91	13.979	13.983	-0.004	94	162397	0.4001	0.3914	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	98	49013	0.4001	0.4008	
67 2-Methylthiophene	97	14.174	14.179	-0.005	98	131497	0.4001	0.3897	
68 3-Methylthiophene	97	14.449	14.457	-0.008	99	129795	0.4001	0.3894	
69 2-Hexanone	58	14.632	14.637	-0.005	93	57979	0.4001	0.3967	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	87069	0.4001	0.3593	
70 n-Octane	85	15.052	15.053	-0.001	92	54155	0.4001	0.3932	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	98	87383	0.4001	0.3842	
73 Tetrachloroethene	129	15.597	15.602	-0.005	97	58771	0.4001	0.3884	
74 Chlorobenzene	112	16.913	16.918	-0.005	95	131595	0.4001	0.3886	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	95	142689	0.4001	0.4077	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	209893	0.4001	0.3875	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	98	153800	0.4001	0.3865	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	325857	0.8002	0.7823	
79 Bromoform	173	18.326	18.330	-0.004	95	68888	0.4001	0.3045	
80 Styrene	104	18.455	18.457	-0.002	98	113039	0.4001	0.3692	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.541	18.547	-0.006	91	112566	0.4001	0.4081	
82 o-Xylene	91	18.558	18.559	-0.001	99	171088	0.4001	0.3962	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	118678	0.4001	0.3824	
84 1,2,3-Trichloropropane	110	19.350	19.352	-0.002	98	36471	0.4001	0.3869	
85 Isopropylbenzene	105	19.587	19.589	-0.002	67	239652	0.4001	0.3907	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	66901	0.4001	0.3805	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	92	61434	0.4001	0.3859	
88 4-Ethyltoluene	105	20.844	20.844	0.000	98	234195	0.4001	0.3861	
89 1,3,5-Trimethylbenzene	120	21.000	21.000	0.000	93	111250	0.4001	0.3825	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	89	85565	0.4001	0.3453	
91 n-Decane	57	21.723	21.726	-0.003	90	138933	0.4001	0.3901	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	213437	0.4001	0.3850	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	96	201199	0.4001	0.3910	
94 1,3-Dichlorobenzene	146	22.294	22.300	-0.006	98	140434	0.4001	0.3792	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	293675	0.4001	0.3930	
96 Benzyl chloride	91	22.467	22.469	-0.002	98	172934	0.4001	0.3700	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	95	143679	0.4001	0.3760	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	97	258646	0.4001	0.3844	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	162536	0.4001	0.3917	
100 Butylcyclohexane	83	22.979	22.980	-0.001	94	158981	0.4001	0.4008	
101 1,2-Dichlorobenzene	146	23.222	23.227	-0.005	96	139420	0.4001	0.3829	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	195828	0.4001	0.3890	
103 Indene	116	23.524	23.527	-0.003	91	142914	0.4001	0.3910	
104 n-Butylbenzene	91	23.670	23.674	-0.004	98	251957	0.4001	0.4053	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	98	195517	0.4001	0.3954	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	95	54604	0.4001	0.3398	
106 Undecane	57	24.602	24.605	-0.003	96	165440	0.4001	0.4034	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	97	226206	0.4001	0.3980	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	138635	0.4001	0.4017	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	97	191192	0.4001	0.4039	
110 Dodecane	57	27.142	27.145	-0.003	97	160737	0.4001	0.4185	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	126661	0.4001	0.3809	
112 Naphthalene	128	27.423	27.426	-0.003	99	304848	0.4001	0.3915	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	199335	0.4001	0.4376	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	94	95459	0.4001	0.3770	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	95	118695	0.4001	0.3728	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	136777	1.25	1.31	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	100	112376	1.25	1.36	
A 118 C6 Range	1	7.797	(7.724-7.843)		0	317170	0.4001	0.4229	
A 119 Toluene Range	1	13.970	(13.920-14.010)		0	393660	0.4001	0.3899	
A 120 C8 Range	1	15.052	(14.993-15.112)		0	820463	0.4001	0.3932	
S 124 Xylenes, Total	100				0		1.20	1.18	
S 145 1,2-Dichloroethene, Total	1				0		0.8002	0.7873	

Reagents:

CDN2C20X1.0_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

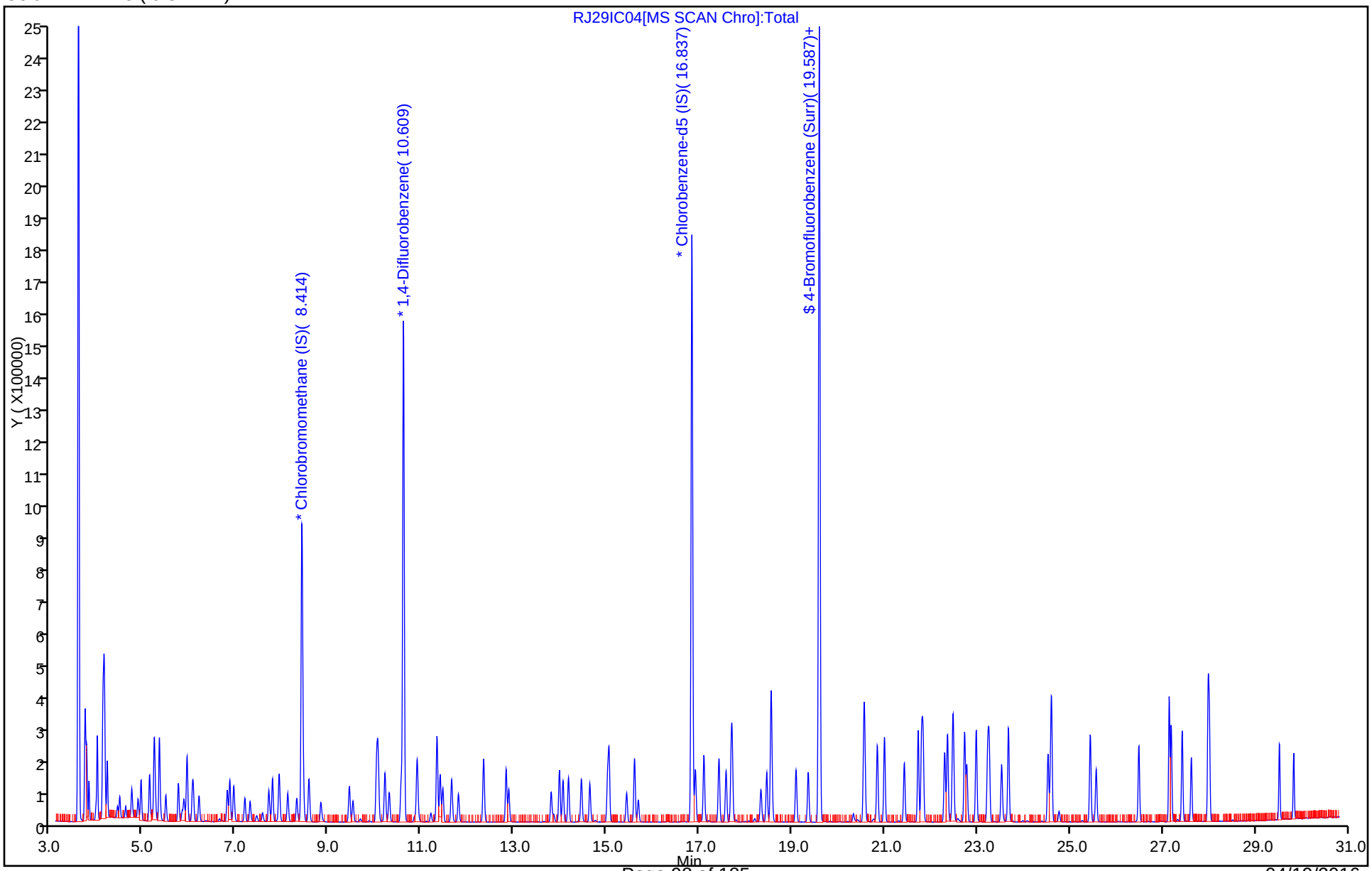
Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D

Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

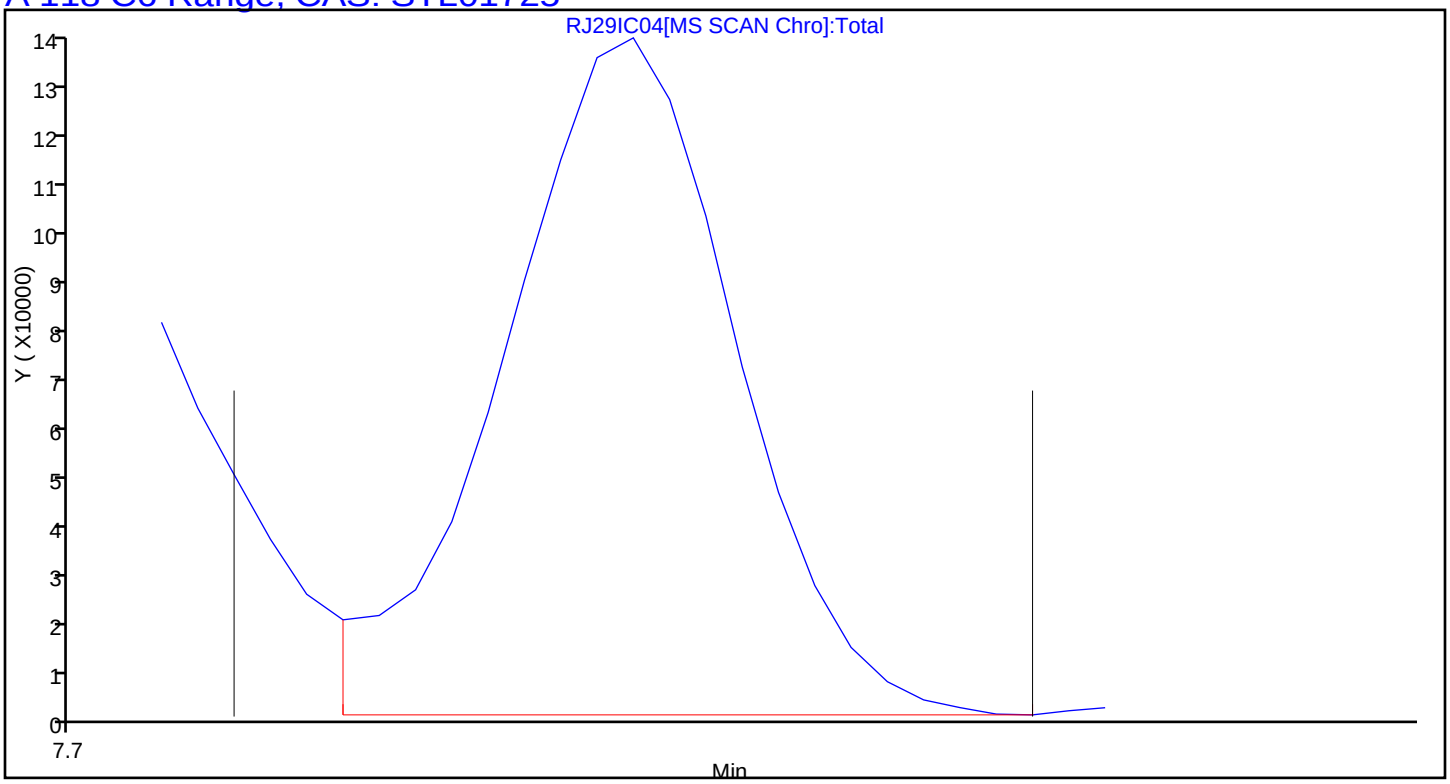


Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D				
Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

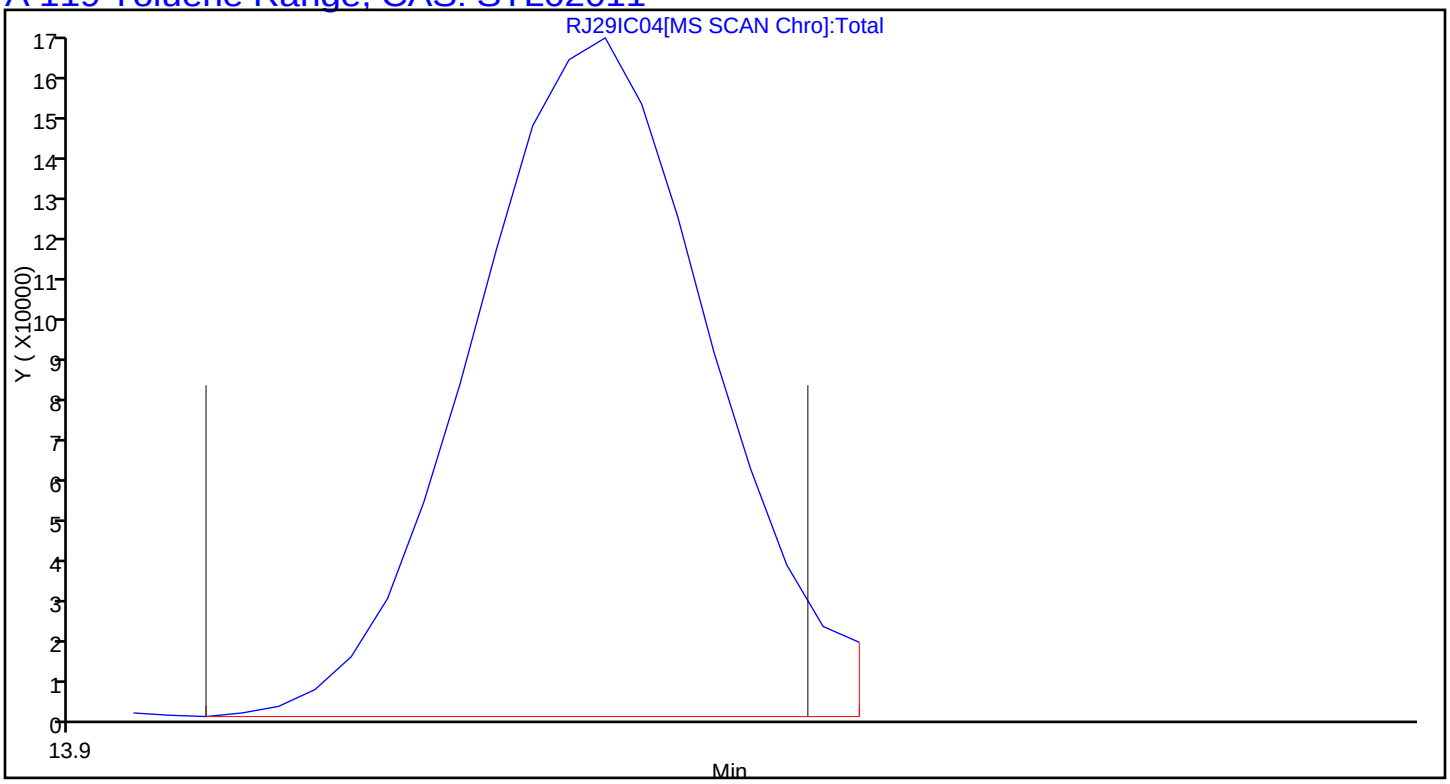


Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D				
Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

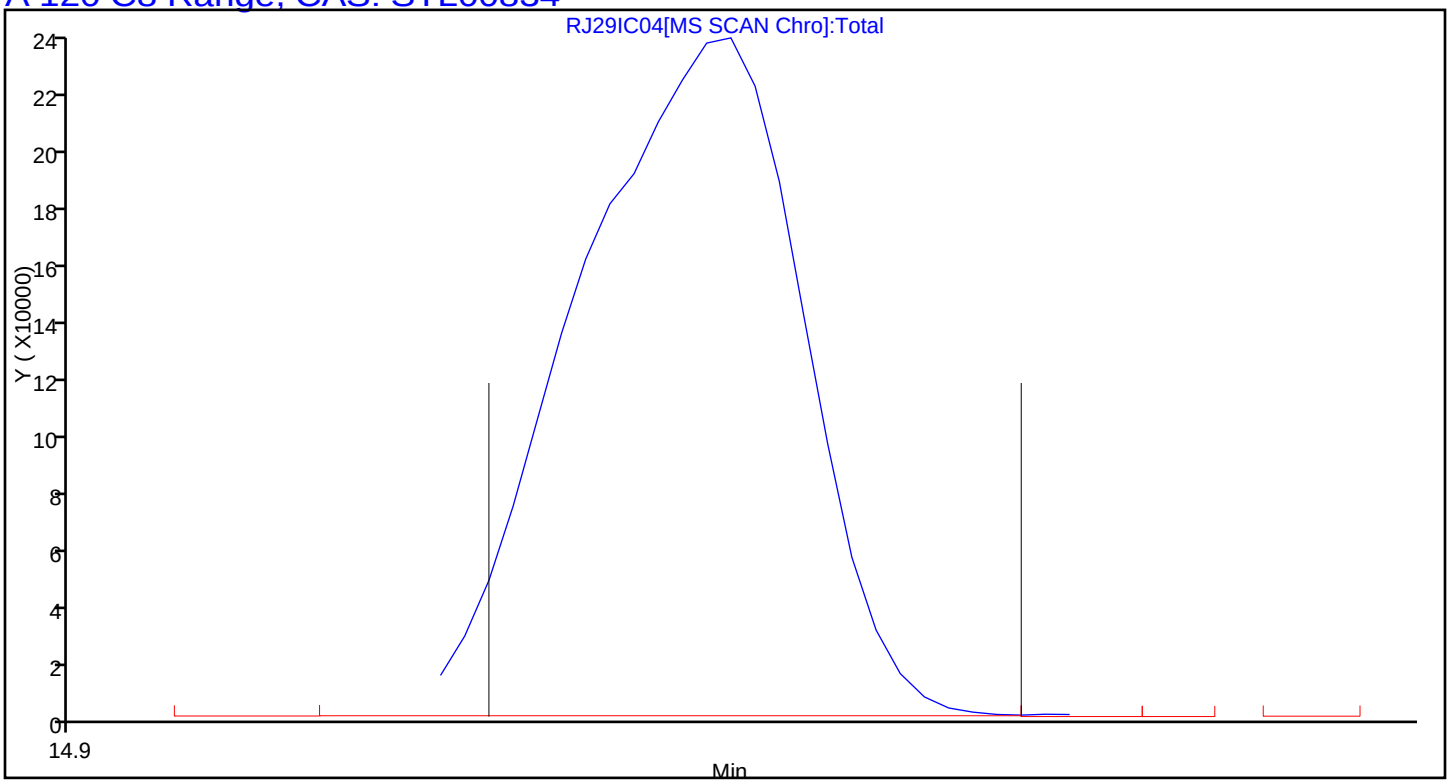


Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D				
Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Oct-2015 17:41:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-006
Misc. Info.: 031528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:07 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:37:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.431	-0.006	93	343123	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.615	10.619	-0.004	94	1723192	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.843	16.842	0.001	86	1625049	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.588	19.590	-0.002	91	1207289	4.00	4.02	
6 Chlorodifluoromethane	67	3.772	3.777	-0.005	96	31155	1.00	1.05	
7 Propene	41	3.772	3.780	-0.008	76	115607	1.00	0.9756	
8 Dichlorodifluoromethane	85	3.826	3.831	-0.005	100	300186	1.00	1.14	
9 Chloromethane	52	3.977	3.984	-0.007	99	41615	1.00	1.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.004	4.011	-0.007	93	251378	1.00	1.07	
11 Acetaldehyde	44	4.128	4.134	-0.006	93	365011	4.99	5.11	
12 Vinyl chloride	62	4.133	4.143	-0.010	98	140975	1.00	1.11	
14 Butadiene	54	4.219	4.224	-0.005	95	112114	1.00	1.12	
13 Butane	43	4.219	4.228	-0.009	93	198146	1.00	1.17	
15 Bromomethane	94	4.489	4.498	-0.009	99	131128	1.00	1.08	
16 Chloroethane	64	4.618	4.627	-0.009	94	70143	1.00	1.11	
17 Ethanol	31	4.753	4.758	-0.005	90	194719	4.99	5.79	
18 Vinyl bromide	106	4.888	4.895	-0.007	99	126897	1.00	1.07	
19 2-Methylbutane	43	4.953	4.957	-0.004	91	143893	1.00	1.08	
21 Acrolein	56	5.136	5.139	-0.003	92	49802	1.00	1.15	
20 Trichlorofluoromethane	101	5.136	5.144	-0.008	99	319225	1.00	1.05	
22 Acetonitrile	40	5.190	5.199	-0.009	100	55951	1.00	1.10	
23 Acetone	58	5.238	5.246	-0.008	97	264563	3.00	3.31	
24 Pentane	72	5.346	5.349	-0.003	94	24712	1.00	1.07	
25 Isopropyl alcohol	45	5.346	5.358	-0.012	92	537637	3.00	3.23	
26 Ethyl ether	31	5.481	5.493	-0.012	97	126823	1.00	1.11	
27 1,1-Dichloroethene	96	5.756	5.767	-0.011	98	123447	1.00	1.03	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	94631	1.00	1.04	
29 2-Methyl-2-propanol	59	5.875	5.885	-0.010	94	231292	1.00	1.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.945	5.950	-0.005	97	265820	1.00	1.04	
31 Methylene Chloride	84	6.064	6.069	-0.005	96	118891	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	96	104079	1.00	1.01	
33 Carbon disulfide	76	6.204	6.212	-0.008	98	357351	1.00	1.04	
34 trans-1,2-Dichloroethene	96	6.818	6.822	-0.004	99	129139	1.00	1.04	
35 2-Methylpentane	43	6.867	6.870	-0.003	95	258059	1.00	1.06	
36 Methyl tert-butyl ether	73	6.948	6.954	-0.006	97	329127	1.00	1.05	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	234434	1.00	1.05	
38 Vinyl acetate	43	7.304	7.310	-0.006	100	329497	1.00	1.05	
39 2-Butanone (MEK)	72	7.708	7.715	-0.007	100	69440	1.00	0.99	
40 Hexane	56	7.789	7.791	-0.002	88	102921	1.00	1.04	
141 Isopropyl ether	45	7.929	7.935	-0.006	98	443603	1.00	1.05	
41 cis-1,2-Dichloroethene	96	8.118	8.125	-0.007	94	133371	1.00	1.04	
42 Ethyl acetate	43	8.312	8.316	-0.004	99	281552	1.00	1.06	
43 Chloroform	83	8.458	8.461	-0.003	97	262490	1.00	1.04	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	95	379812	1.00	1.05	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	94	140980	1.00	1.07	
45 1,1,1-Trichloroethane	97	9.450	9.451	-0.001	97	253256	1.00	1.05	
46 1,2-Dichloroethane	62	9.525	9.530	-0.005	97	171547	1.00	1.07	
49 n-Butanol	31	10.016	10.023	-0.007	59	41205	1.00	1.02	
47 Benzene	78	10.038	10.041	-0.003	97	378365	1.00	1.03	
48 Cyclohexane	69	10.059	10.062	-0.003	97	58112	1.00	1.05	
50 Carbon tetrachloride	117	10.075	10.077	-0.002	98	226936	1.00	0.9632	
51 2,3-Dimethylpentane	71	10.216	10.217	-0.001	90	86149	1.00	1.06	
52 Thiophene	84	10.307	10.313	-0.006	96	213138	1.00	1.05	
142 Tert-amyl methyl ether	73	10.566	10.568	-0.002	98	357259	1.00	1.06	
53 Isooctane	57	10.906	10.911	-0.005	99	639131	1.00	1.05	
54 n-Heptane	71	11.337	11.340	-0.003	91	135077	1.00	1.06	
55 1,2-Dichloropropane	63	11.343	11.346	-0.003	91	149722	1.00	1.05	
56 Trichloroethene	130	11.407	11.410	-0.003	97	176433	1.00	1.02	
57 Dibromomethane	93	11.467	11.467	0.000	93	150967	1.00	1.03	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	100	261330	1.00	1.06	
59 1,4-Dioxane	88	11.661	11.668	-0.007	87	57942	1.00	1.04	
60 Methyl methacrylate	41	11.796	11.801	-0.005	91	160388	1.00	1.05	
61 Methylcyclohexane	83	12.346	12.347	-0.001	95	274918	1.00	1.04	
62 4-Methyl-2-pentanone (MIBK	43	12.826	12.831	-0.005	97	349766	1.00	1.00	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	93	217599	1.00	1.06	
64 trans-1,3-Dichloropropene	75	13.802	13.804	-0.002	98	197119	1.00	1.05	
65 Toluene	91	13.980	13.983	-0.003	94	457420	1.00	1.04	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	98	133607	1.00	1.03	
67 2-Methylthiophene	97	14.179	14.179	0.000	97	375013	1.00	1.05	
68 3-Methylthiophene	97	14.454	14.457	-0.003	99	370606	1.00	1.05	
69 2-Hexanone	58	14.632	14.637	-0.005	94	157606	1.00	1.01	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	267388	1.00	1.04	
70 n-Octane	85	15.053	15.053	0.000	93	152689	1.00	1.04	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	99	250202	1.00	1.03	
73 Tetrachloroethene	129	15.603	15.602	0.001	97	165846	1.00	1.03	
74 Chlorobenzene	112	16.918	16.918	0.000	95	368572	1.00	1.02	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	96	391276	1.00	1.05	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	594816	1.00	1.03	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	440948	1.00	1.04	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	925273	2.00	2.09	
79 Bromoform	173	18.331	18.330	0.001	96	244609	1.00	1.02	
80 Styrene	104	18.455	18.457	-0.002	99	341358	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	92	312693	1.00	1.07	
82 o-Xylene	91	18.558	18.559	-0.001	99	482802	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	344528	1.00	1.04	
84 1,2,3-Trichloropropane	110	19.350	19.352	-0.002	97	104894	1.00	1.05	
85 Isopropylbenzene	105	19.588	19.589	-0.001	75	680222	1.00	1.04	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	192151	1.00	1.03	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	92	174955	1.00	1.03	
88 4-Ethyltoluene	105	20.844	20.844	0.000	99	670475	1.00	1.04	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	94	320773	1.00	1.04	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	90	256646	1.00	0.9744	
91 n-Decane	57	21.723	21.726	-0.003	90	391086	1.00	1.03	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	612021	1.00	1.04	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	95	568468	1.00	1.04	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	396116	1.00	1.01	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	828918	1.00	1.04	
96 Benzyl chloride	91	22.467	22.469	-0.002	99	507273	1.00	1.02	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	94	409445	1.00	1.01	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	97	732338	1.00	1.02	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	454623	1.00	1.03	
100 Butylcyclohexane	83	22.979	22.980	-0.001	94	435406	1.00	1.03	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	96	387634	1.00	1.00	
102 2,3-Dihydroindene	117	23.260	23.259	0.001	94	546977	1.00	1.02	
103 Indene	116	23.524	23.527	-0.003	92	377268	1.00	0.9711	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	692899	1.00	1.05	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	521679	1.00	0.99	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	95	171681	1.00	1.01	
106 Undecane	57	24.602	24.605	-0.003	96	444720	1.00	1.02	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	98	586026	1.00	0.9700	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	351280	1.00	0.9576	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	464848	1.00	0.9238	
110 Dodecane	57	27.142	27.145	-0.003	98	345871	1.00	0.8471	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	308083	1.00	0.8715	
112 Naphthalene	128	27.423	27.426	-0.003	99	683319	1.00	0.8255	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	388506	1.00	0.8023	
114 Hexachlorobutadiene	225	27.984	27.986	-0.002	95	242214	1.00	0.8999	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	96	261864	1.00	0.7736	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	189201	3.12	1.70	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	145609	3.12	1.66	
A 118 C6 Range	1	7.802	(7.730-7.848)		0	859008	1.00	1.09	
A 119 Toluene Range	1	13.969	(13.909-14.031)		0	1104100	1.00	1.04	
A 120 C8 Range	1	15.053	(14.993-15.112)		0	2239894	1.00	1.02	
S 124 Xylenes, Total	100				0		3.00	3.14	
S 145 1,2-Dichloroethene, Total	1				0		2.00	2.08	

Reagents:

CDN2C00X05_00001	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

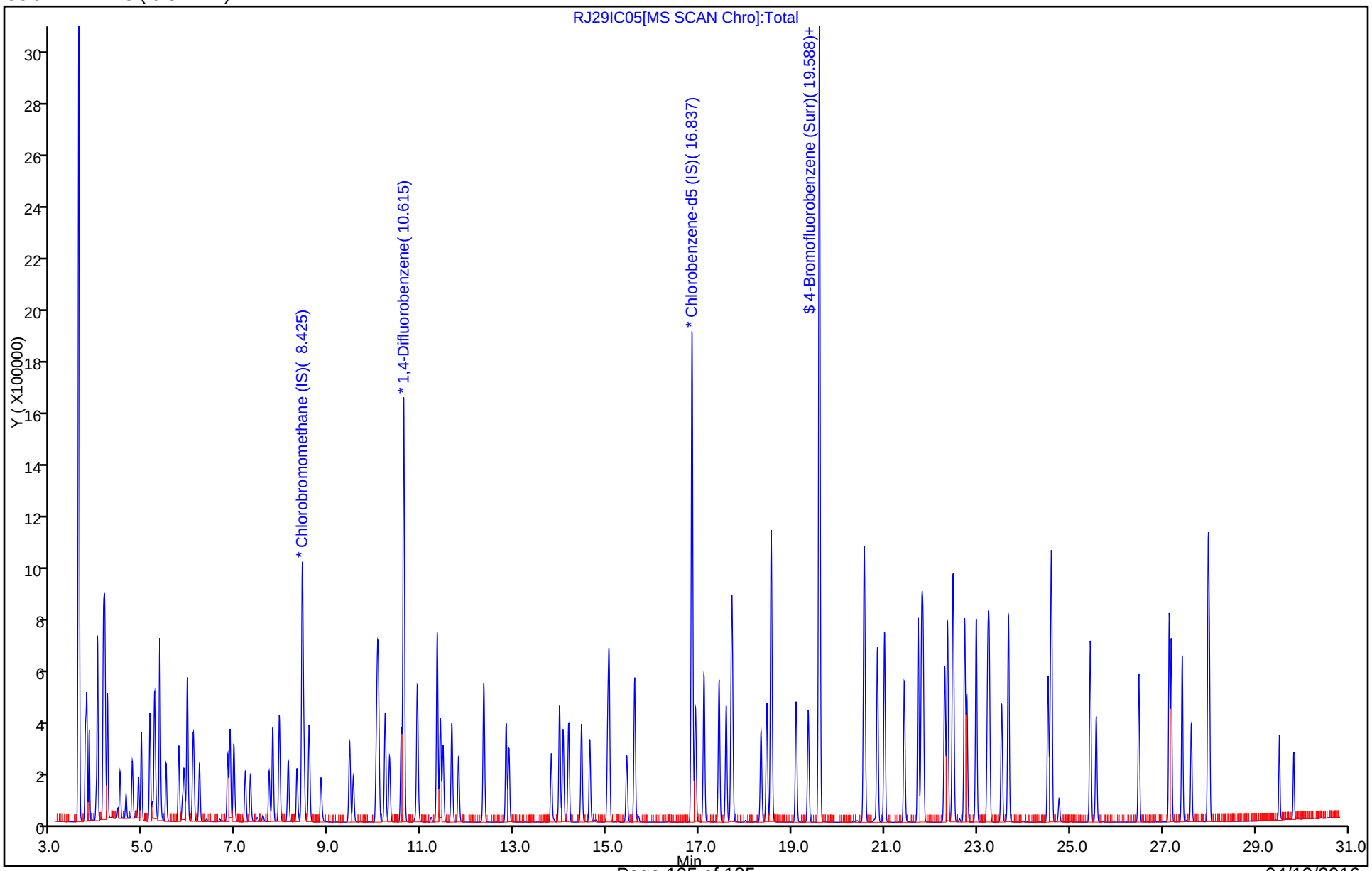
Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D

Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

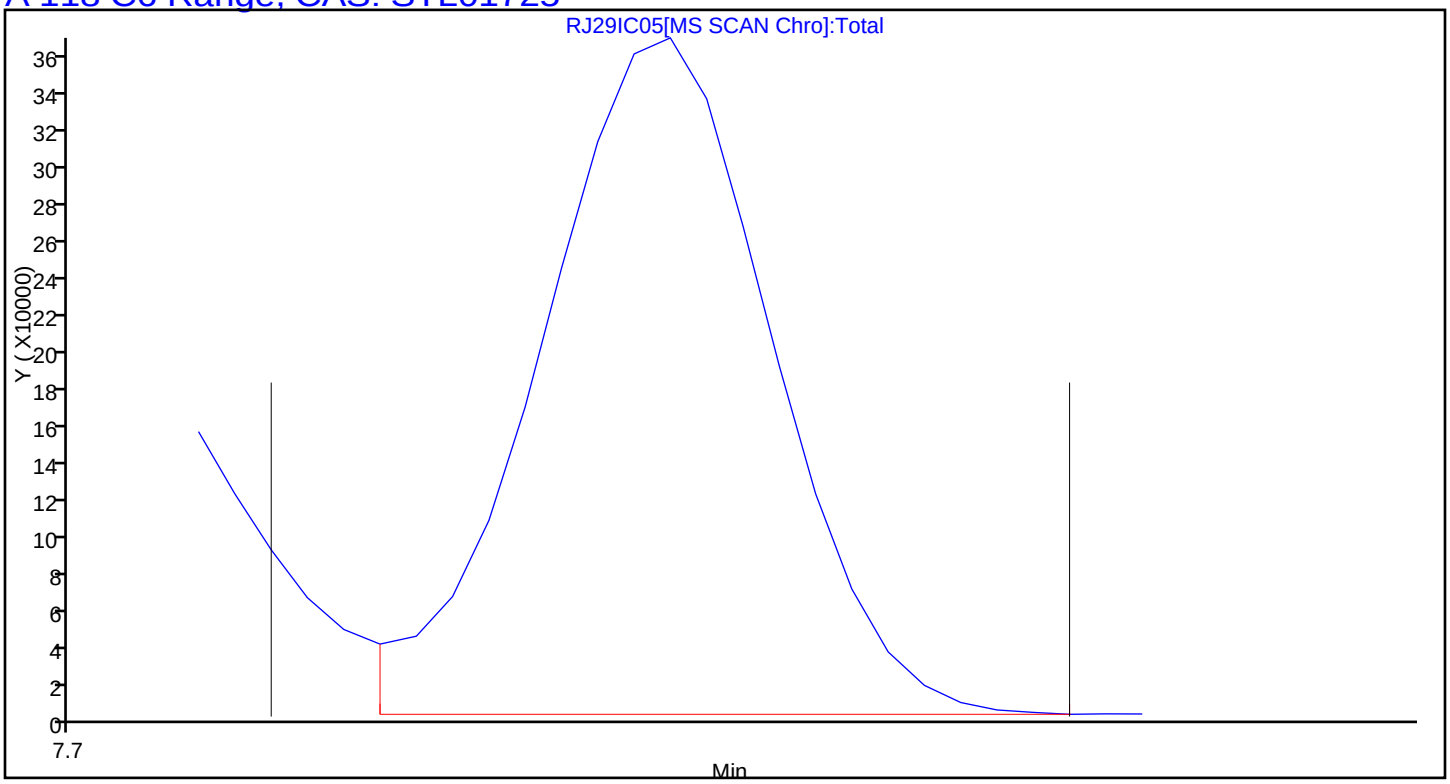


Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D				
Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

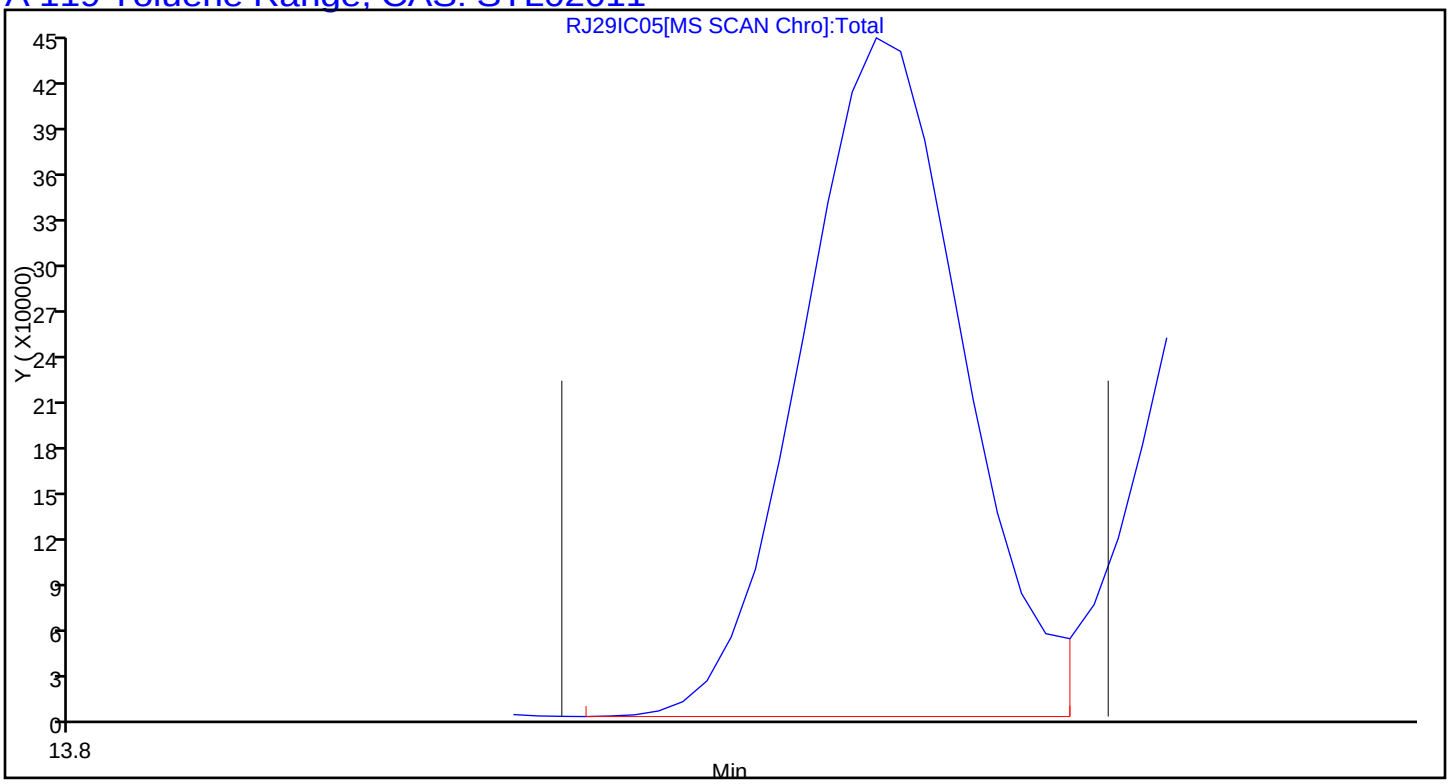


Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D				
Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

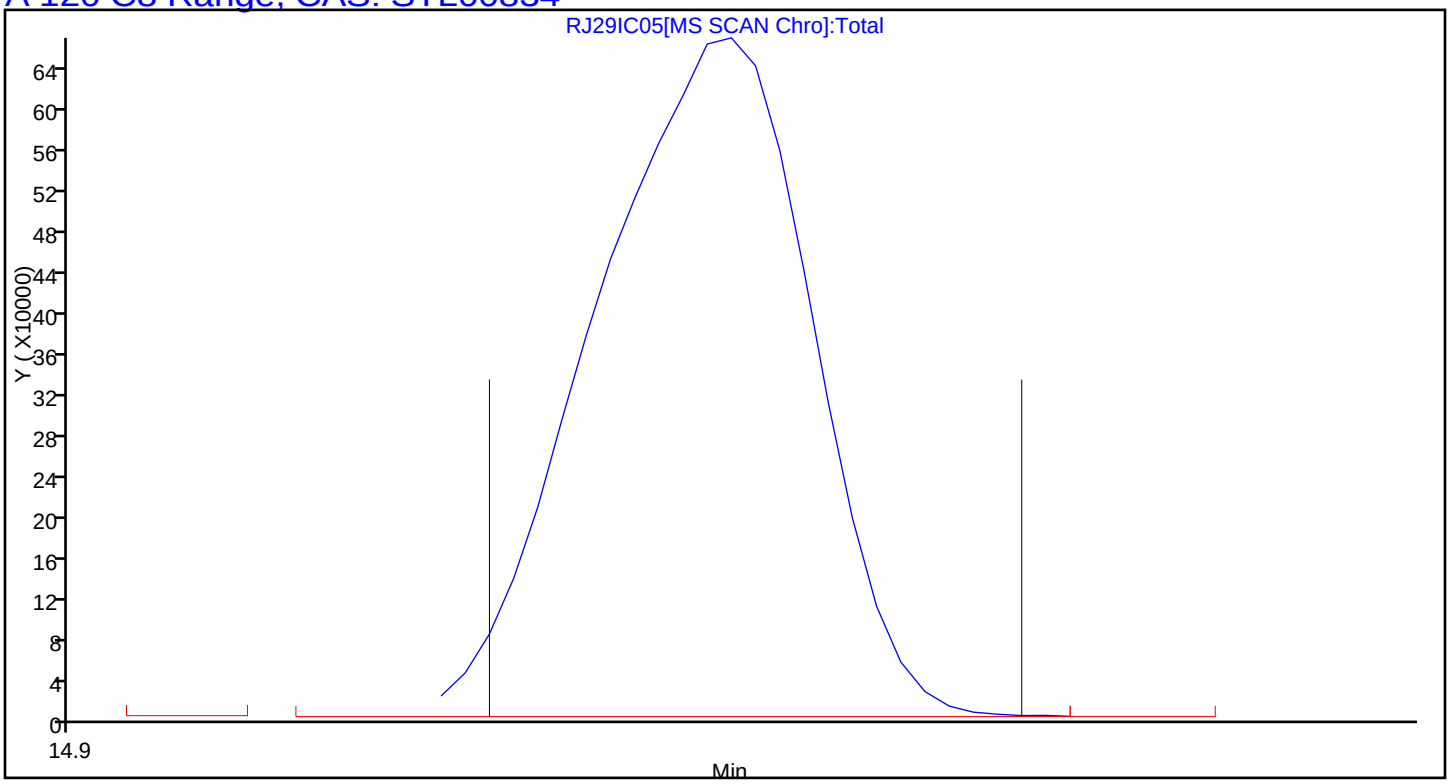


Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D				
Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 29-Oct-2015 18:33:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-007
Misc. Info.: 031528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:15 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: tajh Date: 30-Oct-2015 10:04:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.431	8.431	0.000	93	382463	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.620	10.619	0.001	94	1942786	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1806380	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.593	19.590	0.003	92	1364359	4.00	4.09	
6 Chlorodifluoromethane	67	3.766	3.777	-0.011	96	64578	2.00	1.95	
7 Propene	41	3.772	3.780	-0.008	98	228078	2.00	1.73	
8 Dichlorodifluoromethane	85	3.825	3.831	-0.006	100	540865	2.00	1.85	
9 Chloromethane	52	3.976	3.984	-0.008	99	86227	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.003	4.011	-0.008	92	540208	2.00	2.06	
11 Acetaldehyde	44	4.127	4.134	-0.007	94	703006	9.99	8.84	
12 Vinyl chloride	62	4.133	4.143	-0.010	98	278017	2.00	1.97	
14 Butadiene	54	4.214	4.224	-0.010	95	224206	2.00	2.01	
13 Butane	43	4.219	4.228	-0.009	92	381680	2.00	2.02	
15 Bromomethane	94	4.489	4.498	-0.009	99	265717	2.00	1.96	
16 Chloroethane	64	4.618	4.627	-0.009	94	137380	2.00	1.94	
17 Ethanol	31	4.753	4.758	-0.005	88	367698	9.99	9.80	
18 Vinyl bromide	106	4.888	4.895	-0.007	99	262658	2.00	2.00	
19 2-Methylbutane	43	4.947	4.957	-0.010	90	301828	2.00	2.03	
21 Acrolein	56	5.130	5.139	-0.009	92	105359	2.00	2.19	
20 Trichlorofluoromethane	101	5.136	5.144	-0.008	99	663218	2.00	1.97	
22 Acetonitrile	40	5.190	5.199	-0.009	99	114829	2.00	2.03	
23 Acetone	58	5.233	5.246	-0.013	97	553085	5.99	6.20	
24 Pentane	72	5.341	5.349	-0.008	96	51444	2.00	2.00	
25 Isopropyl alcohol	45	5.352	5.358	-0.006	96	1134762	5.99	6.11	
26 Ethyl ether	31	5.481	5.493	-0.012	95	259696	2.00	2.03	
27 1,1-Dichloroethene	96	5.761	5.767	-0.006	97	260494	2.00	1.96	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	202126	2.00	1.99	
29 2-Methyl-2-propanol	59	5.875	5.885	-0.010	94	492493	2.00	1.99	
30 1,1,2-Trichloro-1,2,2-trif	101	5.939	5.950	-0.011	98	565102	2.00	1.98	
31 Methylene Chloride	84	6.063	6.069	-0.006	96	243572	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	96	217571	2.00	1.90	
33 Carbon disulfide	76	6.204	6.212	-0.008	98	745897	2.00	1.95	
34 trans-1,2-Dichloroethene	96	6.818	6.822	-0.004	99	273041	2.00	1.97	
35 2-Methylpentane	43	6.861	6.870	-0.009	95	542930	2.00	2.01	
36 Methyl tert-butyl ether	73	6.942	6.954	-0.012	97	697771	2.00	1.99	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	488209	2.00	1.97	
38 Vinyl acetate	43	7.304	7.310	-0.006	100	721457	2.00	2.07	
39 2-Butanone (MEK)	72	7.708	7.715	-0.007	99	149730	2.00	1.92	
40 Hexane	56	7.789	7.791	-0.002	87	219369	2.00	1.98	
141 Isopropyl ether	45	7.929	7.935	-0.006	98	937118	2.00	1.99	
41 cis-1,2-Dichloroethene	96	8.123	8.125	-0.002	94	280799	2.00	1.96	
42 Ethyl acetate	43	8.307	8.316	-0.009	100	599775	2.00	2.02	
43 Chloroform	83	8.463	8.461	0.002	97	555413	2.00	1.98	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	94	817040	2.00	2.03	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	95	296262	2.00	2.02	
45 1,1,1-Trichloroethane	97	9.450	9.451	-0.001	96	550734	2.00	2.04	
46 1,2-Dichloroethane	62	9.531	9.530	0.001	97	362286	2.00	2.00	
49 n-Butanol	31	10.011	10.023	-0.012	57	92235	2.00	2.02	
47 Benzene	78	10.037	10.041	-0.004	97	802365	2.00	1.95	
48 Cyclohexane	69	10.059	10.062	-0.003	97	124517	2.00	2.00	
50 Carbon tetrachloride	117	10.075	10.077	-0.002	95	496662	2.00	1.87	
51 2,3-Dimethylpentane	71	10.215	10.217	-0.002	91	183567	2.00	2.00	
52 Thiophene	84	10.312	10.313	-0.001	96	453857	2.00	1.99	
142 Tert-amyl methyl ether	73	10.561	10.568	-0.007	98	760733	2.00	2.00	
53 Isooctane	57	10.906	10.911	-0.005	99	1374170	2.00	2.00	
54 n-Heptane	71	11.337	11.340	-0.003	91	292044	2.00	2.03	
55 1,2-Dichloropropane	63	11.342	11.346	-0.004	92	321938	2.00	2.00	
56 Trichloroethene	130	11.407	11.410	-0.003	97	385332	2.00	1.98	
57 Dibromomethane	93	11.466	11.467	-0.001	92	329232	2.00	1.99	
58 Dichlorobromomethane	83	11.655	11.655	0.000	100	573340	2.00	2.06	
59 1,4-Dioxane	88	11.661	11.668	-0.007	85	127486	2.00	2.02	
60 Methyl methacrylate	41	11.795	11.801	-0.006	91	354887	2.00	2.06	
61 Methylcyclohexane	83	12.345	12.347	-0.002	95	595284	2.00	2.00	
62 4-Methyl-2-pentanone (MIBK	43	12.825	12.831	-0.006	96	710656	2.00	1.81	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	93	475494	2.00	2.06	
64 trans-1,3-Dichloropropene	75	13.801	13.804	-0.003	98	433670	2.00	2.08	
65 Toluene	91	13.979	13.983	-0.004	94	983177	2.00	2.01	
66 1,1,2-Trichloroethane	83	14.060	14.060	0.000	98	288635	2.00	2.00	
67 2-Methylthiophene	97	14.179	14.179	0.000	97	811250	2.00	2.03	
68 3-Methylthiophene	97	14.454	14.457	-0.003	99	799773	2.00	2.03	
69 2-Hexanone	58	14.632	14.637	-0.005	94	351277	2.00	2.03	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	609154	2.00	2.13	
70 n-Octane	85	15.052	15.053	-0.001	92	338144	2.00	2.08	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	98	552400	2.00	2.06	
73 Tetrachloroethene	129	15.602	15.602	0.000	97	360384	2.00	2.02	
74 Chlorobenzene	112	16.918	16.918	0.000	95	782617	2.00	1.96	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	95	834570	2.00	2.02	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	1267112	2.00	1.98	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	950899	2.00	2.02	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	1976245	3.99	4.02	
79 Bromoform	173	18.331	18.330	0.001	96	577227	2.00	2.16	
80 Styrene	104	18.455	18.457	-0.002	98	756830	2.00	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	93	674919	2.00	2.07	
82 o-Xylene	91	18.557	18.559	-0.002	99	1032792	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	745634	2.00	2.03	
84 1,2,3-Trichloropropane	110	19.350	19.352	-0.002	98	223126	2.00	2.00	
85 Isopropylbenzene	105	19.587	19.589	-0.002	95	1472720	2.00	2.03	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	421420	2.00	2.03	
87 2-Chlorotoluene	126	20.574	20.572	0.002	92	377459	2.00	2.01	
88 4-Ethyltoluene	105	20.844	20.844	0.000	98	1452257	2.00	2.03	
89 1,3,5-Trimethylbenzene	120	21.000	21.000	0.000	94	701459	2.00	2.04	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	90	593385	2.00	2.03	
91 n-Decane	57	21.723	21.726	-0.003	90	858341	2.00	2.04	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	95	1337992	2.00	2.04	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	96	1247281	2.00	2.05	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	883117	2.00	2.02	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	1815931	2.00	2.06	
96 Benzyl chloride	91	22.467	22.469	-0.002	98	1151872	2.00	2.09	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	96	911694	2.00	2.02	
98 4-Isopropyltoluene	119	22.731	22.729	0.002	97	1637122	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	996580	2.00	2.03	
100 Butylcyclohexane	83	22.979	22.980	-0.001	95	962444	2.00	2.05	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	96	864059	2.00	2.01	
102 2,3-Dihydroindene	117	23.260	23.259	0.001	95	1216111	2.00	2.04	
103 Indene	116	23.529	23.527	0.002	93	868075	2.00	2.01	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	1534953	2.00	2.09	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	1209859	2.00	2.07	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	95	418662	2.00	2.21	
106 Undecane	57	24.602	24.605	-0.003	96	1032668	2.00	2.13	
107 1,2,4,5-Tetramethylbenzene	119	25.443	25.441	0.002	98	1390405	2.00	2.07	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	839658	2.00	2.06	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	1147426	2.00	2.05	
110 Dodecane	57	27.142	27.145	-0.003	98	974504	2.00	2.15	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	94	832514	2.00	2.12	
112 Naphthalene	128	27.428	27.426	0.002	99	1845704	2.00	2.01	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	1118151	2.00	2.08	
114 Hexachlorobutadiene	225	27.989	27.986	0.003	96	661538	2.00	2.21	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	96	795841	2.00	2.12	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	868802	6.24	7.03	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	699077	6.24	7.17	
A 118 C6 Range	1	7.797	(7.724-7.864)		0	1784009	2.00	2.00	
A 119 Toluene Range	1	13.971	(13.915-14.047)		0	2358213	2.00	1.97	
A 120 C8 Range	1	15.058	(14.988-15.128)		0	4899211	2.00	1.98	
S 124 Xylenes, Total	100				0		5.99	6.04	
S 145 1,2-Dichloroethene, Total	1				0		3.99	3.94	

Reagents:

CDN2C00X05_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

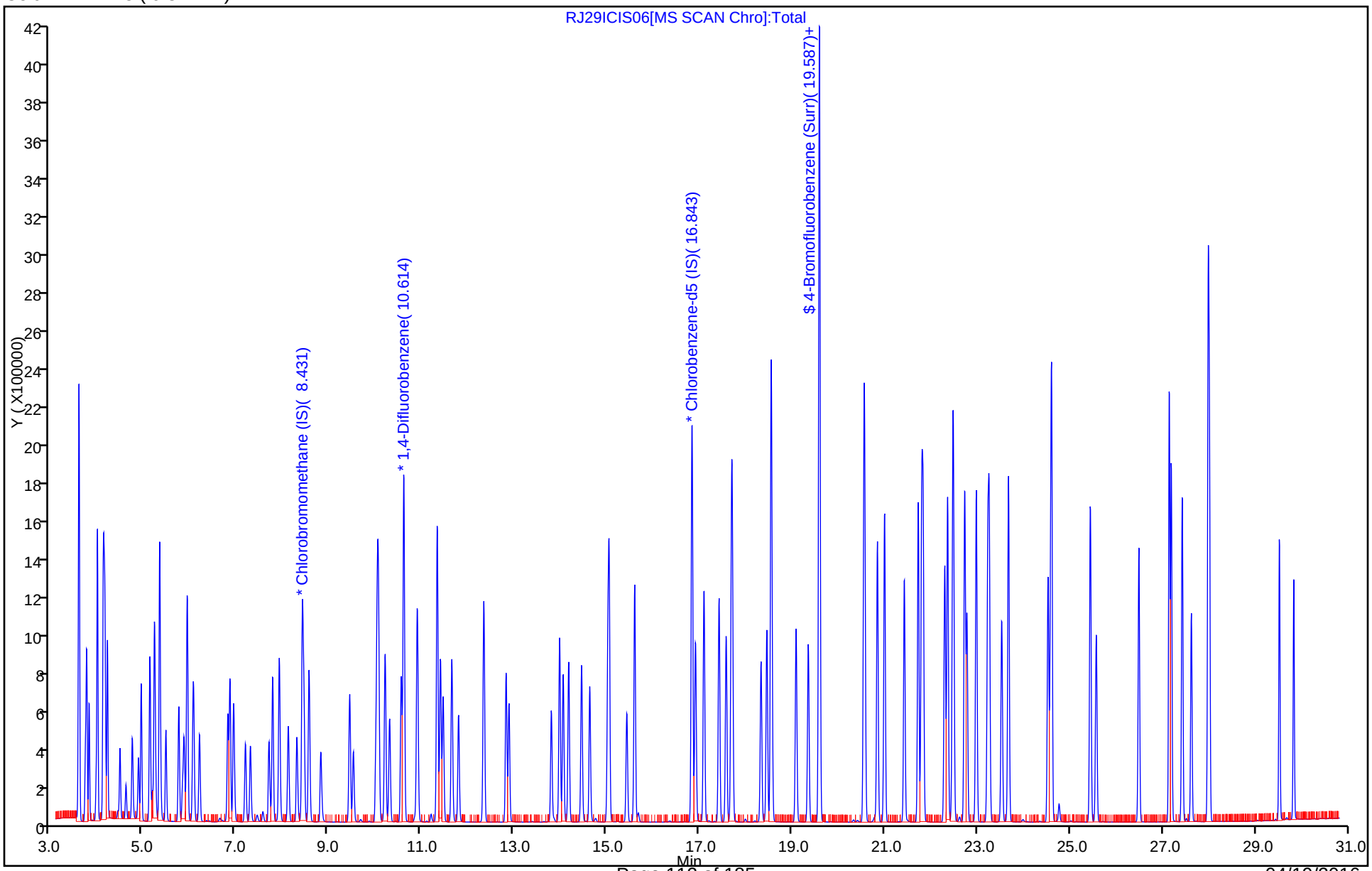
Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D

Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

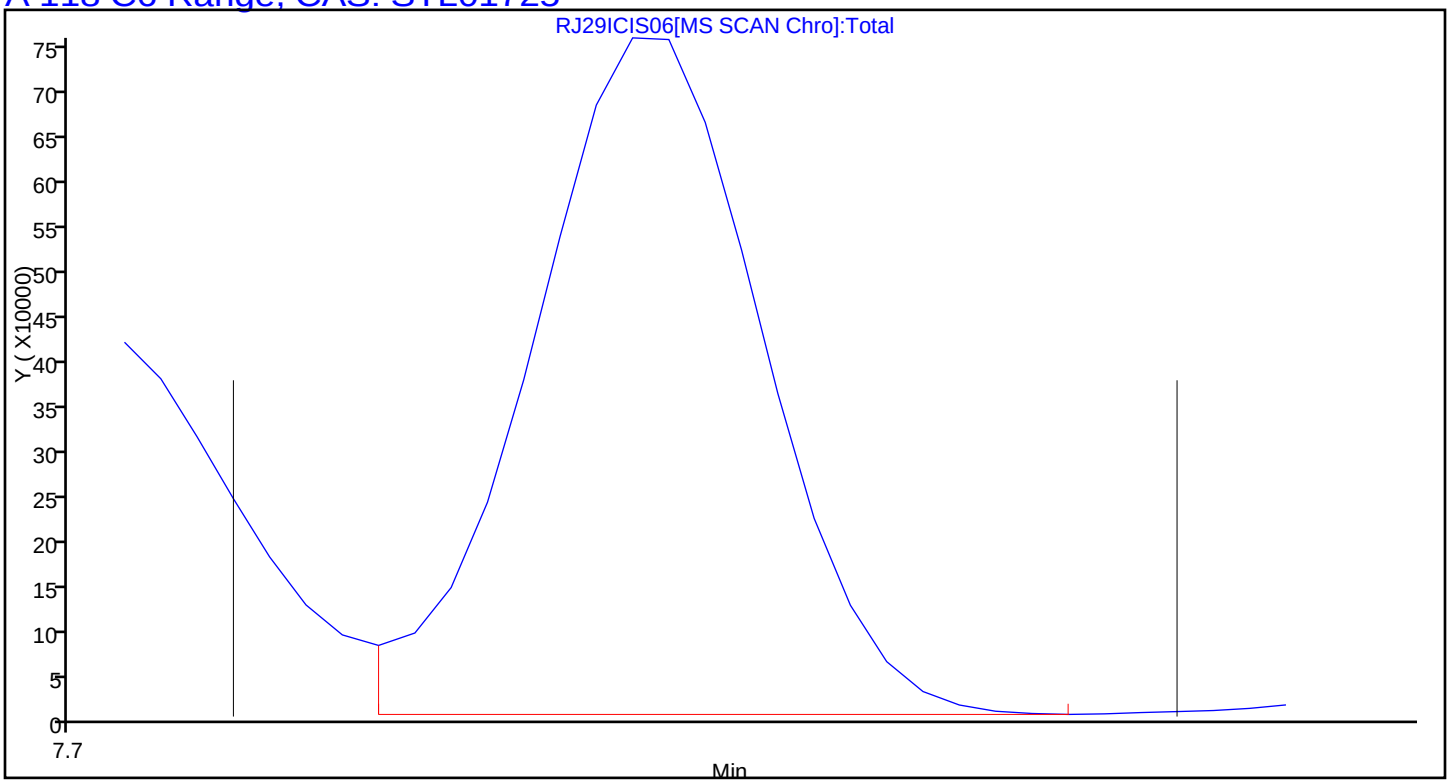


Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D				
Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

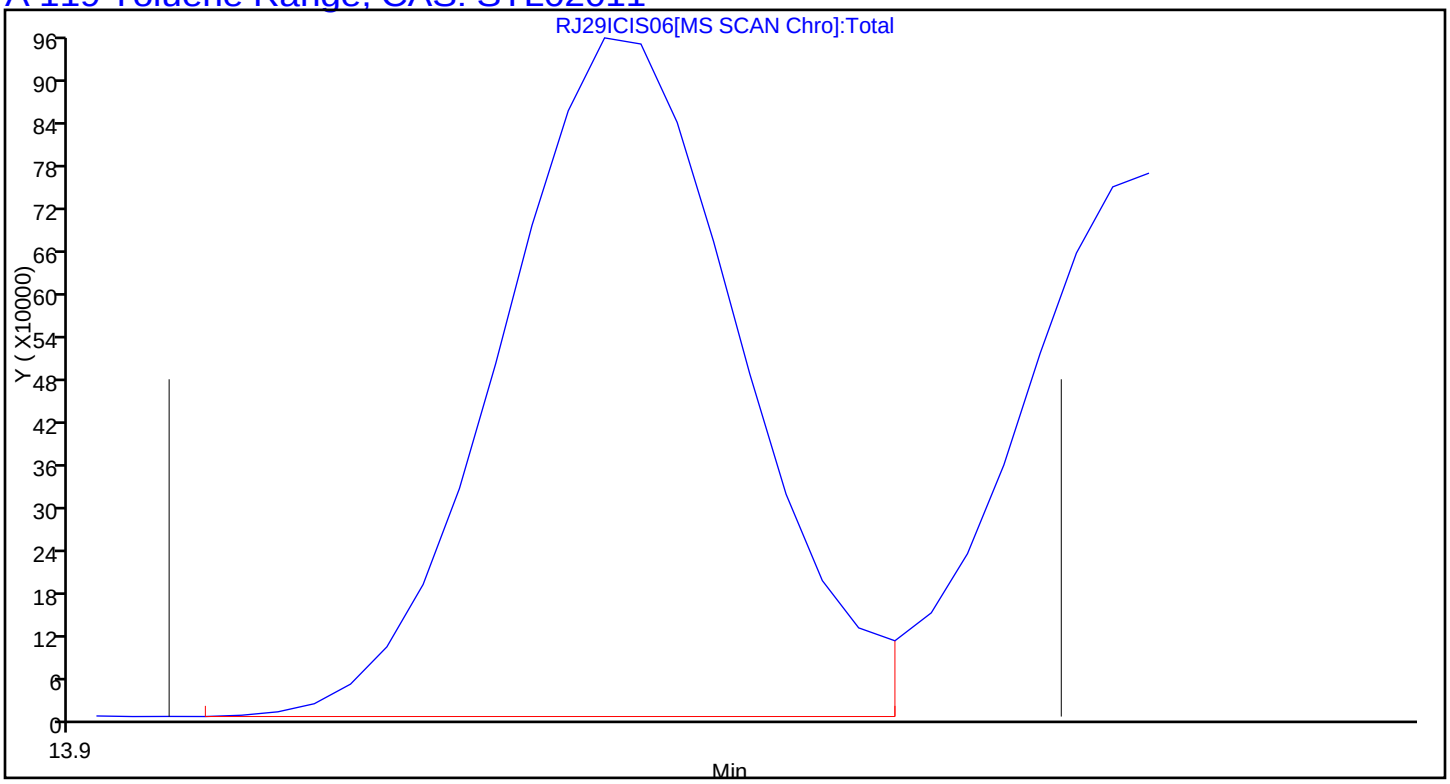


Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D				
Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

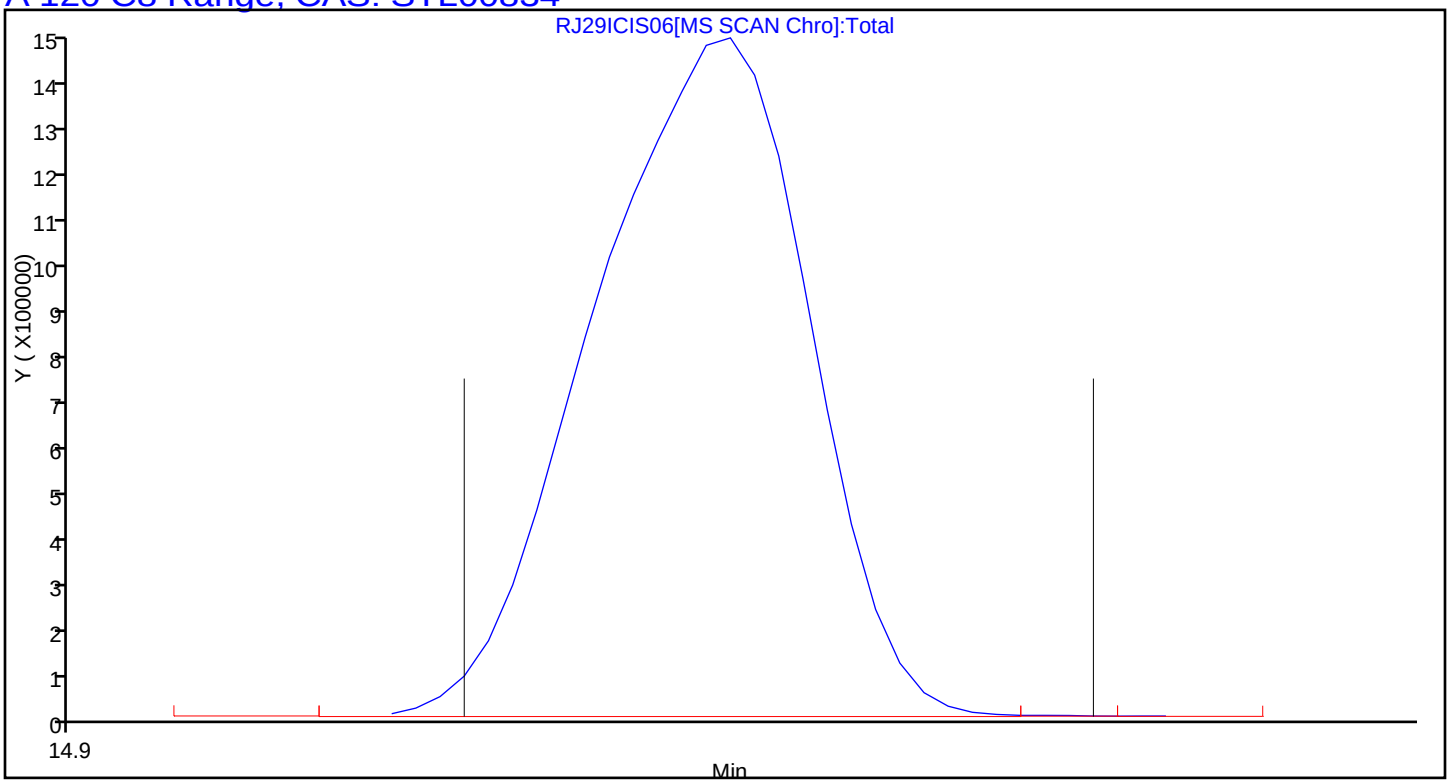


Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D				
Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Oct-2015 19:26:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-008
Misc. Info.: 031527
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:31 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:33:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.431	8.431	0.000	91	415463	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.620	10.619	0.001	94	2090615	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.843	16.842	0.001	85	1954460	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.593	19.590	0.003	60	1482255	4.00	4.11	
6 Chlorodifluoromethane	67	3.750	3.777	-0.027	96	131965	4.00	3.66	
7 Propene	41	3.755	3.780	-0.025	99	454322	4.00	3.17	
8 Dichlorodifluoromethane	85	3.804	3.831	-0.027	100	1159472	4.00	3.65	
9 Chloromethane	52	3.960	3.984	-0.024	99	173952	4.00	3.74	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.987	4.011	-0.024	91	1102238	4.00	3.87	
11 Acetaldehyde	44	4.117	4.134	-0.017	86	1187986	20.0	13.7	
12 Vinyl chloride	62	4.117	4.143	-0.026	67	558900	4.00	3.64	
14 Butadiene	54	4.203	4.224	-0.021	95	445565	4.00	3.68	
13 Butane	43	4.203	4.228	-0.025	92	756149	4.00	3.69	
15 Bromomethane	94	4.478	4.498	-0.020	99	532103	4.00	3.62	
16 Chloroethane	64	4.607	4.627	-0.020	93	277829	4.00	3.62	
17 Ethanol	31	4.753	4.758	-0.005	88	698718	20.0	17.1	
18 Vinyl bromide	106	4.877	4.895	-0.018	99	536525	4.00	3.75	
19 2-Methylbutane	43	4.936	4.957	-0.021	90	611926	4.00	3.79	
21 Acrolein	56	5.125	5.139	-0.014	35	220136	4.00	4.21	
20 Trichlorofluoromethane	101	5.125	5.144	-0.019	99	1402228	4.00	3.83	
22 Acetonitrile	40	5.190	5.199	-0.009	99	234702	4.00	3.83	
23 Acetone	58	5.233	5.246	-0.013	96	989477	12.0	10.2	
24 Pentane	72	5.335	5.349	-0.014	97	108809	4.00	3.90	
25 Isopropyl alcohol	45	5.346	5.358	-0.012	96	2338119	12.0	11.6	
26 Ethyl ether	31	5.470	5.493	-0.023	94	534142	4.00	3.85	
27 1,1-Dichloroethene	96	5.751	5.767	-0.016	98	554923	4.00	3.84	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	427655	4.00	3.87	
29 2-Methyl-2-propanol	59	5.875	5.885	-0.010	94	1047012	4.00	3.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.934	5.950	-0.016	99	1206128	4.00	3.89	
31 Methylene Chloride	84	6.063	6.069	-0.006	96	509999	4.00	3.64	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.080	6.090	-0.010	95	448349	4.00	3.60	
33 Carbon disulfide	76	6.198	6.212	-0.014	98	1587301	4.00	3.83	
34 trans-1,2-Dichloroethene	96	6.813	6.822	-0.009	99	577470	4.00	3.84	
35 2-Methylpentane	43	6.856	6.870	-0.014	95	1136674	4.00	3.87	
36 Methyl tert-butyl ether	73	6.937	6.954	-0.017	97	1489106	4.00	3.92	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	1032486	4.00	3.83	
38 Vinyl acetate	43	7.304	7.310	-0.006	100	1538426	4.00	4.07	
39 2-Butanone (MEK)	72	7.703	7.715	-0.012	99	299693	4.00	3.54	
40 Hexane	56	7.783	7.791	-0.008	86	469565	4.00	3.91	
141 Isopropyl ether	45	7.924	7.935	-0.011	98	1979800	4.00	3.88	
41 cis-1,2-Dichloroethene	96	8.123	8.125	-0.002	93	602078	4.00	3.88	
42 Ethyl acetate	43	8.307	8.316	-0.009	100	1269702	4.00	3.94	
43 Chloroform	83	8.463	8.461	0.002	97	1171239	4.00	3.85	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	94	1753657	4.00	4.01	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	94	624002	4.00	3.92	
45 1,1,1-Trichloroethane	97	9.450	9.451	-0.001	96	1166223	4.00	3.98	
46 1,2-Dichloroethane	62	9.531	9.530	0.001	97	760151	4.00	3.89	
49 n-Butanol	31	10.011	10.023	-0.012	57	198227	4.00	4.04	
47 Benzene	78	10.038	10.041	-0.003	97	1722684	4.00	3.88	
48 Cyclohexane	69	10.059	10.062	-0.003	97	270165	4.00	4.03	
50 Carbon tetrachloride	117	10.075	10.077	-0.002	97	1281986	4.00	4.48	
51 2,3-Dimethylpentane	71	10.215	10.217	-0.002	91	391395	4.00	3.96	
52 Thiophene	84	10.313	10.313	0.000	95	969518	4.00	3.95	
142 Tert-amyl methyl ether	73	10.561	10.568	-0.007	98	1609788	4.00	3.93	
53 Isooctane	57	10.906	10.911	-0.005	99	2932690	4.00	3.96	
54 n-Heptane	71	11.337	11.340	-0.003	89	628890	4.00	4.06	
55 1,2-Dichloropropane	63	11.342	11.346	-0.004	93	689377	4.00	3.98	
56 Trichloroethene	130	11.413	11.410	0.003	96	837826	4.00	4.01	
57 Dibromomethane	93	11.466	11.467	-0.001	92	701252	4.00	3.93	
58 Dichlorobromomethane	83	11.655	11.655	0.000	100	1239764	4.00	4.14	
59 1,4-Dioxane	88	11.661	11.668	-0.007	84	273976	4.00	4.04	
60 Methyl methacrylate	41	11.801	11.801	0.000	90	763818	4.00	4.12	
61 Methylcyclohexane	83	12.345	12.347	-0.002	95	1284697	4.00	4.02	
62 4-Methyl-2-pentanone (MIBK	43	12.825	12.831	-0.006	96	1447462	4.00	3.43	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	92	1026102	4.00	4.13	
64 trans-1,3-Dichloropropene	75	13.807	13.804	0.003	98	939379	4.00	4.16	
65 Toluene	91	13.985	13.983	0.002	94	2121413	4.00	4.00	
66 1,1,2-Trichloroethane	83	14.060	14.060	0.000	97	616596	4.00	3.94	
67 2-Methylthiophene	97	14.179	14.179	0.000	97	1748453	4.00	4.05	
68 3-Methylthiophene	97	14.459	14.457	0.002	98	1734194	4.00	4.07	
69 2-Hexanone	58	14.632	14.637	-0.005	95	772835	4.00	4.14	
71 Chlorodibromomethane	129	15.025	15.023	0.002	98	1385964	4.00	4.47	
70 n-Octane	85	15.052	15.053	-0.001	91	724178	4.00	4.11	
72 Ethylene Dibromide	107	15.435	15.432	0.003	98	1203466	4.00	4.14	
73 Tetrachloroethene	129	15.602	15.602	0.000	98	782310	4.00	4.04	
74 Chlorobenzene	112	16.918	16.918	0.000	95	1700375	4.00	3.93	
75 2,3-Dimethylheptane	43	17.102	17.100	0.002	95	1781528	4.00	3.98	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	2757851	4.00	3.98	
77 2-Ethylthiophene	97	17.581	17.579	0.002	97	2074575	4.00	4.08	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	4338191	8.00	8.15	
79 Bromoform	173	18.331	18.330	0.001	97	1415345	4.00	4.89	
80 Styrene	104	18.460	18.457	0.003	98	1688445	4.00	4.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	91	1469256	4.00	4.17	
82 o-Xylene	91	18.557	18.559	-0.002	99	2250949	4.00	4.08	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	1611027	4.00	4.06	
84 1,2,3-Trichloropropane	110	19.356	19.352	0.004	98	485577	4.00	4.03	
85 Isopropylbenzene	105	19.587	19.589	-0.002	95	3191338	4.00	4.07	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	943679	4.00	4.20	
87 2-Chlorotoluene	126	20.574	20.572	0.002	92	839846	4.00	4.13	
88 4-Ethyltoluene	105	20.844	20.844	0.000	99	3211936	4.00	4.14	
89 1,3,5-Trimethylbenzene	120	21.000	21.000	0.000	94	1558212	4.00	4.19	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	91	1373255	4.00	4.34	
91 n-Decane	57	21.728	21.726	0.002	89	1882295	4.00	4.13	
92 tert-Butylbenzene	119	21.804	21.802	0.002	94	2965326	4.00	4.18	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	95	2755463	4.00	4.19	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	97	1950664	4.00	4.12	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	3983536	4.00	4.17	
96 Benzyl chloride	91	22.472	22.469	0.003	99	2580331	4.00	4.32	
97 1,4-Dichlorobenzene	146	22.488	22.487	0.001	95	2028767	4.00	4.15	
98 4-Isopropyltoluene	119	22.731	22.729	0.002	97	3638174	4.00	4.23	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	2180123	4.00	4.11	
100 Butylcyclohexane	83	22.979	22.980	-0.001	95	2091186	4.00	4.12	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	97	1918912	4.00	4.12	
102 2,3-Dihydroindene	117	23.260	23.259	0.001	95	2707647	4.00	4.21	
103 Indene	116	23.529	23.527	0.002	93	1999122	4.00	4.28	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	3309124	4.00	4.16	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	2686511	4.00	4.25	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	94	982347	4.00	4.78	
106 Undecane	57	24.602	24.605	-0.003	95	2254200	4.00	4.30	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	98	3094196	4.00	4.26	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	1850400	4.00	4.19	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	2564680	4.00	4.24	
110 Dodecane	57	27.142	27.145	-0.003	98	2243771	4.00	4.57	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	94	1906085	4.00	4.48	
112 Naphthalene	128	27.428	27.426	0.002	99	4128915	4.00	4.15	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	2510290	4.00	4.31	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	96	1559597	4.00	4.82	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	97	1869754	4.00	4.59	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	98	2303688	12.5	17.2	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	98	1814582	12.5	17.2	
A 118 C6 Range	1	7.799	(7.719-7.848)		0	3758827	4.00	3.92	
A 119 Toluene Range	1	13.971	(13.915-14.047)		0	5034457	4.00	3.90	
A 120 C8 Range	1	15.058	(14.988-15.128)		0	10554153	4.00	3.96	
S 124 Xylenes, Total	100				0		12.0	12.2	
S 145 1,2-Dichloroethene, Total	1				0		8.00	7.71	

Reagents:

CDN2C00X10_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

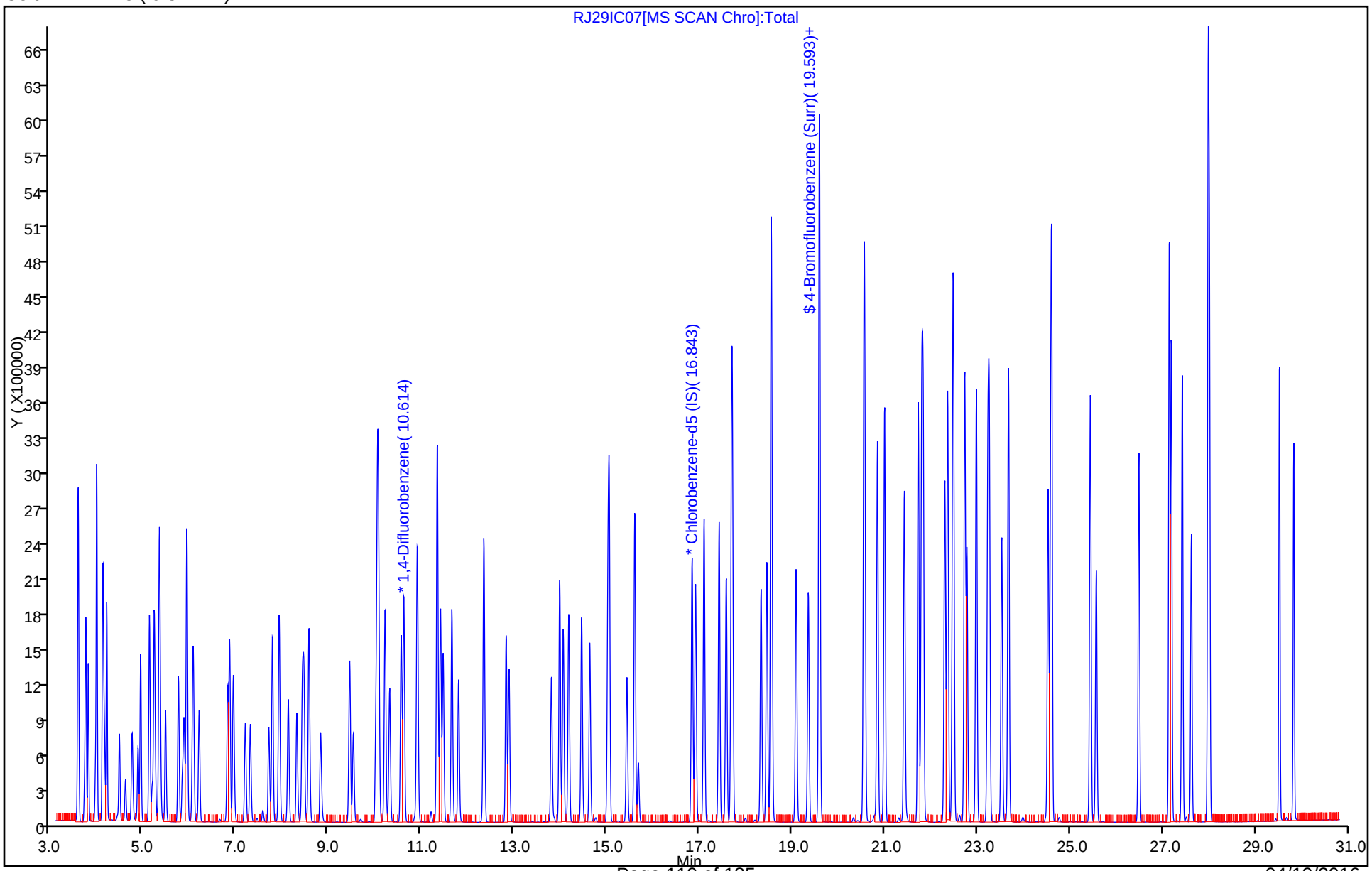
Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D

Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

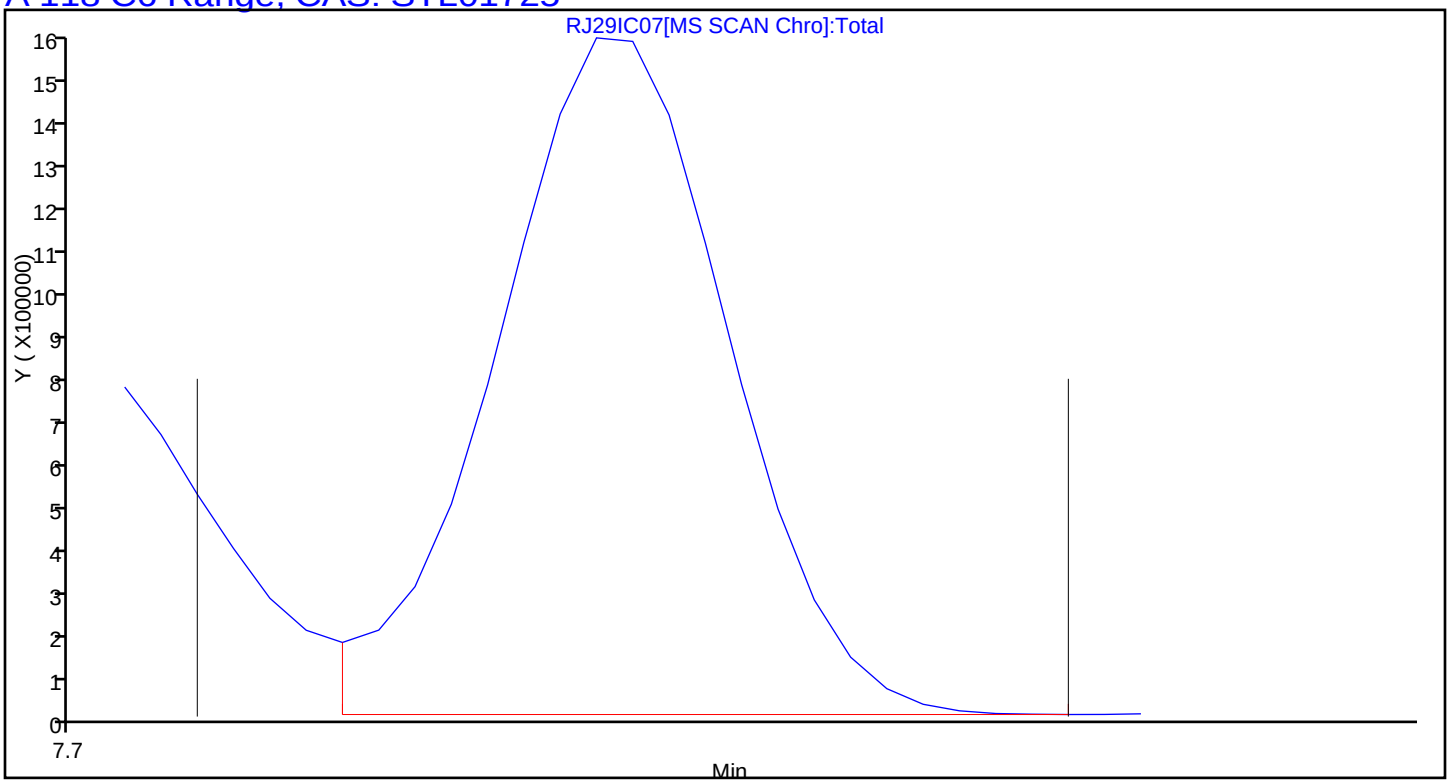


Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D				
Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

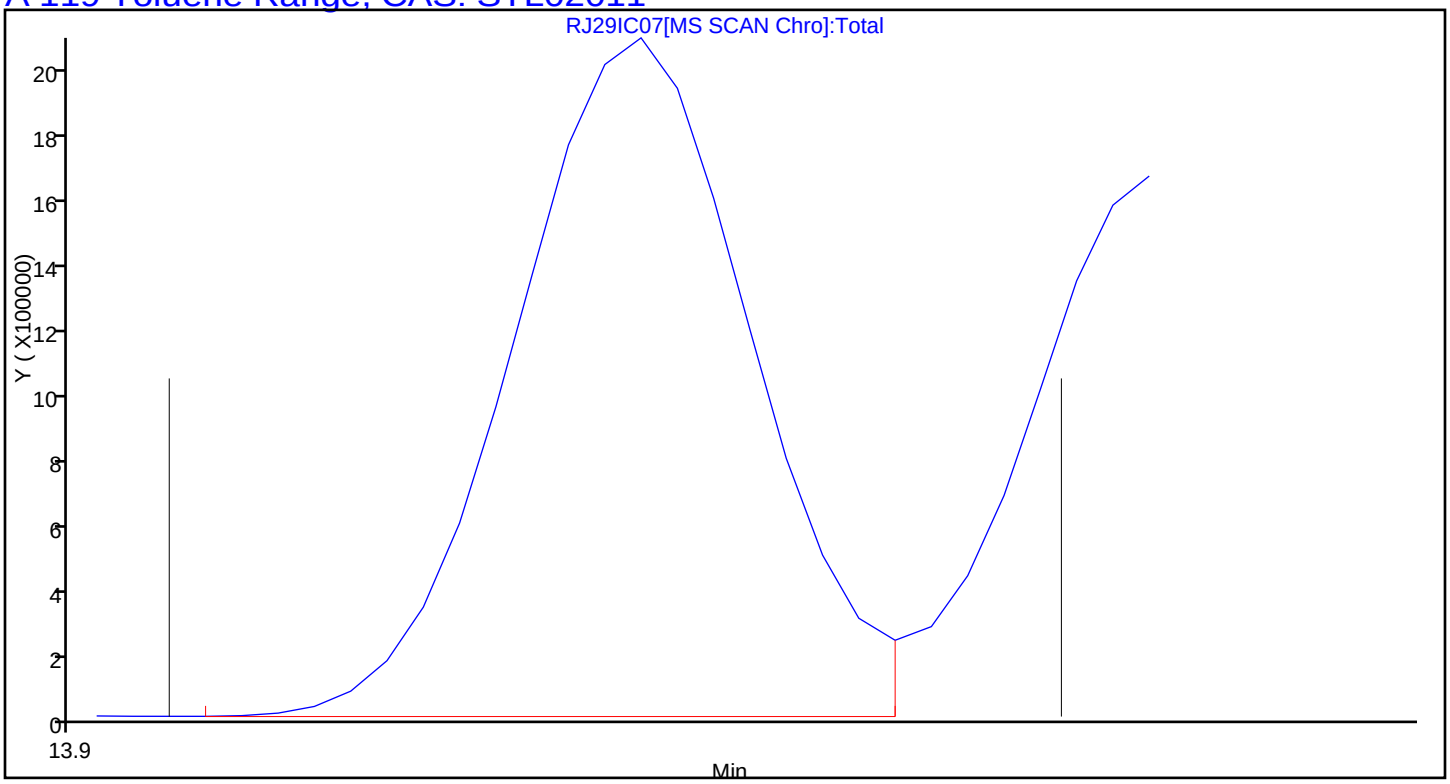


Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D				
Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

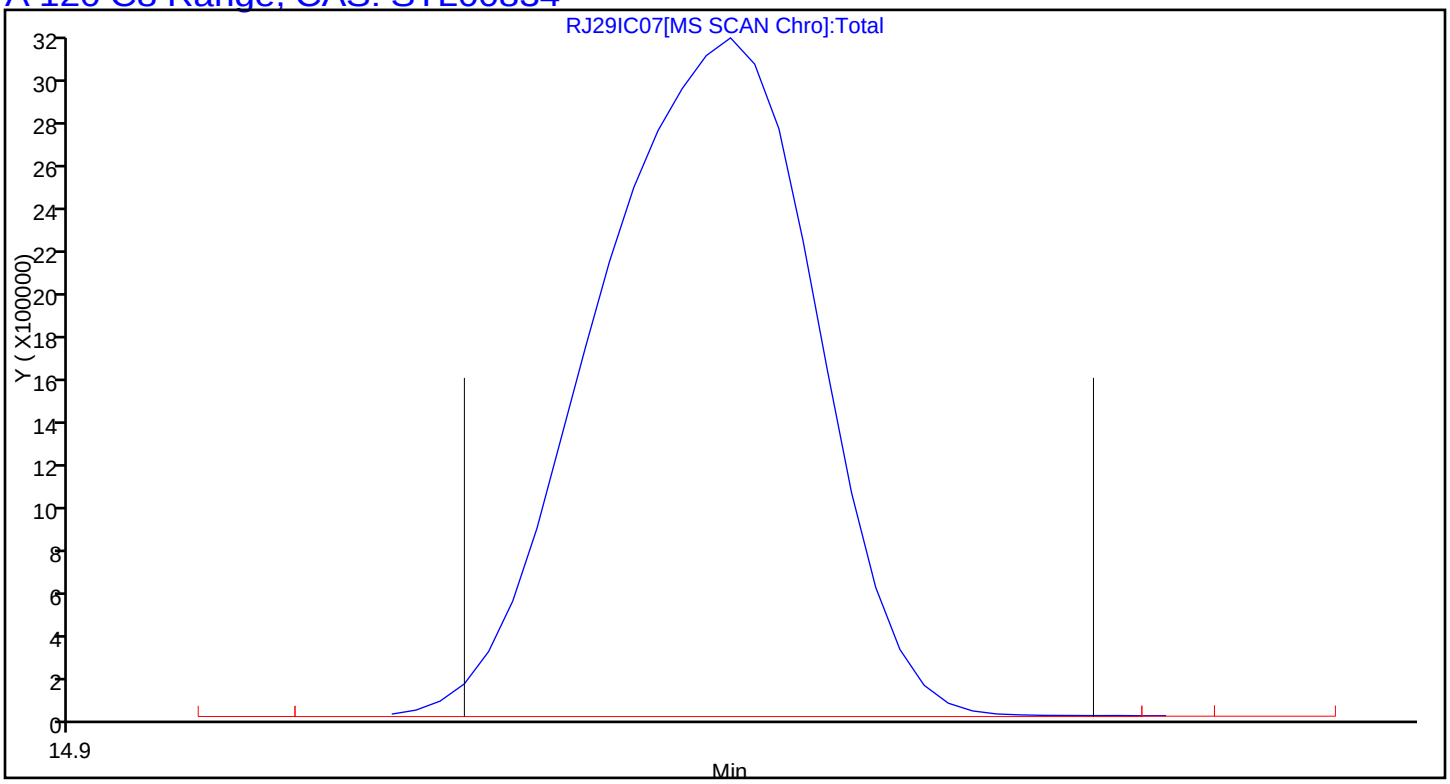


Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D				
Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 29-Oct-2015 20:18:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-009
Misc. Info.: 031526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:42 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:38:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.447	8.431	0.016	91	454948	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.631	10.619	0.012	94	2258988	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.848	16.842	0.006	85	2138361	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.593	19.590	0.003	44	1598369	4.00	4.05	
6 Chlorodifluoromethane	67	3.782	3.777	0.005	96	272574	8.00	6.91	
7 Propene	41	3.788	3.780	0.008	99	907376	8.00	5.77	
8 Dichlorodifluoromethane	85	3.842	3.831	0.011	99	2392864	8.00	6.88	
9 Chloromethane	52	3.998	3.984	0.014	99	355318	8.00	6.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.020	4.011	0.009	91	2325713	8.00	7.45	
11 Acetaldehyde	44	4.149	4.134	0.015	97	1986969	40.0	21.0	
12 Vinyl chloride	62	4.155	4.143	0.011	98	1143088	8.00	6.80	
14 Butadiene	54	4.235	4.224	0.011	97	927708	8.00	6.99	
13 Butane	43	4.241	4.228	0.013	91	1532407	8.00	6.83	
15 Bromomethane	94	4.510	4.498	0.012	99	1136498	8.00	7.06	
16 Chloroethane	64	4.645	4.627	0.018	92	590343	8.00	7.02	
17 Ethanol	31	4.780	4.758	0.022	87	1383312	40.0	31.0	
18 Vinyl bromide	106	4.915	4.895	0.020	99	1158727	8.00	7.40	
19 2-Methylbutane	43	4.969	4.957	0.012	90	1328810	8.00	7.51	
21 Acrolein	56	5.152	5.139	0.013	90	466743	8.00	8.14	
20 Trichlorofluoromethane	101	5.157	5.144	0.013	99	3042568	8.00	7.58	
22 Acetonitrile	40	5.217	5.199	0.018	99	492512	8.00	7.33	
23 Acetone	58	5.260	5.246	0.014	99	1860214	24.0	17.5	
24 Pentane	72	5.362	5.349	0.013	97	236807	8.00	7.75	
25 Isopropyl alcohol	45	5.373	5.358	0.015	98	4899594	24.0	22.2	
26 Ethyl ether	31	5.503	5.493	0.010	93	1125617	8.00	7.41	
27 1,1-Dichloroethene	96	5.783	5.767	0.016	98	1221079	8.00	7.71	
28 Acrylonitrile	53	5.864	5.847	0.017	95	944908	8.00	7.80	
29 2-Methyl-2-propanol	59	5.896	5.885	0.011	92	2261803	8.00	7.70	
30 1,1,2-Trichloro-1,2,2-trif	101	5.961	5.950	0.011	98	2642823	8.00	7.78	
31 Methylene Chloride	84	6.090	6.069	0.021	95	1088367	8.00	7.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.107	6.090	0.017	95	941169	8.00	6.91	
33 Carbon disulfide	76	6.231	6.212	0.019	97	3461632	8.00	7.62	
34 trans-1,2-Dichloroethene	96	6.840	6.822	0.018	99	1274909	8.00	7.74	
35 2-Methylpentane	43	6.883	6.870	0.013	95	2395365	8.00	7.45	
36 Methyl tert-butyl ether	73	6.959	6.954	0.005	97	3242166	8.00	7.79	
37 1,1-Dichloroethane	63	7.217	7.200	0.017	100	2240128	8.00	7.60	
38 Vinyl acetate	43	7.325	7.310	0.015	100	3344517	8.00	8.08	
39 2-Butanone (MEK)	72	7.724	7.715	0.009	99	615977	8.00	6.65	
40 Hexane	56	7.800	7.791	0.009	85	1022501	8.00	7.77	
141 Isopropyl ether	45	7.945	7.935	0.010	98	4223787	8.00	7.56	
41 cis-1,2-Dichloroethene	96	8.145	8.125	0.020	93	1325594	8.00	7.80	
42 Ethyl acetate	43	8.323	8.316	0.007	100	2730736	8.00	7.74	
43 Chloroform	83	8.479	8.461	0.018	97	2505006	8.00	7.51	
144 Tert-butyl ethyl ether	59	8.587	8.579	0.008	93	3771671	8.00	7.88	
44 Tetrahydrofuran	42	8.835	8.833	0.002	94	1344781	8.00	7.71	
45 1,1,1-Trichloroethane	97	9.466	9.451	0.015	96	2545336	8.00	7.93	
46 1,2-Dichloroethane	62	9.547	9.530	0.017	97	1617907	8.00	7.67	
49 n-Butanol	31	10.021	10.023	-0.002	81	415934	8.00	7.84	
47 Benzene	78	10.054	10.041	0.013	97	3697831	8.00	7.71	
48 Cyclohexane	69	10.075	10.062	0.013	95	570677	8.00	7.89	
50 Carbon tetrachloride	117	10.092	10.077	0.015	98	2638814	8.00	8.54	
51 2,3-Dimethylpentane	71	10.226	10.217	0.009	90	844188	8.00	7.91	
52 Thiophene	84	10.329	10.313	0.016	95	2113673	8.00	7.98	
142 Tert-amyl methyl ether	73	10.571	10.568	0.003	99	3476380	8.00	7.86	
53 Isooctane	57	10.922	10.911	0.011	99	6312213	8.00	7.89	
54 n-Heptane	71	11.348	11.340	0.008	88	1351309	8.00	8.07	
55 1,2-Dichloropropane	63	11.359	11.346	0.013	95	1473064	8.00	7.87	
56 Trichloroethene	130	11.423	11.410	0.013	94	1845788	8.00	8.17	
57 Dibromomethane	93	11.477	11.467	0.010	90	1514037	8.00	7.86	
58 Dichlorobromomethane	83	11.666	11.655	0.011	99	2665437	8.00	8.23	
59 1,4-Dioxane	88	11.671	11.668	0.003	82	586133	8.00	7.99	
60 Methyl methacrylate	41	11.806	11.801	0.005	89	1618663	8.00	8.09	
61 Methylcyclohexane	83	12.356	12.347	0.009	95	2779758	8.00	8.05	
62 4-Methyl-2-pentanone (MIBK	43	12.836	12.831	0.005	95	2991645	8.00	6.56	
63 cis-1,3-Dichloropropene	75	12.901	12.891	0.010	91	2248978	8.00	8.37	
64 trans-1,3-Dichloropropene	75	13.812	13.804	0.008	97	2065343	8.00	8.37	
65 Toluene	91	13.990	13.983	0.007	94	4570212	8.00	7.88	
66 1,1,2-Trichloroethane	83	14.066	14.060	0.006	97	1329359	8.00	7.77	
67 2-Methylthiophene	97	14.184	14.179	0.005	97	3819634	8.00	8.09	
68 3-Methylthiophene	97	14.465	14.457	0.008	98	3785045	8.00	8.12	
69 2-Hexanone	58	14.637	14.637	0.000	95	1681654	8.00	8.23	
71 Chlorodibromomethane	129	15.031	15.023	0.008	98	3071816	8.00	9.06	
70 n-Octane	85	15.058	15.053	0.005	89	1564530	8.00	8.12	
72 Ethylene Dibromide	107	15.441	15.432	0.009	99	2633951	8.00	8.28	
73 Tetrachloroethene	129	15.608	15.602	0.006	98	1724895	8.00	8.15	
74 Chlorobenzene	112	16.924	16.918	0.006	96	3791193	8.00	8.00	
75 2,3-Dimethylheptane	43	17.107	17.100	0.007	97	3775786	8.00	7.71	
76 Ethylbenzene	91	17.431	17.426	0.005	98	6073848	8.00	8.02	
77 2-Ethylthiophene	97	17.587	17.579	0.008	97	4609501	8.00	8.28	
78 m-Xylene & p-Xylene	91	17.711	17.703	0.008	100	9448325	16.0	16.2	
79 Bromoform	173	18.336	18.330	0.006	98	3274328	8.00	10.3	
80 Styrene	104	18.460	18.457	0.003	97	3808385	8.00	8.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.552	18.547	0.005	88	3087316	8.00	8.00	
82 o-Xylene	91	18.563	18.559	0.004	99	4860434	8.00	8.05	
83 1,1,2,2-Tetrachloroethane	83	19.091	19.088	0.003	98	3547918	8.00	8.17	
84 1,2,3-Trichloropropane	110	19.356	19.352	0.004	98	1078212	8.00	8.18	
85 Isopropylbenzene	105	19.593	19.589	0.004	95	6924078	8.00	8.07	
86 N-Propylbenzene	120	20.558	20.554	0.004	99	2117797	8.00	8.61	
87 2-Chlorotoluene	126	20.574	20.572	0.002	92	1873215	8.00	8.41	
88 4-Ethyltoluene	105	20.849	20.844	0.005	99	7108118	8.00	8.38	
89 1,3,5-Trimethylbenzene	120	21.006	21.000	0.006	94	3525676	8.00	8.67	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	92	3241964	8.00	9.35	
91 n-Decane	57	21.728	21.726	0.002	90	4034285	8.00	8.10	
92 tert-Butylbenzene	119	21.809	21.802	0.007	95	6609661	8.00	8.52	
93 1,2,4-Trimethylbenzene	105	21.836	21.832	0.004	95	6067725	8.00	8.43	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	97	4385579	8.00	8.47	
95 sec-Butylbenzene	105	22.365	22.361	0.004	99	8724571	8.00	8.35	
96 Benzyl chloride	91	22.472	22.469	0.003	100	5656118	8.00	8.65	
97 1,4-Dichlorobenzene	146	22.494	22.487	0.007	96	4531126	8.00	8.48	
98 4-Isopropyltoluene	119	22.731	22.729	0.002	97	8025529	8.00	8.53	
99 1,2,3-Trimethylbenzene	105	22.780	22.776	0.004	97	4780460	8.00	8.24	
100 Butylcyclohexane	83	22.985	22.980	0.005	95	4506164	8.00	8.12	
101 1,2-Dichlorobenzene	146	23.233	23.227	0.006	98	4273803	8.00	8.39	
102 2,3-Dihydroindene	117	23.265	23.259	0.006	95	5991009	8.00	8.51	
103 Indene	116	23.529	23.527	0.002	93	4563045	8.00	8.93	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	7009088	8.00	8.06	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.532	24.528	0.004	98	5841893	8.00	8.45	
143 1,2-Dibromo-3-Chloropropan	157	24.586	24.582	0.004	90	2152032	8.00	9.58	
106 Undecane	57	24.608	24.605	0.003	94	4463670	8.00	7.78	
107 1,2,4,5-Tetramethylbenzene	119	25.444	25.441	0.003	98	6608938	8.00	8.31	
108 1,2,3,5-Tetramethylbenzene	119	25.573	25.569	0.004	96	3940832	8.00	8.16	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	5397558	8.00	8.15	
110 Dodecane	57	27.148	27.145	0.003	98	4228844	8.00	7.87	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	94	4015190	8.00	8.63	
112 Naphthalene	128	27.428	27.426	0.002	99	8451930	8.00	7.76	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	5205487	8.00	8.17	
114 Hexachlorobutadiene	225	27.989	27.986	0.003	95	3241421	8.00	9.15	
115 1,2,3-Trichlorobenzene	180	28.016	28.012	0.004	97	3835748	8.00	8.61	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	98	4734820	25.0	32.4	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	98	3723019	25.0	32.3	
A 118 C6 Range	1	7.816	(7.746-7.897)		0	8057924	8.00	7.78	
A 119 Toluene Range	1	14.002	(13.920-14.074)		0	19564471	8.00	14.0	
A 120 C8 Range	1	15.058	(14.988-15.128)		0	22138042	8.00	7.68	
S 124 Xylenes, Total	100				0		24.0	24.3	
S 145 1,2-Dichloroethene, Total	1				0		16.0	15.5	

Reagents:

CDN2C00X20_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

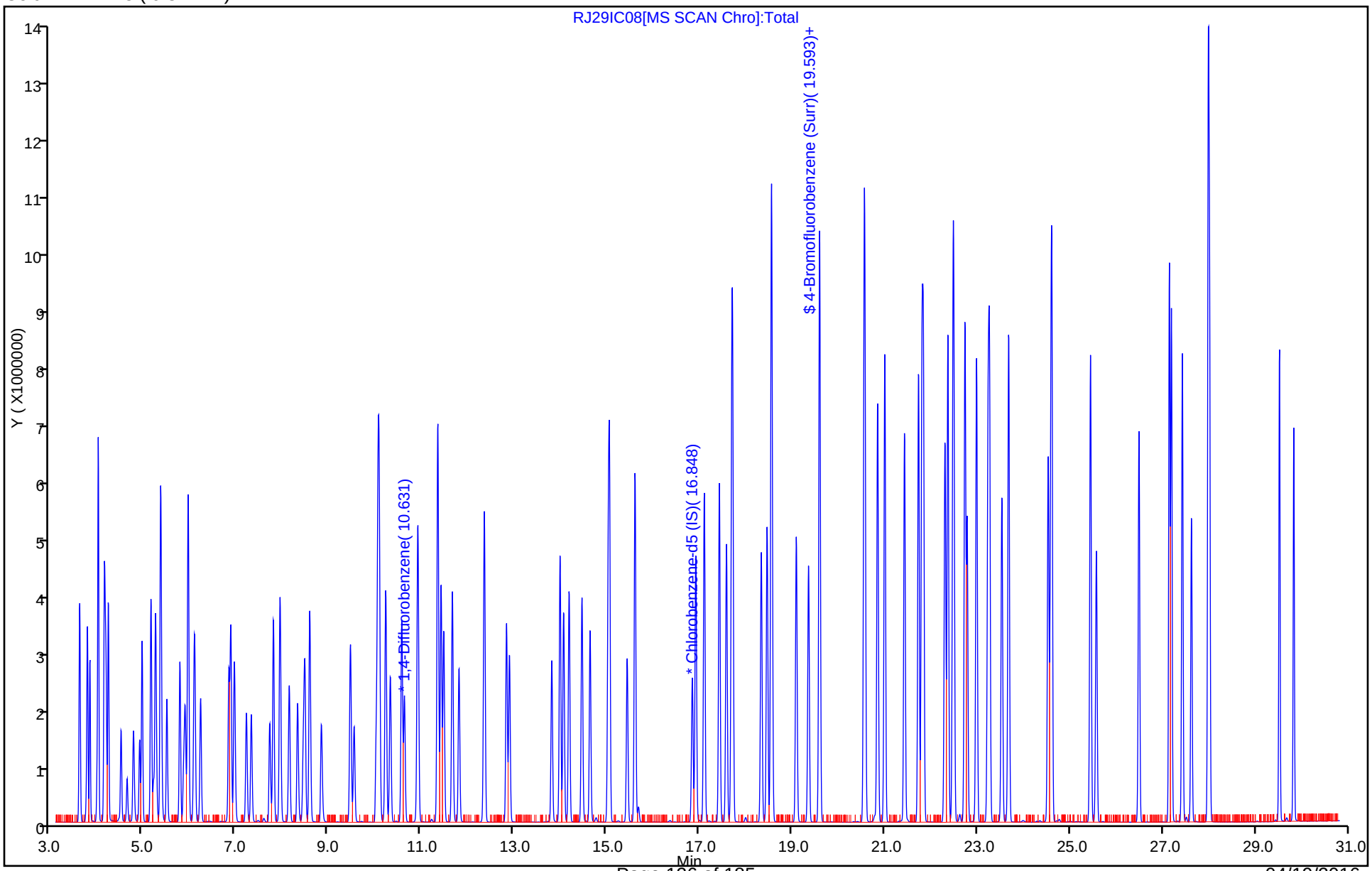
Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D

Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

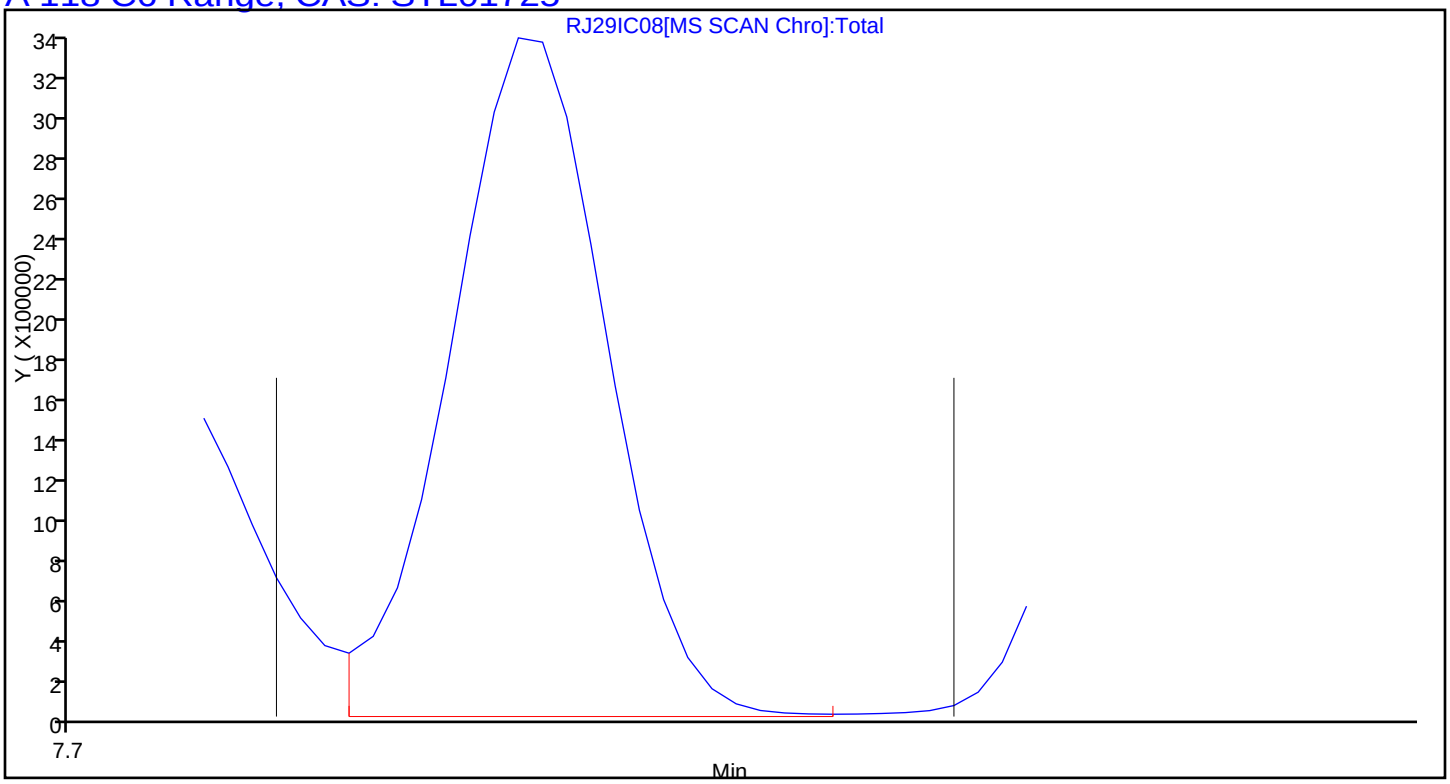


Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D				
Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

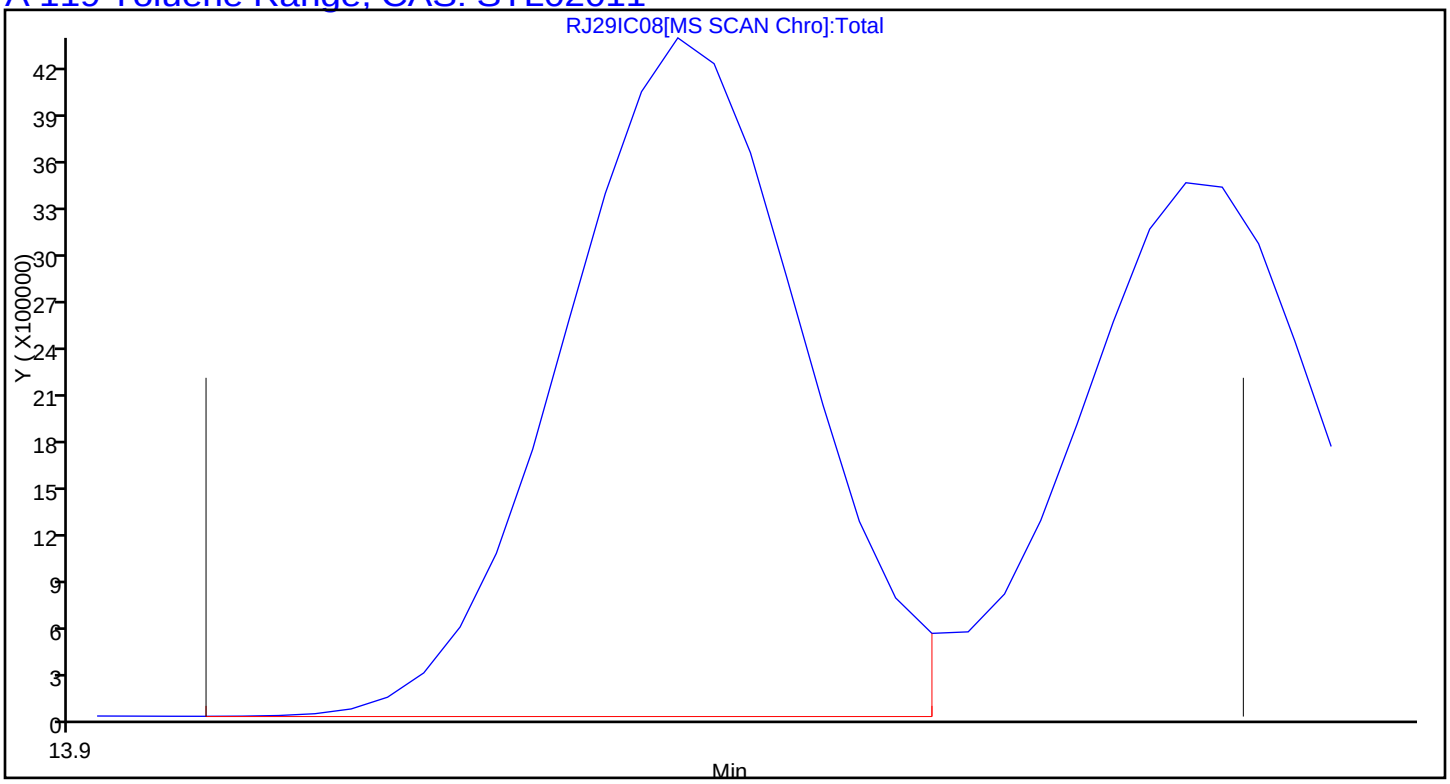


Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D				
Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

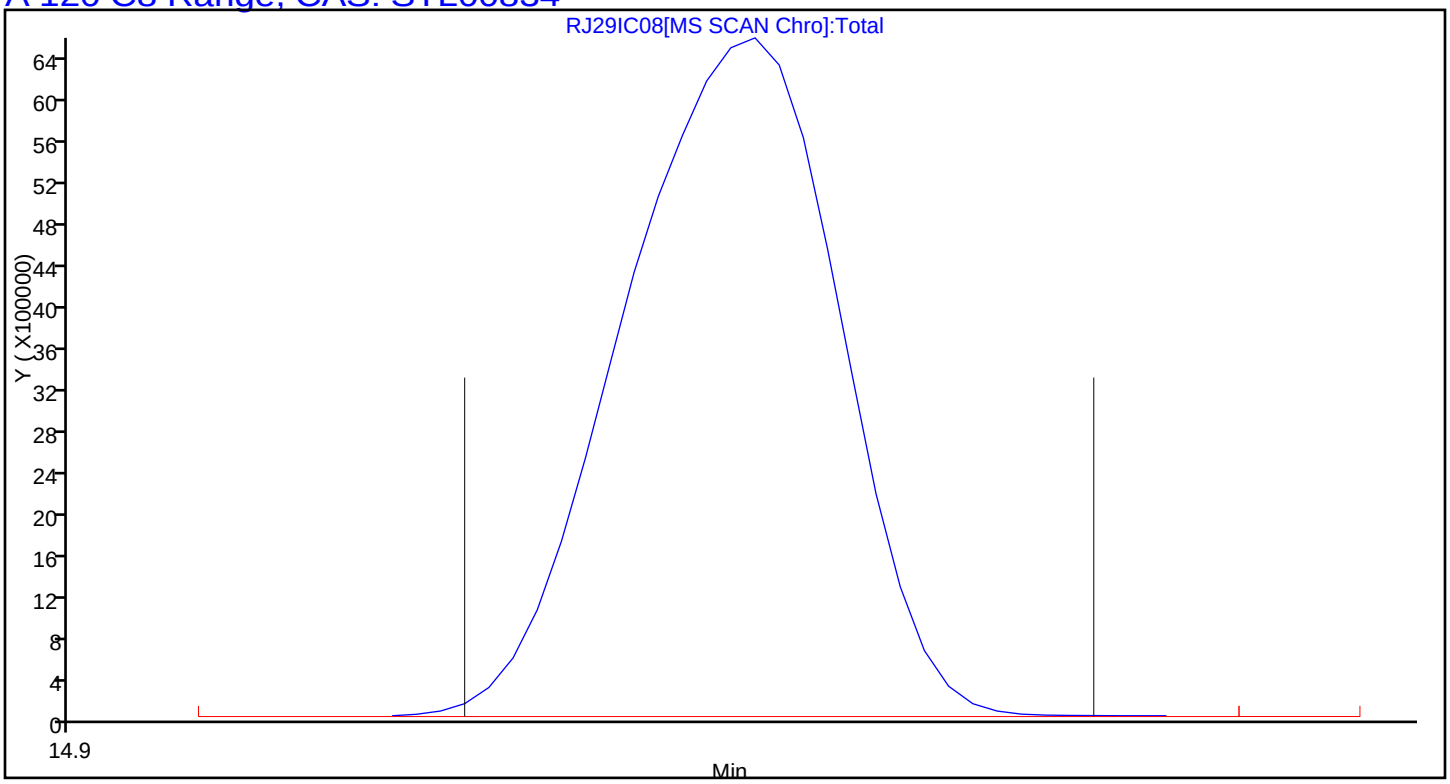


Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D				
Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 29-Oct-2015 21:11:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-010
Misc. Info.: 031525
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:53 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:38:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.458	8.431	0.027	95	510396	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.636	10.619	0.017	94	2491041	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.854	16.842	0.012	84	2352299	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.598	19.590	0.008	64	1712632	4.00	3.94	
6 Chlorodifluoromethane	67	3.782	3.777	0.005	96	540426	16.0	12.2	
7 Propene	41	3.788	3.780	0.008	98	1765222	16.0	10.0	
8 Dichlorodifluoromethane	85	3.842	3.831	0.011	99	5027990	16.0	12.9	
9 Chloromethane	52	4.003	3.984	0.019	99	694820	16.0	12.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.025	4.011	0.014	98	4732267	16.0	13.5	
11 Acetaldehyde	44	4.160	4.134	0.026	88	3712581	80.0	35.0	
12 Vinyl chloride	62	4.160	4.143	0.017	98	2273528	16.0	12.1	
14 Butadiene	54	4.241	4.224	0.017	75	1868473	16.0	12.6	
13 Butane	43	4.246	4.228	0.018	84	3006124	16.0	11.9	
15 Bromomethane	94	4.521	4.498	0.023	99	2339668	16.0	13.0	
16 Chloroethane	64	4.651	4.627	0.024	91	1227936	16.0	13.0	
17 Ethanol	31	4.785	4.758	0.027	86	2644048	80.0	52.8	
18 Vinyl bromide	106	4.926	4.895	0.031	100	2483740	16.0	14.1	
19 2-Methylbutane	43	4.974	4.957	0.017	89	2711263	16.0	13.7	
21 Acrolein	56	5.163	5.139	0.024	90	965739	16.0	15.0	
20 Trichlorofluoromethane	101	5.168	5.144	0.024	99	6348924	16.0	14.1	
22 Acetonitrile	40	5.228	5.199	0.029	99	1013753	16.0	13.5	
23 Acetone	58	5.265	5.246	0.019	95	3808835	48.0	32.0	
24 Pentane	72	5.368	5.349	0.019	96	497795	16.0	14.5	
25 Isopropyl alcohol	45	5.389	5.358	0.031	96	9573808	48.0	38.6	
26 Ethyl ether	31	5.508	5.493	0.015	90	2248035	16.0	13.2	
27 1,1-Dichloroethene	96	5.794	5.767	0.027	98	2630603	16.0	14.8	
28 Acrylonitrile	53	5.875	5.847	0.028	97	2015627	16.0	14.8	
29 2-Methyl-2-propanol	59	5.907	5.885	0.022	93	4735364	16.0	14.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.972	5.950	0.022	97	5571061	16.0	14.6	
31 Methylene Chloride	84	6.096	6.069	0.027	94	2304869	16.0	13.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.117	6.090	0.027	95	1846882	16.0	12.1	
33 Carbon disulfide	76	6.236	6.212	0.024	97	7342693	16.0	14.4	
34 trans-1,2-Dichloroethene	96	6.851	6.822	0.029	98	2735476	16.0	14.8	
35 2-Methylpentane	43	6.888	6.870	0.018	94	4893654	16.0	13.6	
36 Methyl tert-butyl ether	73	6.969	6.954	0.015	96	6855095	16.0	14.7	
37 1,1-Dichloroethane	63	7.228	7.200	0.028	100	4716818	16.0	14.3	
38 Vinyl acetate	43	7.336	7.310	0.026	100	6942989	16.0	14.9	
39 2-Butanone (MEK)	72	7.730	7.715	0.015	99	1311844	16.0	12.6	
40 Hexane	56	7.811	7.791	0.019	83	2144501	16.0	14.5	
141 Isopropyl ether	45	7.951	7.935	0.016	97	8506719	16.0	13.6	
41 cis-1,2-Dichloroethene	96	8.150	8.125	0.025	92	2838815	16.0	14.9	
42 Ethyl acetate	43	8.334	8.316	0.018	100	5617273	16.0	14.2	
43 Chloroform	83	8.490	8.461	0.029	97	5247650	16.0	14.0	
144 Tert-butyl ethyl ether	59	8.592	8.579	0.013	92	7853517	16.0	14.6	
44 Tetrahydrofuran	42	8.840	8.833	0.007	94	2810050	16.0	14.4	
45 1,1,1-Trichloroethane	97	9.471	9.451	0.020	96	5363645	16.0	14.9	
46 1,2-Dichloroethane	62	9.552	9.530	0.022	97	3367163	16.0	14.5	
49 n-Butanol	31	10.027	10.023	0.004	78	828029	16.0	14.1	
47 Benzene	78	10.065	10.041	0.024	96	7615521	16.0	14.4	
48 Cyclohexane	69	10.081	10.062	0.019	90	1171679	16.0	14.7	
50 Carbon tetrachloride	117	10.097	10.077	0.020	98	5976711	16.0	17.5	
51 2,3-Dimethylpentane	71	10.232	10.217	0.015	90	1795323	16.0	15.3	
52 Thiophene	84	10.334	10.313	0.021	94	4499652	16.0	15.4	
142 Tert-amyl methyl ether	73	10.582	10.568	0.014	99	7336251	16.0	15.0	
53 Isooctane	57	10.927	10.911	0.016	99	12947237	16.0	14.7	
54 n-Heptane	71	11.359	11.340	0.019	85	2814638	16.0	15.2	
55 1,2-Dichloropropane	63	11.364	11.346	0.018	95	3028775	16.0	14.7	
56 Trichloroethene	130	11.429	11.410	0.019	96	4036727	16.0	16.2	
57 Dibromomethane	93	11.483	11.467	0.016	89	3195717	16.0	15.0	
58 Dichlorobromomethane	83	11.671	11.655	0.016	99	5602203	16.0	15.7	
59 1,4-Dioxane	88	11.677	11.668	0.009	82	1231880	16.0	15.2	
60 Methyl methacrylate	41	11.817	11.801	0.016	87	3303219	16.0	15.0	
61 Methylcyclohexane	83	12.362	12.347	0.015	95	5899945	16.0	15.5	
62 4-Methyl-2-pentanone (MIBK	43	12.842	12.831	0.011	94	6069313	16.0	12.1	
63 cis-1,3-Dichloropropene	75	12.906	12.891	0.015	90	4732844	16.0	16.0	
64 trans-1,3-Dichloropropene	75	13.818	13.804	0.014	96	4383688	16.0	16.1	
65 Toluene	91	13.996	13.983	0.013	94	9654968	16.0	15.1	
66 1,1,2-Trichloroethane	83	14.076	14.060	0.016	96	2808159	16.0	14.9	
67 2-Methylthiophene	97	14.195	14.179	0.016	96	8094755	16.0	15.6	
68 3-Methylthiophene	97	14.470	14.457	0.013	98	8024092	16.0	15.6	
69 2-Hexanone	58	14.648	14.637	0.011	97	3524101	16.0	15.7	
71 Chlorodibromomethane	129	15.036	15.023	0.013	97	6621514	16.0	17.8	
70 n-Octane	85	15.063	15.053	0.010	86	3249197	16.0	15.3	
72 Ethylene Dibromide	107	15.446	15.432	0.014	99	5615191	16.0	16.0	
73 Tetrachloroethene	129	15.613	15.602	0.011	96	3688597	16.0	15.8	
74 Chlorobenzene	112	16.929	16.918	0.011	97	8108986	16.0	15.6	
75 2,3-Dimethylheptane	43	17.107	17.100	0.007	91	7408213	16.0	13.8	
76 Ethylbenzene	91	17.436	17.426	0.010	97	12678164	16.0	15.2	
77 2-Ethylthiophene	97	17.587	17.579	0.008	96	9807914	16.0	16.0	
78 m-Xylene & p-Xylene	91	17.716	17.703	0.013	99	19211149	32.0	30.0	
79 Bromoform	173	18.342	18.330	0.012	98	7361637	16.0	21.1	
80 Styrene	104	18.466	18.457	0.009	97	8253951	16.0	17.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.552	18.547	0.005	87	5942521	16.0	14.0	
82 o-Xylene	91	18.568	18.559	0.009	99	9903343	16.0	14.9	
83 1,1,2,2-Tetrachloroethane	83	19.097	19.088	0.009	98	7445066	16.0	15.6	
84 1,2,3-Trichloropropane	110	19.361	19.352	0.009	97	2311190	16.0	15.9	
85 Isopropylbenzene	105	19.598	19.589	0.009	95	14334362	16.0	15.2	
86 N-Propylbenzene	120	20.563	20.554	0.009	100	4500545	16.0	16.6	
87 2-Chlorotoluene	126	20.580	20.572	0.008	93	3958594	16.0	16.2	
88 4-Ethyltoluene	105	20.855	20.844	0.011	98	14980816	16.0	16.1	
89 1,3,5-Trimethylbenzene	120	21.011	21.000	0.011	95	7582349	16.0	16.9	
90 Alpha Methyl Styrene	118	21.432	21.426	0.006	92	7136341	16.0	18.7	
91 n-Decane	57	21.739	21.726	0.013	89	8106520	16.0	14.8	
92 tert-Butylbenzene	119	21.814	21.802	0.012	95	13949432	16.0	16.4	
93 1,2,4-Trimethylbenzene	105	21.847	21.832	0.015	95	12655271	16.0	16.0	
94 1,3-Dichlorobenzene	146	22.311	22.300	0.011	95	9631974	16.0	16.9	
95 sec-Butylbenzene	105	22.370	22.361	0.009	98	18121323	16.0	15.8	
96 Benzyl chloride	91	22.483	22.469	0.014	99	11530116	16.0	16.0	
97 1,4-Dichlorobenzene	146	22.505	22.487	0.018	97	9754192	16.0	16.6	
98 4-Isopropyltoluene	119	22.742	22.729	0.013	97	16948735	16.0	16.4	
99 1,2,3-Trimethylbenzene	105	22.785	22.776	0.009	97	10278175	16.0	16.1	
100 Butylcyclohexane	83	22.990	22.980	0.010	95	9400588	16.0	15.4	
101 1,2-Dichlorobenzene	146	23.238	23.227	0.011	98	9269460	16.0	16.5	
102 2,3-Dihydroindene	117	23.270	23.259	0.011	95	12593037	16.0	16.3	
103 Indene	116	23.535	23.527	0.008	94	10067376	16.0	17.9	
104 n-Butylbenzene	91	23.686	23.674	0.012	98	14478085	16.0	15.1	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.538	24.528	0.010	98	12796605	16.0	16.8	
143 1,2-Dibromo-3-Chloropropan	157	24.592	24.582	0.010	88	4871923	16.0	19.7	
106 Undecane	57	24.619	24.605	0.014	92	8642784	16.0	13.7	
107 1,2,4,5-Tetramethylbenzene	119	25.449	25.441	0.008	98	14315531	16.0	16.4	
108 1,2,3,5-Tetramethylbenzene	119	25.578	25.569	0.009	97	8794750	16.0	16.6	
109 1,2,3,4-Tetramethylbenzene	119	26.495	26.489	0.006	98	11949321	16.0	16.4	
110 Dodecane	57	27.153	27.145	0.008	97	8556466	16.0	14.5	
111 1,2,4-Trichlorobenzene	180	27.196	27.189	0.007	93	8897824	16.0	17.4	
112 Naphthalene	128	27.433	27.426	0.007	99	18211095	16.0	15.2	
113 Benzo(b)thiophene	134	27.627	27.623	0.004	100	11672515	16.0	16.7	
114 Hexachlorobutadiene	225	27.994	27.986	0.008	94	7178125	16.0	18.4	
115 1,2,3-Trichlorobenzene	180	28.021	28.012	0.009	97	7956596	16.0	16.2	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	98	6507661	50.0	40.5	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	4488346	50.0	35.4	
A 118 C6 Range	1	7.821	(7.746-7.908)		0	16395428	16.0	14.4	
A 119 Toluene Range	1	14.032	(13.920-14.128)		0	40862736	16.0	26.6	
A 120 C8 Range	1	15.091	(14.999-15.214)		0	44749832	16.0	14.1	
S 124 Xylenes, Total	100				0		48.0	44.9	
S 145 1,2-Dichloroethene, Total	1				0		32.0	29.7	

Reagents:

CDN2C00X40_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

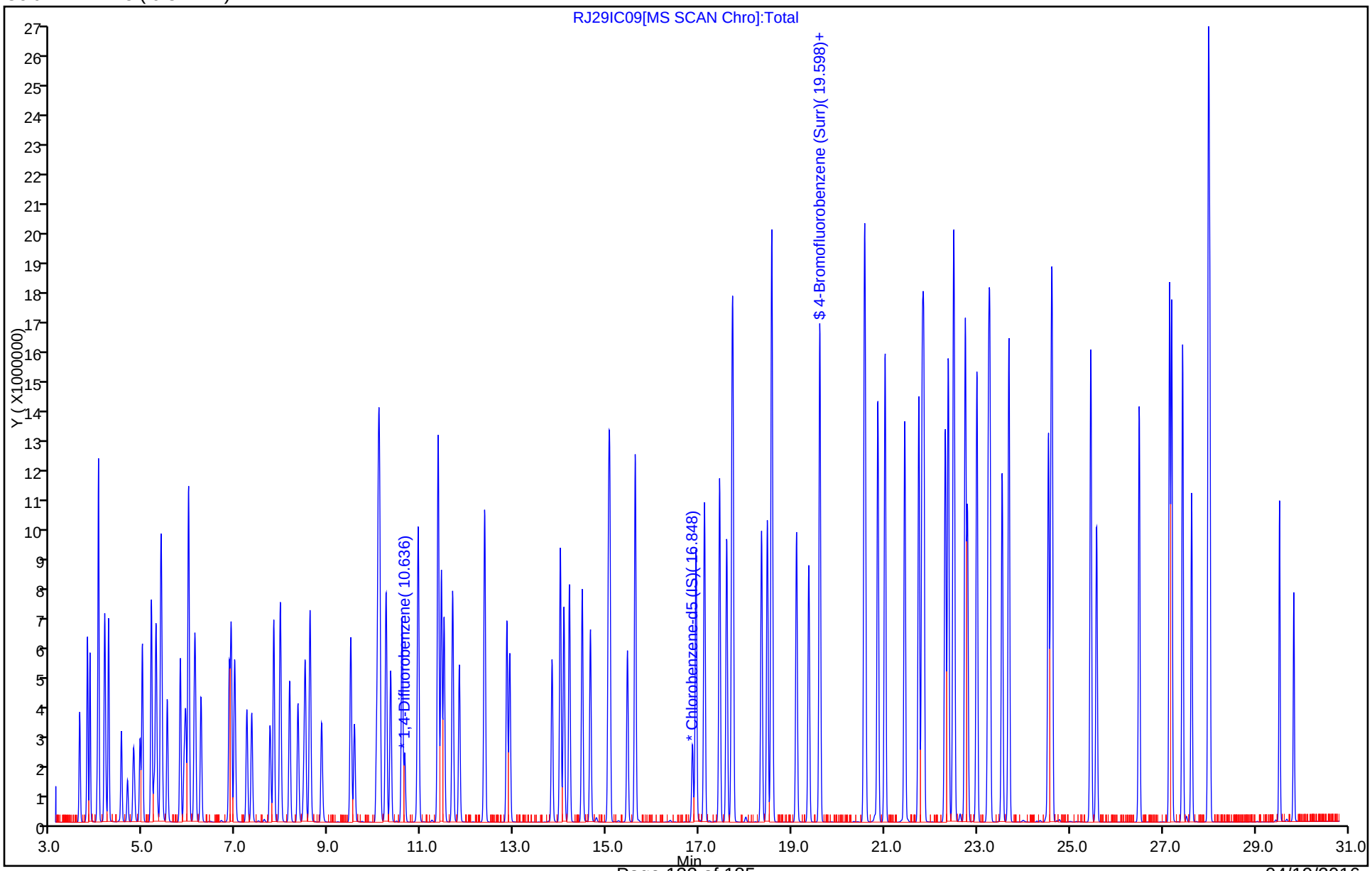
Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

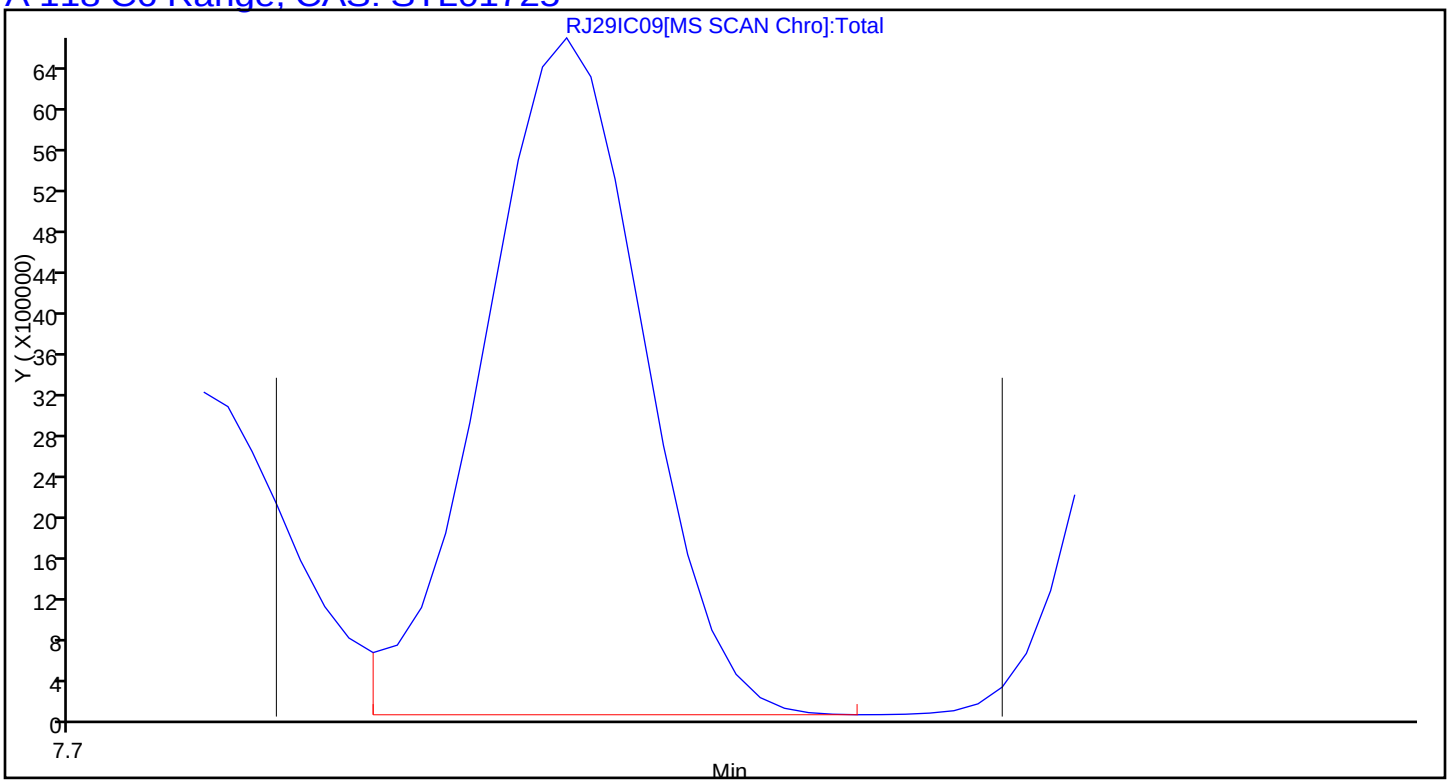


Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

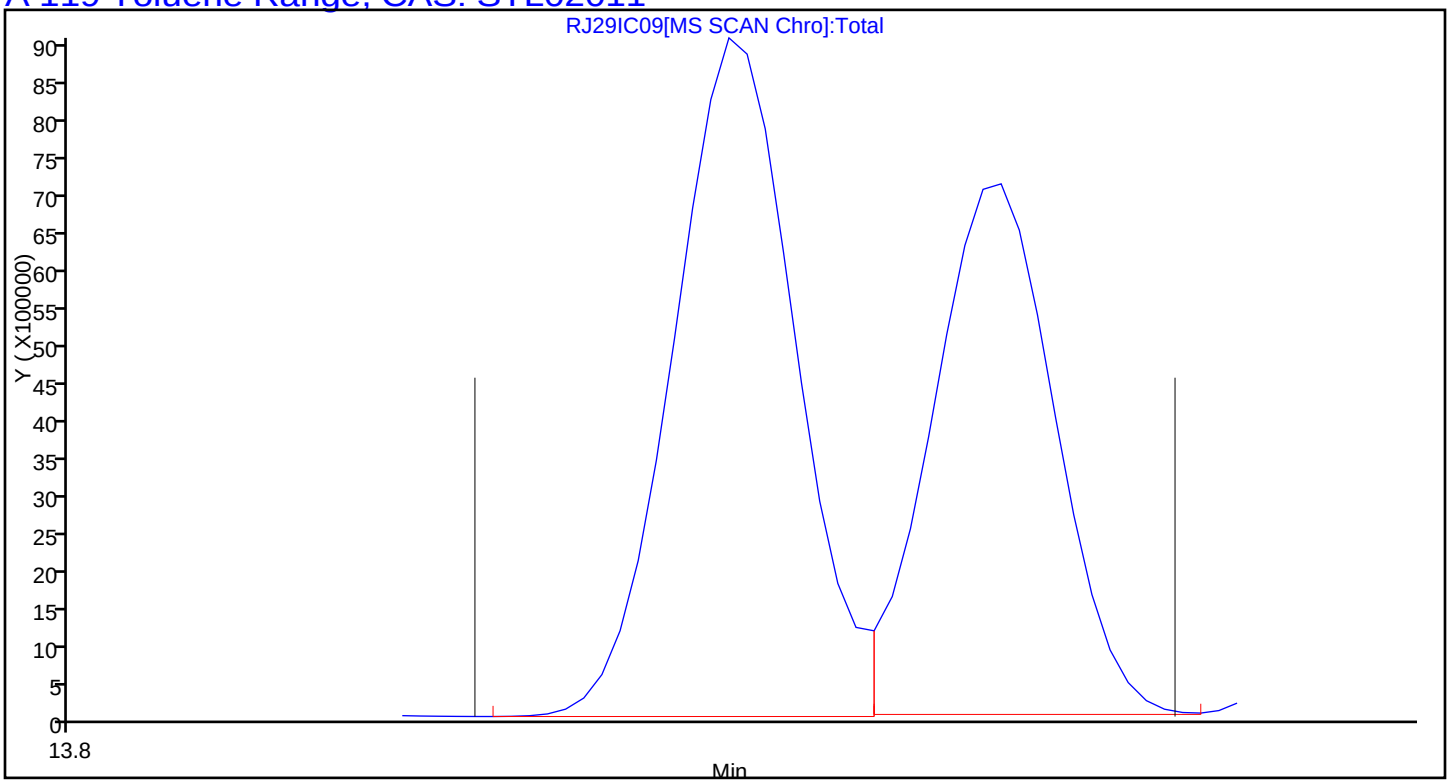


Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

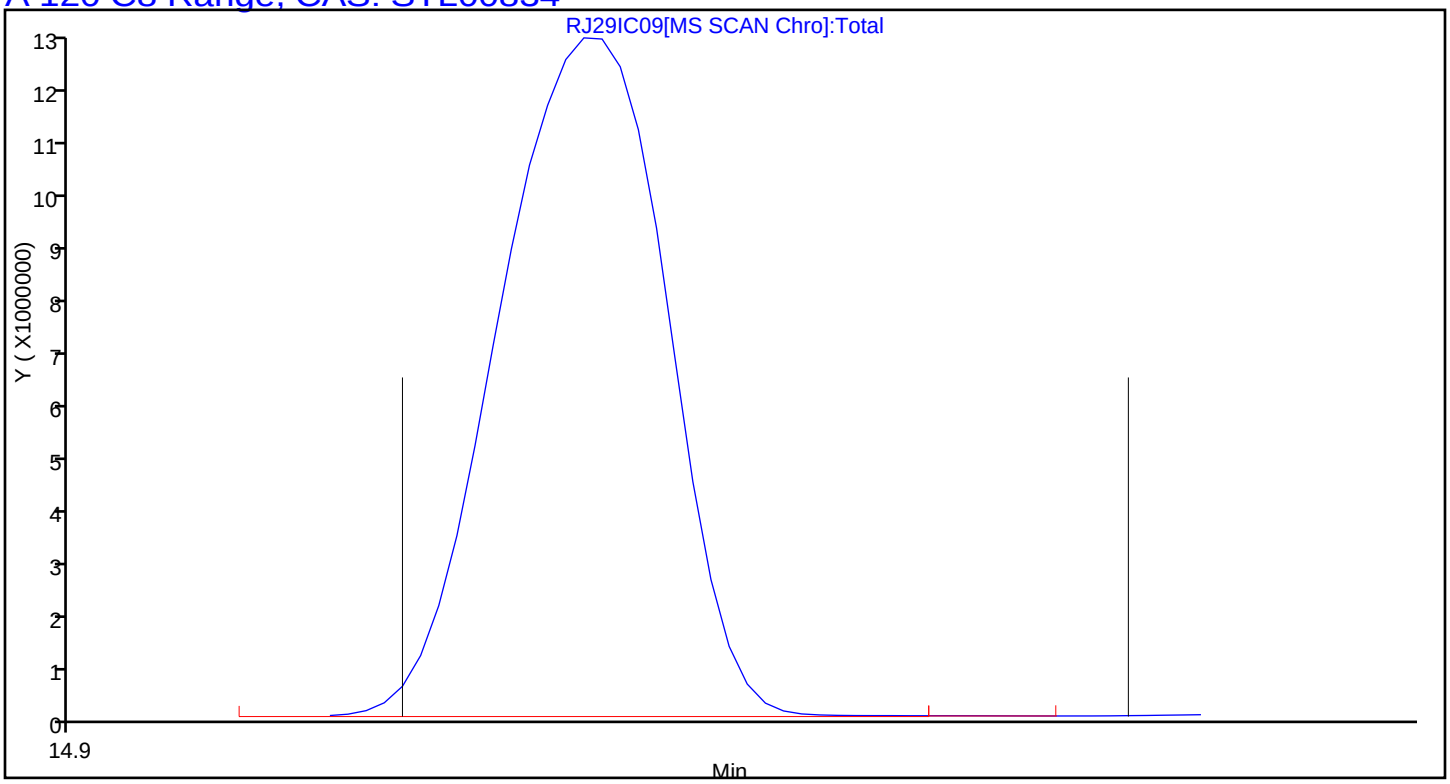


Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab Sample ID: ICV 140-3621/12 Calibration Date: 10/29/2015 22:54

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RJ29ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3468	0.3265		1.88	2.00	-5.9	35.0
Propene	Ave	1.381	1.043		1.51	2.00	-24.5	35.0
Dichlorodifluoromethane	Ave	3.057	2.465		1.61	2.00	-19.4	35.0
Chloromethane	Ave	0.4474	0.3819		1.71	2.00	-14.6	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.744	2.536		1.85	2.00	-7.6	35.0
Acetaldehyde	Ave	0.8319	0.4637		5.58	10.0	-44.3*	35.0
Vinyl chloride	Ave	1.477	1.303		1.77	2.00	-11.8	35.0
1,3-Butadiene	Ave	1.166	1.026		1.76	2.00	-12.1	35.0
Butane	Ave	1.974	1.821		1.85	2.00	-7.7	35.0
Bromomethane	Ave	1.415	1.225		1.73	2.00	-13.4	35.0
Chloroethane	Ave	0.7397	0.6572		1.78	2.00	-11.2	35.0
Ethanol	Ave	0.3923	0.3243		8.27	10.0	-17.3	35.0
Vinyl bromide	Ave	1.377	1.355		1.97	2.00	-1.6	35.0
2-Methylbutane	Ave	1.555	1.538		1.98	2.00	-1.1	35.0
Acrolein	Ave	0.5039	0.5993		2.38	2.00	18.9	35.0
Trichlorofluoromethane	Ave	3.529	3.376		1.91	2.00	-4.4	35.0
Acetonitrile	Ave	0.5905	0.5262		1.78	2.00	-10.9	35.0
Acetone	Ave	0.9331	0.7005		4.51	6.00	-24.9	35.0
Isopropyl alcohol	Ave	1.942	1.564		4.83	6.00	-19.5	35.0
Pentane	Ave	0.2686	0.2924		2.18	2.00	8.9	35.0
Ethyl ether	Ave	1.335	1.297		1.94	2.00	-2.8	35.0
1,1-Dichloroethene	Ave	1.392	1.361		1.96	2.00	-2.2	35.0
Acrylonitrile	Ave	1.065	1.062		2.00	2.00	-0.2	35.0
tert-Butyl alcohol	Ave	2.583	2.516		1.95	2.00	-2.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.988	2.935		1.97	2.00	-1.8	35.0
Methylene Chloride	Ave	1.348	1.575		2.34	2.00	16.9	35.0
3-Chloropropene	Ave	1.198	1.030		1.72	2.00	-14.0	35.0
Carbon disulfide	Ave	3.992	3.799		1.90	2.00	-4.8	35.0
trans-1,2-Dichloroethene	Ave	1.449	1.400		1.93	2.00	-3.4	35.0
2-Methylpentane	Ave	2.828	3.006		2.13	2.00	6.3	35.0
Methyl tert-butyl ether	Ave	3.658	3.607		1.97	2.00	-1.4	35.0
1,1-Dichloroethane	Ave	2.592	2.507		1.94	2.00	-3.3	35.0
Vinyl acetate	Ave	3.641	3.662		2.01	2.00	0.6	35.0
2-Butanone (MEK)	Ave	0.8144	0.6884		1.69	2.00	-15.5	35.0
Hexane	Ave	1.157	1.153		1.99	2.00	-0.4	35.0
Isopropyl ether	Ave	4.913	4.868		1.98	2.00	-0.9	35.0
cis-1,2-Dichloroethene	Ave	1.495	1.488		1.99	2.00	-0.5	35.0
Ethyl acetate	Ave	3.102	2.850		1.84	2.00	-8.1	35.0
Chloroform	Ave	2.933	2.801		1.91	2.00	-4.5	35.0
Tert-butyl ethyl ether	Ave	4.209	4.973		2.36	2.00	18.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab Sample ID: ICV 140-3621/12 Calibration Date: 10/29/2015 22:54

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RJ29ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.533	1.477		1.93	2.00	-3.7	35.0
1,1,1-Trichloroethane	Ave	2.823	2.786		1.97	2.00	-1.3	35.0
1,2-Dichloroethane	Ave	0.3736	0.3630		1.94	2.00	-2.8	35.0
1-Butanol	Ave	0.0940	0.0932		1.99	2.00	-0.8	35.0
Benzene	Ave	0.8488	0.8531		2.01	2.00	0.5	35.0
Cyclohexane	Ave	0.1281	0.1292		2.02	2.00	0.8	35.0
Carbon tetrachloride	Ave	0.5469	0.5747		2.10	2.00	5.1	35.0
2,3-Dimethylpentane	Ave	0.1890	0.1778		1.88	2.00	-5.9	35.0
Thiophene	Ave	0.4690	0.4944		2.11	2.00	5.4	35.0
Tert-amyl methyl ether	Ave	0.7829	0.8453		2.16	2.00	8.0	35.0
2,2,4-Trimethylpentane	Ave	1.416	1.429		2.02	2.00	1.0	35.0
Heptane	Ave	0.2964	0.3024		2.04	2.00	2.0	35.0
1,2-Dichloropropane	Ave	0.3316	0.3304		1.99	2.00	-0.4	35.0
Trichloroethene	Ave	0.4001	0.4127		2.06	2.00	3.1	35.0
Dibromomethane	Ave	0.3413	0.3419		2.00	2.00	0.2	35.0
Bromodichloromethane	Ave	0.5734	0.5783		2.02	2.00	0.9	35.0
1,4-Dioxane	Ave	0.1299	0.1303		2.01	2.00	0.3	35.0
Methyl methacrylate	Ave	0.3544	0.3477		1.96	2.00	-1.9	35.0
Methylcyclohexane	Ave	0.6115	0.5043		1.65	2.00	-17.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8079	0.6960		1.72	2.00	-13.8	35.0
cis-1,3-Dichloropropene	Ave	0.4758	0.4955		2.08	2.00	4.1	35.0
trans-1,3-Dichloropropene	Ave	0.4617	0.4856		2.10	2.00	5.2	35.0
Toluene	Ave	1.086	1.166		2.15	2.00	7.4	35.0
1,1,2-Trichloroethane	Ave	0.3200	0.3188		1.99	2.00	-0.4	35.0
2-Methylthiophene	Ave	0.8830	0.9622		2.18	2.00	9.0	35.0
3-Methylthiophene	Ave	0.8722	0.9822		2.25	2.00	12.6	35.0
2-Hexanone	Ave	0.3824	0.3788		1.98	2.00	-0.9	35.0
Dibromochloromethane	Ave	0.6340	0.6677		2.11	2.00	5.3	35.0
Octane	Ave	0.3604	0.3792		2.11	2.00	5.2	35.0
1,2-Dibromoethane (EDB)	Ave	0.5950	0.6196		2.08	2.00	4.1	35.0
Tetrachloroethene	Ave	0.3959	0.4122		2.08	2.00	4.1	35.0
Chlorobenzene	Ave	0.8860	0.9121		2.06	2.00	2.9	35.0
2,3-Dimethylheptane	Ave	0.9157	0.9457		2.07	2.00	3.3	35.0
Ethylbenzene	Ave	1.417	1.447		2.04	2.00	2.1	35.0
2-Ethylthiophene	Ave	1.041	1.075		2.07	2.00	3.3	35.0
m-Xylene & p-Xylene	Ave	1.090	1.131		4.15	4.00	3.7	35.0
Bromoform	Ave	0.5920	0.6199		2.10	2.00	4.7	35.0
Styrene	Ave	0.8010	0.8714		2.18	2.00	8.8	35.0
Nonane	Ave	0.7217	0.7537		2.09	2.00	4.4	35.0
o-Xylene	Ave	1.130	1.140		2.02	2.00	0.9	35.0
1,1,2,2-Tetrachloroethane	Ave	0.8121	0.8070		1.99	2.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab Sample ID: ICV 140-3621/12 Calibration Date: 10/29/2015 22:54

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RJ29ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2467	0.2520		2.04	2.00	2.2	35.0
Isopropylbenzene	Ave	1.605	1.669		2.08	2.00	4.0	35.0
Propylbenzene	Ave	0.4601	0.4837		2.10	2.00	5.1	35.0
2-Chlorotoluene	Ave	0.4165	0.4379		2.10	2.00	5.1	35.0
4-Ethyltoluene	Ave	1.587	1.514		1.91	2.00	-4.6	35.0
1,3,5-Trimethylbenzene	Ave	0.7610	0.7956		2.09	2.00	4.6	35.0
Alpha Methyl Styrene	Ave	0.6483	0.6786		2.09	2.00	4.7	35.0
Decane	Ave	0.9320	0.9557		2.05	2.00	2.5	35.0
tert-Butylbenzene	Ave	1.451	1.489		2.05	2.00	2.7	35.0
1,2,4-Trimethylbenzene	Ave	1.346	1.355		2.01	2.00	0.7	35.0
1,3-Dichlorobenzene	Ave	0.9689	0.9633		1.99	2.00	-0.6	35.0
sec-Butylbenzene	Ave	1.955	1.988		2.03	2.00	1.7	35.0
Benzyl chloride	Ave	1.223	1.211		1.98	2.00	-1.0	35.0
1,4-Dichlorobenzene	Ave	1.000	0.9773		1.96	2.00	-2.3	35.0
4-Isopropyltoluene	Ave	1.760	1.779		2.02	2.00	1.1	35.0
1,2,3-Trimethylbenzene	Ave	1.086	1.177		2.17	2.00	8.4	35.0
Butylcyclohexane	Ave	1.038	1.028		1.98	2.00	-0.9	35.0
1,2-Dichlorobenzene	Ave	0.9528	0.9273		1.95	2.00	-2.7	35.0
Indane	Ave	1.317	1.257		1.91	2.00	-4.5	35.0
Indene	Ave	0.9563	1.251		2.62	2.00	30.9	35.0
Butylbenzene	Ave	1.626	1.611		1.98	2.00	-0.9	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.294	1.636		2.53	2.00	26.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4204	0.3075		1.46	2.00	-26.8	35.0
Undecane	Ave	1.073	1.083		2.02	2.00	0.9	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.487	1.647		2.22	2.00	10.7	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9029	1.030		2.28	2.00	14.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.239	1.351		2.18	2.00	9.0	35.0
Dodecane	Ave	1.005	1.028		2.05	2.00	2.3	35.0
1,2,4-Trichlorobenzene	Ave	0.8701	0.8001		1.84	2.00	-8.0	35.0
Naphthalene	Ave	2.038	1.710		1.68	2.00	-16.1	35.0
Benzo(b)thiophene	Ave	1.192	1.284		2.16	2.00	7.7	35.0
Hexachlorobutadiene	Ave	0.6625	0.6619		2.00	2.00	-0.0	35.0
1,2,3-Trichlorobenzene	Ave	0.8332	0.7683		1.85	2.00	-7.8	35.0
2-Methylnaphthalene	Ave	0.2735	0.3756		8.59	6.25	37.3	50.0
1-Methylnaphthalene	Ave	0.2158	0.2963		8.58	6.25	37.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7387	0.7306		3.96	4.00	-1.1	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Oct-2015 22:54:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-012
Misc. Info.: 031519
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 16:31:32 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 04-Nov-2015 16:31:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.436	8.431	0.005	90	485034	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.625	10.619	0.006	94	2411549	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.843	16.842	0.001	85	2232798	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.588	19.592	-0.002	86	1631208	4.00	3.96	
6 Chlorodifluoromethane	67	3.788	3.779	0.011	96	79219	2.00	1.88	
7 Propene	41	3.788	3.782	0.008	98	253197	2.00	1.51	
8 Dichlorodifluoromethane	85	3.842	3.833	0.011	100	598060	2.00	1.61	
9 Chloromethane	52	3.998	3.987	0.014	100	92673	2.00	1.71	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.020	4.013	0.009	97	615338	2.00	1.85	
11 Acetaldehyde	44	4.144	4.137	0.010	97	562541	10.0	5.58	
12 Vinyl chloride	62	4.155	4.145	0.012	98	316186	2.00	1.77	
14 Butadiene	54	4.235	4.227	0.011	94	248835	2.00	1.76	
13 Butane	43	4.235	4.230	0.007	92	441903	2.00	1.85	
15 Bromomethane	94	4.510	4.501	0.012	99	297344	2.00	1.73	
16 Chloroethane	64	4.634	4.630	0.007	93	159471	2.00	1.78	
17 Ethanol	31	4.759	4.761	0.000	88	393473	10.0	8.27	
18 Vinyl bromide	106	4.904	4.898	0.009	99	328712	2.00	1.97	
19 2-Methylbutane	43	4.963	4.960	0.006	90	373091	2.00	1.98	
21 Acrolein	56	5.147	5.143	0.008	89	145412	2.00	2.38	
20 Trichlorofluoromethane	101	5.152	5.147	0.008	99	819083	2.00	1.91	
22 Acetonitrile	40	5.201	5.203	0.002	100	127671	2.00	1.78	
23 Acetone	58	5.249	5.250	0.003	97	509987	6.00	4.51	
24 Pentane	72	5.362	5.353	0.013	97	70958	2.00	2.18	
25 Isopropyl alcohol	45	5.357	5.362	-0.001	82	1138704	6.00	4.83	
26 Ethyl ether	31	5.497	5.497	0.004	93	314712	2.00	1.94	
27 1,1-Dichloroethene	96	5.778	5.771	0.011	98	330185	2.00	1.96	
28 Acrylonitrile	53	5.853	5.851	0.006	94	257675	2.00	2.00	
29 2-Methyl-2-propanol	59	5.880	5.889	-0.005	93	610538	2.00	1.95	
30 1,1,2-Trichloro-1,2,2-trif	101	5.956	5.953	0.006	98	712071	2.00	1.97	
31 Methylene Chloride	84	6.080	6.073	0.011	95	382167	2.00	2.34	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.096	6.094	0.006	95	249950	2.00	1.72	
33 Carbon disulfide	76	6.220	6.216	0.008	97	921784	2.00	1.90	
34 trans-1,2-Dichloroethene	96	6.829	6.826	0.007	99	339618	2.00	1.93	
35 2-Methylpentane	43	6.878	6.874	0.008	95	729474	2.00	2.13	
36 Methyl tert-butyl ether	73	6.953	6.959	-0.001	97	875214	2.00	1.97	
37 1,1-Dichloroethane	63	7.207	7.205	0.007	100	608254	2.00	1.94	
38 Vinyl acetate	43	7.314	7.315	0.004	100	888457	2.00	2.01	
39 2-Butanone (MEK)	72	7.714	7.720	-0.001	99	167039	2.00	1.69	
40 Hexane	56	7.800	7.796	0.009	86	279670	2.00	1.99	
141 Isopropyl ether	45	7.935	7.940	0.000	98	1181320	2.00	1.98	
41 cis-1,2-Dichloroethene	96	8.134	8.130	0.009	93	360936	2.00	1.99	
42 Ethyl acetate	43	8.317	8.321	0.001	100	691626	2.00	1.84	
43 Chloroform	83	8.468	8.467	0.007	96	679681	2.00	1.91	
144 Tert-butyl ethyl ether	59	8.576	8.584	-0.003	94	1206806	2.00	2.36	
44 Tetrahydrofuran	42	8.830	8.839	-0.003	94	358353	2.00	1.93	
45 1,1,1-Trichloroethane	97	9.455	9.457	0.004	96	676015	2.00	1.97	
46 1,2-Dichloroethane	62	9.536	9.531	0.006	97	437913	2.00	1.94	
49 n-Butanol	31	10.016	10.024	-0.007	80	112469	2.00	1.99	
47 Benzene	78	10.048	10.042	0.007	96	1029231	2.00	2.01	
48 Cyclohexane	69	10.070	10.063	0.008	96	155841	2.00	2.02	
50 Carbon tetrachloride	117	10.081	10.078	0.004	98	693316	2.00	2.10	
51 2,3-Dimethylpentane	71	10.221	10.219	0.004	90	214442	2.00	1.88	
52 Thiophene	84	10.318	10.314	0.005	95	596412	2.00	2.11	
142 Tert-amyl methyl ether	73	10.566	10.569	-0.002	98	1019893	2.00	2.16	
53 Isooctane	57	10.917	10.912	0.006	99	1724237	2.00	2.02	
54 n-Heptane	71	11.343	11.341	0.003	89	364840	2.00	2.04	
55 1,2-Dichloropropane	63	11.348	11.347	0.002	95	398592	2.00	1.99	
56 Trichloroethene	130	11.413	11.411	0.003	95	497865	2.00	2.06	
57 Dibromomethane	93	11.472	11.469	0.005	90	412420	2.00	2.00	
58 Dichlorobromomethane	83	11.655	11.656	0.000	99	697722	2.00	2.02	
59 1,4-Dioxane	88	11.666	11.670	-0.002	83	157194	2.00	2.01	
60 Methyl methacrylate	41	11.801	11.803	0.000	89	419520	2.00	1.96	
61 Methylcyclohexane	83	12.351	12.349	0.004	95	608417	2.00	1.65	
62 4-Methyl-2-pentanone (MIBK	43	12.831	12.832	0.000	95	839701	2.00	1.72	
63 cis-1,3-Dichloropropene	75	12.890	12.892	-0.001	92	597732	2.00	2.08	
64 trans-1,3-Dichloropropene	75	13.807	13.805	0.003	97	542361	2.00	2.10	
65 Toluene	91	13.985	13.984	0.002	94	1302550	2.00	2.15	
66 1,1,2-Trichloroethane	83	14.060	14.069	0.000	97	356084	2.00	1.99	
67 2-Methylthiophene	97	14.179	14.180	0.000	97	1074731	2.00	2.18	
68 3-Methylthiophene	97	14.459	14.458	0.002	98	1097057	2.00	2.25	
69 2-Hexanone	58	14.632	14.638	-0.005	95	423160	2.00	1.98	
71 Chlorodibromomethane	129	15.026	15.024	0.003	98	745795	2.00	2.11	
70 n-Octane	85	15.058	15.054	0.005	90	423612	2.00	2.11	
72 Ethylene Dibromide	107	15.435	15.434	0.003	99	692029	2.00	2.08	
73 Tetrachloroethene	129	15.603	15.604	0.001	98	460413	2.00	2.08	
74 Chlorobenzene	112	16.918	16.919	0.000	95	1018801	2.00	2.06	
75 2,3-Dimethylheptane	43	17.102	17.101	0.002	94	1056320	2.00	2.07	
76 Ethylbenzene	91	17.425	17.427	-0.001	98	1616029	2.00	2.04	
77 2-Ethylthiophene	97	17.582	17.580	0.003	97	1200971	2.00	2.07	
78 m-Xylene & p-Xylene	91	17.706	17.704	0.003	99	2525875	4.00	4.15	
79 Bromoform	173	18.331	18.332	0.001	97	692471	2.00	2.10	
80 Styrene	104	18.455	18.458	-0.002	98	973359	2.00	2.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.549	0.000	91	841903	2.00	2.09	
82 o-Xylene	91	18.558	18.561	-0.001	99	1273136	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.090	-0.002	99	901428	2.00	1.99	
84 1,2,3-Trichloropropane	110	19.356	19.353	0.004	98	281529	2.00	2.04	
85 Isopropylbenzene	105	19.588	19.591	-0.001	95	1864043	2.00	2.08	
86 N-Propylbenzene	120	20.553	20.555	-0.001	98	540287	2.00	2.10	
87 2-Chlorotoluene	126	20.569	20.573	-0.003	97	489159	2.00	2.10	
88 4-Ethyltoluene	105	20.844	20.845	0.000	99	1690755	2.00	1.91	
89 1,3,5-Trimethylbenzene	120	21.000	21.001	0.000	94	888665	2.00	2.09	
90 Alpha Methyl Styrene	118	21.426	21.427	0.000	90	758013	2.00	2.09	
91 n-Decane	57	21.723	21.727	-0.003	89	1067505	2.00	2.05	
92 tert-Butylbenzene	119	21.798	21.804	-0.004	95	1663545	2.00	2.05	
93 1,2,4-Trimethylbenzene	105	21.831	21.834	-0.001	95	1514016	2.00	2.01	
94 1,3-Dichlorobenzene	146	22.300	22.302	0.000	97	1076043	2.00	1.99	
95 sec-Butylbenzene	105	22.359	22.363	-0.002	99	2220120	2.00	2.03	
96 Benzyl chloride	91	22.467	22.471	-0.002	99	1352752	2.00	1.98	
97 1,4-Dichlorobenzene	146	22.489	22.489	0.002	96	1091655	2.00	1.96	
98 4-Isopropyltoluene	119	22.726	22.731	-0.003	98	1987121	2.00	2.02	
99 1,2,3-Trimethylbenzene	105	22.774	22.777	-0.002	98	1314672	2.00	2.17	
100 Butylcyclohexane	83	22.979	22.982	-0.001	95	1148352	2.00	1.98	
101 1,2-Dichlorobenzene	146	23.227	23.229	0.000	97	1035798	2.00	1.95	
102 2,3-Dihydroindene	117	23.260	23.261	0.001	95	1404581	2.00	1.91	
103 Indene	116	23.524	23.529	-0.003	93	1397679	2.00	2.62	
104 n-Butylbenzene	91	23.675	23.676	0.001	98	1799922	2.00	1.98	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.530	-0.001	98	1827221	2.00	2.53	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.584	-0.001	93	343552	2.00	1.46	
106 Undecane	57	24.602	24.607	-0.003	95	1209676	2.00	2.02	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.443	-0.003	98	1839310	2.00	2.22	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.571	-0.001	96	1150455	2.00	2.28	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.491	0.001	98	1508674	2.00	2.18	
110 Dodecane	57	27.142	27.147	-0.003	98	1148273	2.00	2.05	
111 1,2,4-Trichlorobenzene	180	27.185	27.191	-0.004	94	893724	2.00	1.84	
112 Naphthalene	128	27.423	27.428	-0.003	99	1909986	2.00	1.68	
113 Benzo(b)thiophene	134	27.622	27.625	-0.001	100	1434467	2.00	2.16	
114 Hexachlorobutadiene	225	27.983	27.988	-0.003	96	739310	2.00	2.00	
115 1,2,3-Trichlorobenzene	180	28.010	28.014	-0.002	95	858149	2.00	1.85	
116 2-Methylnaphthalene	142	29.526	29.525	0.003	99	1311091	6.25	8.59	
117 1-Methylnaphthalene	142	29.833	29.835	0.000	99	1034352	6.25	8.58	
A 118 C6 Range	1	7.824	(7.767-7.881)		0	2781415	2.00	2.52	
A 119 Toluene Range	1	14.031	(13.946-14.115)		0	6768238	2.00	4.55	E
A 120 C8 Range	1	15.106	(14.999-15.214)		0	7620157	2.00	2.48	
S 124 Xylenes, Total	100				0		6.00	6.17	
S 145 1,2-Dichloroethene, Total	1				0		4.00	3.92	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

ICM2C00X10_00006	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

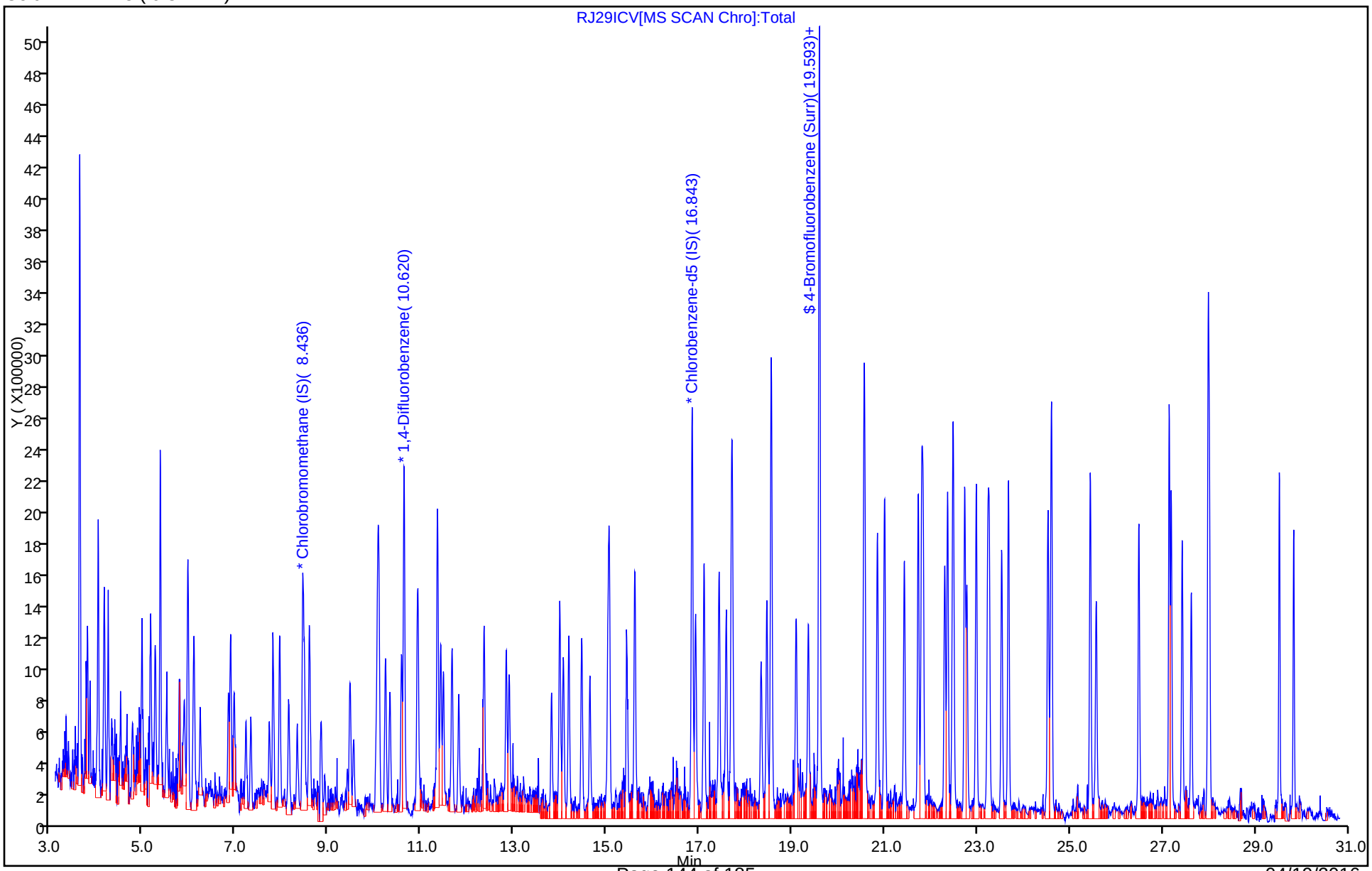
Report Date: 04-Nov-2015 16:31:34 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICV.D

Injection Date:	29-Oct-2015 22:54:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab Sample ID: CCVIS 140-4632/2 Calibration Date: 04/12/2016 14:05

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RCCVD12.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3468	0.3703		2.14	2.00	6.8	30.0
Propene	Ave	1.381	1.323		1.91	2.00	-4.3	30.0
Dichlorodifluoromethane	Ave	3.057	2.499		1.63	2.00	-18.3	30.0
Chloromethane	Ave	0.4474	0.4960		2.22	2.00	10.9	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.744	2.653		1.93	2.00	-3.3	30.0
Acetaldehyde	Ave	0.8319	0.6186		7.44	10.0	-25.6	30.0
Vinyl chloride	Ave	1.477	1.600		2.17	2.00	8.3	30.0
1,3-Butadiene	Ave	1.166	1.281		2.20	2.00	9.8	30.0
Butane	Ave	1.974	2.376		2.41	2.00	20.4	30.0
Bromomethane	Ave	1.415	1.357		1.92	2.00	-4.2	30.0
Chloroethane	Ave	0.7397	0.7625		2.06	2.00	3.1	30.0
Ethanol	Ave	0.3923	0.4656		11.9	10.0	18.7	30.0
Vinyl bromide	Ave	1.377	1.393		2.02	2.00	1.2	30.0
2-Methylbutane	Ave	1.555	1.789		2.30	2.00	15.1	30.0
Acrolein	Ave	0.5039	0.6238		2.48	2.00	23.8	30.0
Trichlorofluoromethane	Ave	3.529	3.626		2.05	2.00	2.7	30.0
Acetonitrile	Ave	0.5905	0.6899		2.34	2.00	16.8	30.0
Acetone	Ave	0.9331	0.8062		5.18	6.00	-13.6	30.0
Isopropyl alcohol	Ave	1.942	2.191		6.77	6.00	12.8	30.0
Pentane	Ave	0.2686	0.2872		2.14	2.00	6.9	30.0
Ethyl ether	Ave	1.335	1.538		2.30	2.00	15.2	30.0
1,1-Dichloroethene	Ave	1.392	1.355		1.95	2.00	-2.7	30.0
Acrylonitrile	Ave	1.065	1.213		2.28	2.00	13.9	30.0
tert-Butyl alcohol	Ave	2.583	2.680		2.08	2.00	3.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.988	3.043		2.04	2.00	1.8	30.0
Methylene Chloride	Ave	1.348	1.307		1.94	2.00	-3.0	30.0
3-Chloropropene	Ave	1.198	1.289		2.15	2.00	7.6	30.0
Carbon disulfide	Ave	3.992	4.063		2.04	2.00	1.8	30.0
trans-1,2-Dichloroethene	Ave	1.449	1.410		1.95	2.00	-2.7	30.0
2-Methylpentane	Ave	2.828	3.521		2.49	2.00	24.5	30.0
Methyl tert-butyl ether	Ave	3.658	3.751		2.05	2.00	2.5	30.0
1,1-Dichloroethane	Ave	2.592	2.772		2.14	2.00	6.9	30.0
Vinyl acetate	Ave	3.641	4.107		2.26	2.00	12.8	30.0
2-Butanone (MEK)	Ave	0.8144	0.7013		1.72	2.00	-13.9	30.0
Hexane	Ave	1.157	1.264		2.19	2.00	9.3	30.0
Isopropyl ether	Ave	4.913	5.463		2.22	2.00	11.2	30.0
cis-1,2-Dichloroethene	Ave	1.495	1.515		2.03	2.00	1.4	30.0
Ethyl acetate	Ave	3.102	3.346		2.16	2.00	7.9	30.0
Chloroform	Ave	2.933	3.040		2.07	2.00	3.7	30.0
Tert-butyl ethyl ether	Ave	4.209	4.731		2.25	2.00	12.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab Sample ID: CCVIS 140-4632/2 Calibration Date: 04/12/2016 14:05

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RCCVD12.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.533	1.755		2.29	2.00	14.5	30.0
1,1,1-Trichloroethane	Ave	2.823	2.972		2.11	2.00	5.3	30.0
1,2-Dichloroethane	Ave	0.3736	0.4076		2.18	2.00	9.1	30.0
1-Butanol	Ave	0.0940	0.0991		2.11	2.00	5.4	30.0
Benzene	Ave	0.8488	0.8718		2.05	2.00	2.7	30.0
Cyclohexane	Ave	0.1281	0.1327		2.07	2.00	3.5	30.0
Carbon tetrachloride	Ave	0.5469	0.6269		2.29	2.00	14.6	30.0
2,3-Dimethylpentane	Ave	0.1890	0.1795		1.90	2.00	-5.0	30.0
Thiophene	Ave	0.4690	0.5000		2.13	2.00	6.6	30.0
Tert-amyl methyl ether	Ave	0.7829	0.7968		2.04	2.00	1.8	30.0
2,2,4-Trimethylpentane	Ave	1.416	1.538		2.17	2.00	8.6	30.0
1,2-Dichloropropane	Ave	0.3316	0.3541		2.14	2.00	6.8	30.0
Heptane	Ave	0.2964	0.3069		2.07	2.00	3.5	30.0
Trichloroethene	Ave	0.4001	0.4369		2.18	2.00	9.2	30.0
Dibromomethane	Ave	0.3413	0.3531		2.07	2.00	3.5	30.0
Bromodichloromethane	Ave	0.5734	0.6179		2.16	2.00	7.8	30.0
1,4-Dioxane	Ave	0.1299	0.1309		2.01	2.00	0.7	30.0
Methyl methacrylate	Ave	0.3544	0.4128		2.33	2.00	16.5	30.0
Methylcyclohexane	Ave	0.6115	0.4962		1.62	2.00	-18.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8079	0.7708		1.91	2.00	-4.6	30.0
cis-1,3-Dichloropropene	Ave	0.4758	0.5085		2.14	2.00	6.9	30.0
trans-1,3-Dichloropropene	Ave	0.4617	0.5142		2.23	2.00	11.4	30.0
Toluene	Ave	1.086	1.169		2.15	2.00	7.6	30.0
1,1,2-Trichloroethane	Ave	0.3200	0.3359		2.10	2.00	5.0	30.0
2-Methylthiophene	Ave	0.8830	0.9576		2.17	2.00	8.5	30.0
3-Methylthiophene	Ave	0.8722	0.9743		2.23	2.00	11.7	30.0
2-Hexanone	Ave	0.3824	0.4033		2.11	2.00	5.4	30.0
Dibromochloromethane	Ave	0.6340	0.6864		2.17	2.00	8.3	30.0
Octane	Ave	0.3604	0.3877		2.15	2.00	7.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.5950	0.6178		2.08	2.00	3.8	30.0
Tetrachloroethene	Ave	0.3959	0.4015		2.03	2.00	1.4	30.0
Chlorobenzene	Ave	0.8860	0.9060		2.05	2.00	2.3	30.0
2,3-Dimethylheptane	Ave	0.9157	1.113		2.43	2.00	21.5	30.0
Ethylbenzene	Ave	1.417	1.471		2.08	2.00	3.8	30.0
2-Ethylthiophene	Ave	1.041	1.061		2.04	2.00	1.9	30.0
m-Xylene & p-Xylene	Ave	1.090	1.151		4.22	4.00	5.6	30.0
Bromoform	Ave	0.5920	0.6183		2.09	2.00	4.4	30.0
Styrene	Ave	0.8010	0.8533		2.13	2.00	6.5	30.0
Nonane	Ave	0.7217	0.8234		2.28	2.00	14.1	30.0
o-Xylene	Ave	1.130	1.168		2.07	2.00	3.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.8121	0.7347		1.81	2.00	-9.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Lab Sample ID: CCVIS 140-4632/2 Calibration Date: 04/12/2016 14:05

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RCCVD12.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2467	0.2535		2.06	2.00	2.8	30.0
Isopropylbenzene	Ave	1.605	1.707		2.13	2.00	6.3	30.0
Propylbenzene	Ave	0.4601	0.4725		2.05	2.00	2.7	30.0
2-Chlorotoluene	Ave	0.4165	0.4292		2.06	2.00	3.1	30.0
4-Ethyltoluene	Ave	1.587	1.536		1.94	2.00	-3.2	30.0
1,3,5-Trimethylbenzene	Ave	0.7610	0.7843		2.06	2.00	3.1	30.0
Alpha Methyl Styrene	Ave	0.6483	0.6550		2.02	2.00	1.0	30.0
Decane	Ave	0.9320	1.056		2.27	2.00	13.3	30.0
tert-Butylbenzene	Ave	1.451	1.503		2.07	2.00	3.6	30.0
1,2,4-Trimethylbenzene	Ave	1.346	1.409		2.09	2.00	4.6	30.0
1,3-Dichlorobenzene	Ave	0.9689	0.9458		1.95	2.00	-2.4	30.0
sec-Butylbenzene	Ave	1.955	2.062		2.11	2.00	5.4	30.0
Benzyl chloride	Ave	1.223	1.283		2.10	2.00	4.9	30.0
1,4-Dichlorobenzene	Ave	1.000	0.9768		1.95	2.00	-2.3	30.0
4-Isopropyltoluene	Ave	1.760	1.809		2.05	2.00	2.7	30.0
1,2,3-Trimethylbenzene	Ave	1.086	1.200		2.21	2.00	10.5	30.0
Butylcyclohexane	Ave	1.038	1.074		2.07	2.00	3.5	30.0
1,2-Dichlorobenzene	Ave	0.9528	0.9174		1.93	2.00	-3.7	30.0
Indane	Ave	1.317	1.265		1.92	2.00	-4.0	30.0
Indene	Ave	0.9563	1.228		2.57	2.00	28.4	30.0
Butylbenzene	Ave	1.626	1.761		2.17	2.00	8.3	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.294	1.623		2.51	2.00	25.4	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4204	0.3063		1.46	2.00	-27.2	30.0
Undecane	Ave	1.073	1.253		2.34	2.00	16.8	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.487	1.660		2.23	2.00	11.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9029	1.027		2.27	2.00	13.7	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.239	1.340		2.16	2.00	8.2	30.0
Dodecane	Ave	1.005	1.189		2.37	2.00	18.3	30.0
1,2,4-Trichlorobenzene	Ave	0.8701	0.8029		1.85	2.00	-7.7	30.0
Naphthalene	Ave	2.038	1.881		1.85	2.00	-7.7	30.0
Benzo(b)thiophene	Ave	1.192	1.213		2.03	2.00	1.7	30.0
Hexachlorobutadiene	Ave	0.6625	0.6494		1.96	2.00	-2.0	30.0
1,2,3-Trichlorobenzene	Ave	0.8332	0.7768		1.86	2.00	-6.8	30.0
2-Methylnaphthalene	Ave	0.2735	0.3209		7.33	6.25	17.3	50.0
1-Methylnaphthalene	Ave	0.2158	0.2815		8.15	6.25	30.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7387	0.7471		4.05	4.00	1.1	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RCCVD12.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 12-Apr-2016 14:05:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002734-002
Misc. Info.: S10
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Apr-2016 11:13:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: tajh Date: 13-Apr-2016 11:13:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.425	0.000	98	287029	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.604	10.604	0.000	95	1469572	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.816	16.816	0.000	87	1326124	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.560	19.560	0.000	81	990695	4.00	4.05	
7 Chlorodifluoromethane	67	3.799	3.799	0.000	96	53142	2.00	2.14	
6 Propene	41	3.799	3.799	0.000	96	189802	2.00	1.91	
8 Dichlorodifluoromethane	85	3.847	3.847	0.000	100	358651	2.00	1.63	
9 Chloromethane	52	4.003	4.003	0.000	99	71188	2.00	2.22	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.030	4.030	0.000	94	380767	2.00	1.93	
11 Acetaldehyde	44	4.154	4.154	0.000	96	443868	10.0	7.44	
12 Vinyl chloride	62	4.160	4.160	0.000	99	229647	2.00	2.17	
13 Butadiene	54	4.241	4.241	0.000	96	183803	2.00	2.20	
14 Butane	43	4.246	4.246	0.000	92	341008	2.00	2.41	
15 Bromomethane	94	4.516	4.516	0.000	99	194690	2.00	1.92	
16 Chloroethane	64	4.640	4.640	0.000	96	109427	2.00	2.06	
17 Ethanol	31	4.758	4.758	0.000	90	334123	10.0	11.9	
18 Vinyl bromide	106	4.909	4.909	0.000	98	199907	2.00	2.02	
19 2-Methylbutane	43	4.969	4.969	0.000	91	256774	2.00	2.30	
20 Acrolein	56	5.147	5.147	0.000	92	89528	2.00	2.48	
21 Trichlorofluoromethane	101	5.157	5.157	0.000	100	520367	2.00	2.05	
22 Acetonitrile	40	5.206	5.206	0.000	99	99011	2.00	2.34	
23 Acetone	58	5.249	5.249	0.000	97	347121	6.00	5.18	
25 Isopropyl alcohol	45	5.357	5.357	0.000	94	943389	6.00	6.77	
24 Pentane	72	5.362	5.362	0.000	94	41212	2.00	2.14	
26 Ethyl ether	31	5.497	5.497	0.000	96	220769	2.00	2.30	
27 1,1-Dichloroethene	96	5.772	5.772	0.000	96	194402	2.00	1.95	
28 Acrylonitrile	53	5.848	5.848	0.000	94	174057	2.00	2.28	
29 2-Methyl-2-propanol	59	5.875	5.875	0.000	94	384582	2.00	2.08	
30 1,1,2-Trichloro-1,2,2-trif	101	5.955	5.955	0.000	98	436744	2.00	2.04	
31 Methylene Chloride	84	6.074	6.074	0.000	99	187530	2.00	1.94	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.096	6.096	0.000	95	185020	2.00	2.15	
33 Carbon disulfide	76	6.220	6.220	0.000	99	583168	2.00	2.04	
34 trans-1,2-Dichloroethene	96	6.824	6.824	0.000	97	202360	2.00	1.95	
35 2-Methylpentane	43	6.872	6.872	0.000	96	505243	2.00	2.49	
36 Methyl tert-butyl ether	73	6.948	6.948	0.000	97	538375	2.00	2.05	
37 1,1-Dichloroethane	63	7.201	7.201	0.000	99	397796	2.00	2.14	
38 Vinyl acetate	43	7.304	7.304	0.000	100	589485	2.00	2.26	
39 2-Butanone (MEK)	72	7.697	7.697	0.000	99	100648	2.00	1.72	
40 Hexane	56	7.789	7.789	0.000	89	181464	2.00	2.19	
41 Isopropyl ether	45	7.924	7.924	0.000	98	784097	2.00	2.22	
42 cis-1,2-Dichloroethene	96	8.123	8.123	0.000	95	217429	2.00	2.03	
43 Ethyl acetate	43	8.301	8.301	0.000	99	480195	2.00	2.16	
44 Chloroform	83	8.452	8.452	0.000	97	436271	2.00	2.07	
45 Tert-butyl ethyl ether	59	8.565	8.565	0.000	95	678977	2.00	2.25	
46 Tetrahydrofuran	42	8.813	8.813	0.000	96	251893	2.00	2.29	
47 1,1,1-Trichloroethane	97	9.439	9.439	0.000	97	426533	2.00	2.11	
48 1,2-Dichloroethane	62	9.520	9.520	0.000	97	299523	2.00	2.18	
49 n-Butanol	31	10.000	10.000	0.000	81	72796	2.00	2.11	
50 Benzene	78	10.027	10.027	0.000	97	640602	2.00	2.05	
51 Cyclohexane	69	10.054	10.054	0.000	96	97474	2.00	2.07	
52 Carbon tetrachloride	117	10.064	10.064	0.000	98	460601	2.00	2.29	
53 2,3-Dimethylpentane	71	10.205	10.205	0.000	90	131894	2.00	1.90	
54 Thiophene	84	10.302	10.302	0.000	97	367366	2.00	2.13	
55 Tert-amyl methyl ether	73	10.550	10.550	0.000	97	585535	2.00	2.04	
56 Isooctane	57	10.900	10.900	0.000	99	1130106	2.00	2.17	
57 n-Heptane	71	11.326	11.326	0.000	91	225477	2.00	2.07	
58 1,2-Dichloropropane	63	11.326	11.326	0.000	94	260201	2.00	2.14	
59 Trichloroethene	130	11.396	11.396	0.000	96	321060	2.00	2.18	
60 Dibromomethane	93	11.450	11.450	0.000	95	259479	2.00	2.07	
61 Dichlorobromomethane	83	11.634	11.634	0.000	99	453996	2.00	2.16	
62 1,4-Dioxane	88	11.639	11.639	0.000	91	96146	2.00	2.01	
63 Methyl methacrylate	41	11.779	11.779	0.000	95	303302	2.00	2.33	
64 Methylcyclohexane	83	12.329	12.329	0.000	93	364562	2.00	1.62	
65 4-Methyl-2-pentanone (MIBK	43	12.804	12.804	0.000	97	566396	2.00	1.91	
66 cis-1,3-Dichloropropene	75	12.869	12.869	0.000	94	373663	2.00	2.14	
67 trans-1,3-Dichloropropene	75	13.780	13.780	0.000	99	340961	2.00	2.23	
68 Toluene	91	13.963	13.963	0.000	94	774851	2.00	2.15	
69 1,1,2-Trichloroethane	83	14.039	14.039	0.000	99	222694	2.00	2.10	
70 2-Methylthiophene	97	14.157	14.157	0.000	97	634964	2.00	2.17	
71 3-Methylthiophene	97	14.432	14.432	0.000	99	645994	2.00	2.23	
72 2-Hexanone	58	14.610	14.610	0.000	93	267395	2.00	2.11	
73 Chlorodibromomethane	129	14.999	14.999	0.000	98	455133	2.00	2.17	
74 n-Octane	85	15.031	15.031	0.000	94	257043	2.00	2.15	
75 Ethylene Dibromide	107	15.408	15.408	0.000	98	409652	2.00	2.08	
76 Tetrachloroethene	129	15.581	15.581	0.000	96	266230	2.00	2.03	
77 Chlorobenzene	112	16.891	16.891	0.000	93	600760	2.00	2.05	
78 2,3-Dimethylheptane	43	17.080	17.080	0.000	98	738035	2.00	2.43	
79 Ethylbenzene	91	17.398	17.398	0.000	98	975666	2.00	2.08	
80 2-Ethylthiophene	97	17.549	17.549	0.000	98	703438	2.00	2.04	
81 m-Xylene & p-Xylene	91	17.673	17.673	0.000	99	1526277	4.00	4.22	
82 Bromoform	173	18.304	18.304	0.000	95	409964	2.00	2.09	
83 Styrene	104	18.428	18.428	0.000	99	565794	2.00	2.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	18.520	18.520	0.000	94	545954	2.00	2.28	
85 o-Xylene	91	18.531	18.531	0.000	99	774123	2.00	2.07	
86 1,1,2,2-Tetrachloroethane	83	19.059	19.059	0.000	99	487129	2.00	1.81	
87 1,2,3-Trichloropropane	110	19.323	19.323	0.000	97	168092	2.00	2.06	
88 Isopropylbenzene	105	19.560	19.560	0.000	95	1131529	2.00	2.13	
89 N-Propylbenzene	120	20.526	20.526	0.000	98	313289	2.00	2.05	
90 2-Chlorotoluene	126	20.542	20.542	0.000	92	284609	2.00	2.06	
91 4-Ethyltoluene	105	20.817	20.817	0.000	98	1018500	2.00	1.94	
92 1,3,5-Trimethylbenzene	120	20.968	20.968	0.000	93	520068	2.00	2.06	
93 Alpha Methyl Styrene	118	21.394	21.394	0.000	89	434270	2.00	2.02	
94 n-Decane	57	21.701	21.701	0.000	89	700280	2.00	2.27	
95 tert-Butylbenzene	119	21.771	21.771	0.000	93	996599	2.00	2.07	
96 1,2,4-Trimethylbenzene	105	21.804	21.804	0.000	96	934018	2.00	2.09	
97 1,3-Dichlorobenzene	146	22.267	22.267	0.000	99	627091	2.00	1.95	
98 sec-Butylbenzene	105	22.332	22.332	0.000	98	1367067	2.00	2.11	
99 Benzyl chloride	91	22.440	22.440	0.000	98	850713	2.00	2.10	
100 1,4-Dichlorobenzene	146	22.456	22.456	0.000	95	647703	2.00	1.95	
101 4-Isopropyltoluene	119	22.699	22.699	0.000	97	1199365	2.00	2.05	
102 1,2,3-Trimethylbenzene	105	22.747	22.747	0.000	98	795361	2.00	2.21	
103 Butylcyclohexane	83	22.952	22.952	0.000	93	712176	2.00	2.07	
104 1,2-Dichlorobenzene	146	23.195	23.195	0.000	95	608257	2.00	1.93	
105 2,3-Dihydroindene	117	23.227	23.227	0.000	94	838885	2.00	1.92	
106 Indene	116	23.497	23.497	0.000	92	814206	2.00	2.57	
107 n-Butylbenzene	91	23.642	23.642	0.000	99	1167606	2.00	2.17	
108 1,2-Dimethyl-4-Ethylbenzen	119	24.500	24.500	0.000	98	1076060	2.00	2.51	
109 1,2-Dibromo-3-Chloropropan	157	24.548	24.548	0.000	97	203082	2.00	1.46	
110 Undecane	57	24.575	24.575	0.000	96	830982	2.00	2.34	
111 1,2,4,5-Tetramethylbenzene	119	25.411	25.411	0.000	98	1100562	2.00	2.23	
112 1,2,3,5-Tetramethylbenzene	119	25.535	25.535	0.000	96	680962	2.00	2.27	
113 1,2,3,4-Tetramethylbenzene	119	26.463	26.463	0.000	98	888217	2.00	2.16	
114 Dodecane	57	27.121	27.121	0.000	96	788500	2.00	2.37	
115 1,2,4-Trichlorobenzene	180	27.158	27.158	0.000	94	532382	2.00	1.85	
116 Naphthalene	128	27.396	27.396	0.000	99	1247327	2.00	1.85	
117 Benzo(b)thiophene	134	27.595	27.595	0.000	99	803964	2.00	2.03	
118 Hexachlorobutadiene	225	27.962	27.962	0.000	93	430617	2.00	1.96	
119 1,2,3-Trichlorobenzene	180	27.983	27.983	0.000	95	515065	2.00	1.86	
120 2-Methylnaphthalene	142	29.466	29.466	0.000	99	664911	6.25	7.33	
121 1-Methylnaphthalene	142	29.768	29.768	0.000	99	583315	6.25	8.15	
A 122 C6 Range	1	7.800	(7.730-7.859)		0	1489260	2.00	2.21	
S 124 Xylenes, Total	100				0		6.00	6.29	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.97	

Reagents:

40CV101S_00010	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

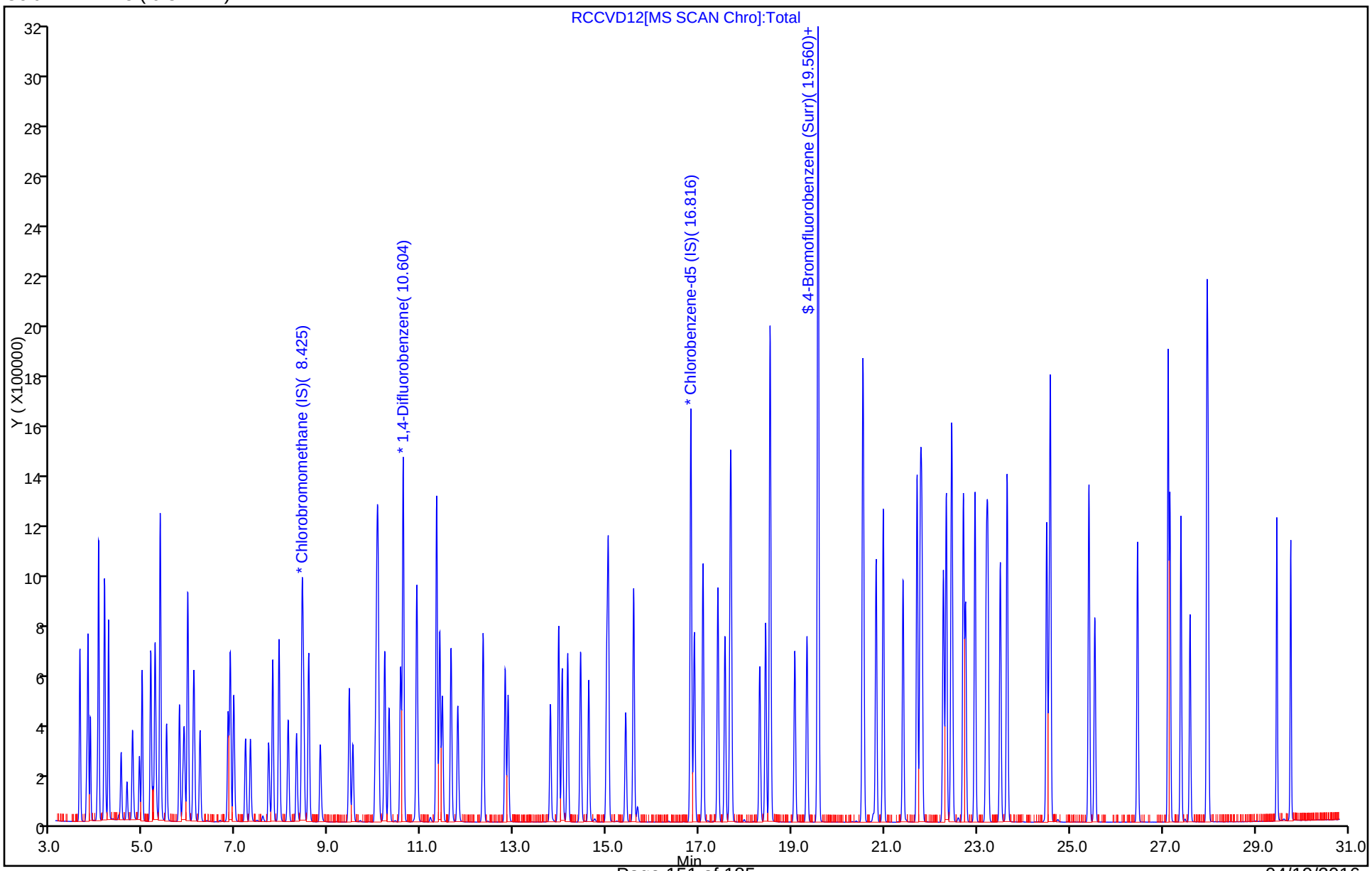
Report Date: 13-Apr-2016 11:13:21 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RCCVD12.D

Injection Date:	12-Apr-2016 14:05:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 29-Oct-2015 12:53:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-001
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:16 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 29-Oct-2015 13:10:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 133 BFB	95	4.658	4.658	0.000	0	1110281	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

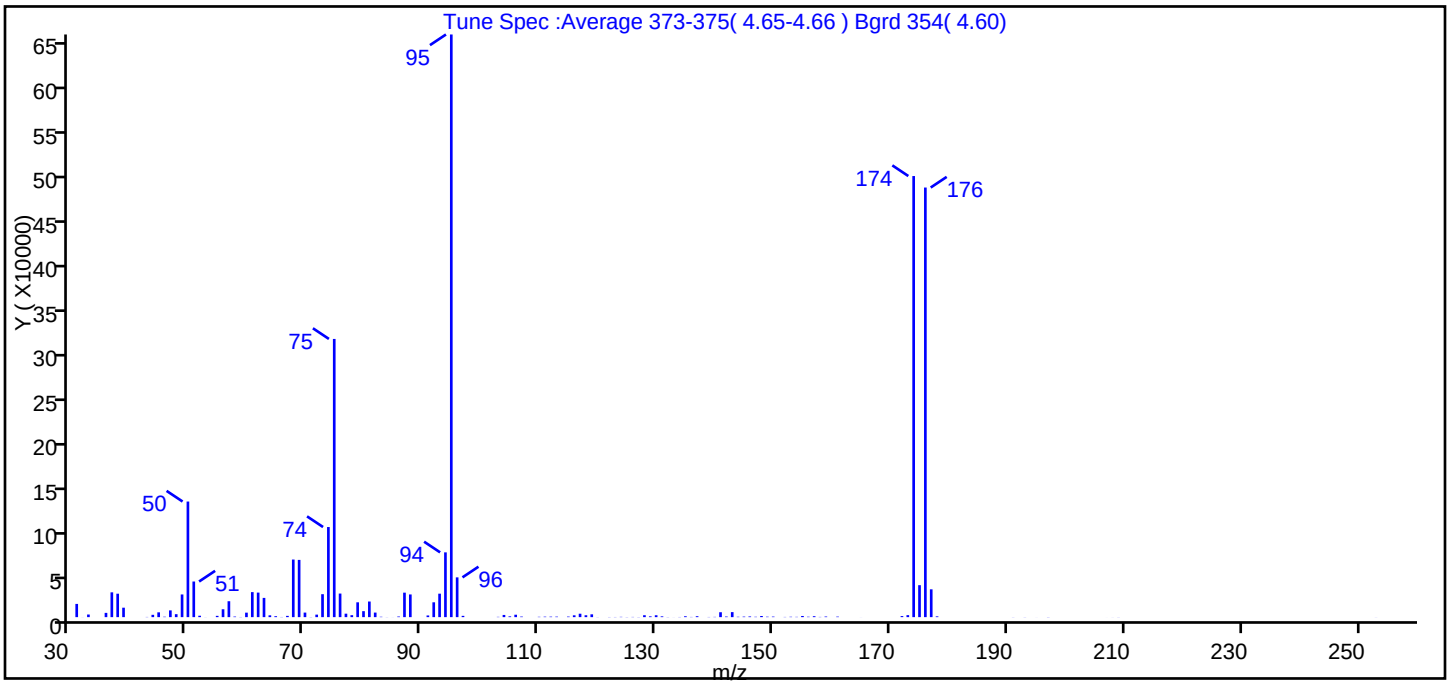
MAbfb1_00003 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D
Injection Date: 29-Oct-2015 12:53:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 133 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.8
75	30 to 60% of m/z 95	47.7
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	75.7
175	5 to 9% of m/z 174	5.5 (7.2)
176	Greater than 95% but less than 101% of m/z 174	73.7 (97.4)
177	5 to 9% of m/z 176	4.8 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D\MR_TO15.rslt\spectra.d
Injection Date: 29-Oct-2015 12:53:30
Spectrum: Tune Spec :Average 373-375(4.65-4.66) Bgrd 354(4.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	14802	69.00	64056	110.00	381	145.00	595
32.00	57	70.00	5093	111.00	538	146.00	770
33.00	2939	71.00	156	112.00	562	147.00	410
36.00	4780	72.00	2813	113.00	578	148.00	1277
37.00	27760	73.00	25680	115.00	625	149.00	488
38.00	26224	74.00	100832	116.00	2051	150.00	603
39.00	10577	75.00	311296	117.00	3835	152.00	232
43.00	221	76.00	26392	118.00	2123	153.00	421
44.00	2599	77.00	3876	119.00	3155	154.00	316
45.00	5369	78.00	2178	120.00	98	155.00	1292
46.00	460	79.00	16600	122.00	168	156.00	463
47.00	7566	80.00	6698	123.00	176	157.00	1032
48.00	3312	81.00	17488	124.00	326	158.00	248
49.00	25384	82.00	5097	125.00	154	159.00	689
50.00	129352	83.00	415	126.00	237	161.00	587
51.00	39872	84.00	96	127.00	157	165.00	41
52.00	1584	85.00	42	128.00	2149	172.00	1187
53.00	70	86.00	691	129.00	867	173.00	2233
55.00	1445	87.00	27400	130.00	2105	174.00	493568
56.00	8828	88.00	25400	131.00	870	175.00	35768
57.00	17808	91.00	1879	132.00	143	176.00	480704
58.00	638	92.00	16608	133.00	53	177.00	31136
59.00	173	93.00	26264	134.00	186	178.00	865
60.00	5024	94.00	72488	135.00	985	191.00	100
61.00	27992	95.00	651968	136.00	225	193.00	106
62.00	27464	96.00	44512	137.00	1036	195.00	36
63.00	21536	97.00	1442	139.00	196	197.00	154
64.00	2030	103.00	319	140.00	285	207.00	20
65.00	1055	104.00	2456	141.00	5504	208.00	50
66.00	179	105.00	865	142.00	663	209.00	94
67.00	1424	106.00	2707	143.00	5616	253.00	62
68.00	64456	107.00	639	144.00	422		

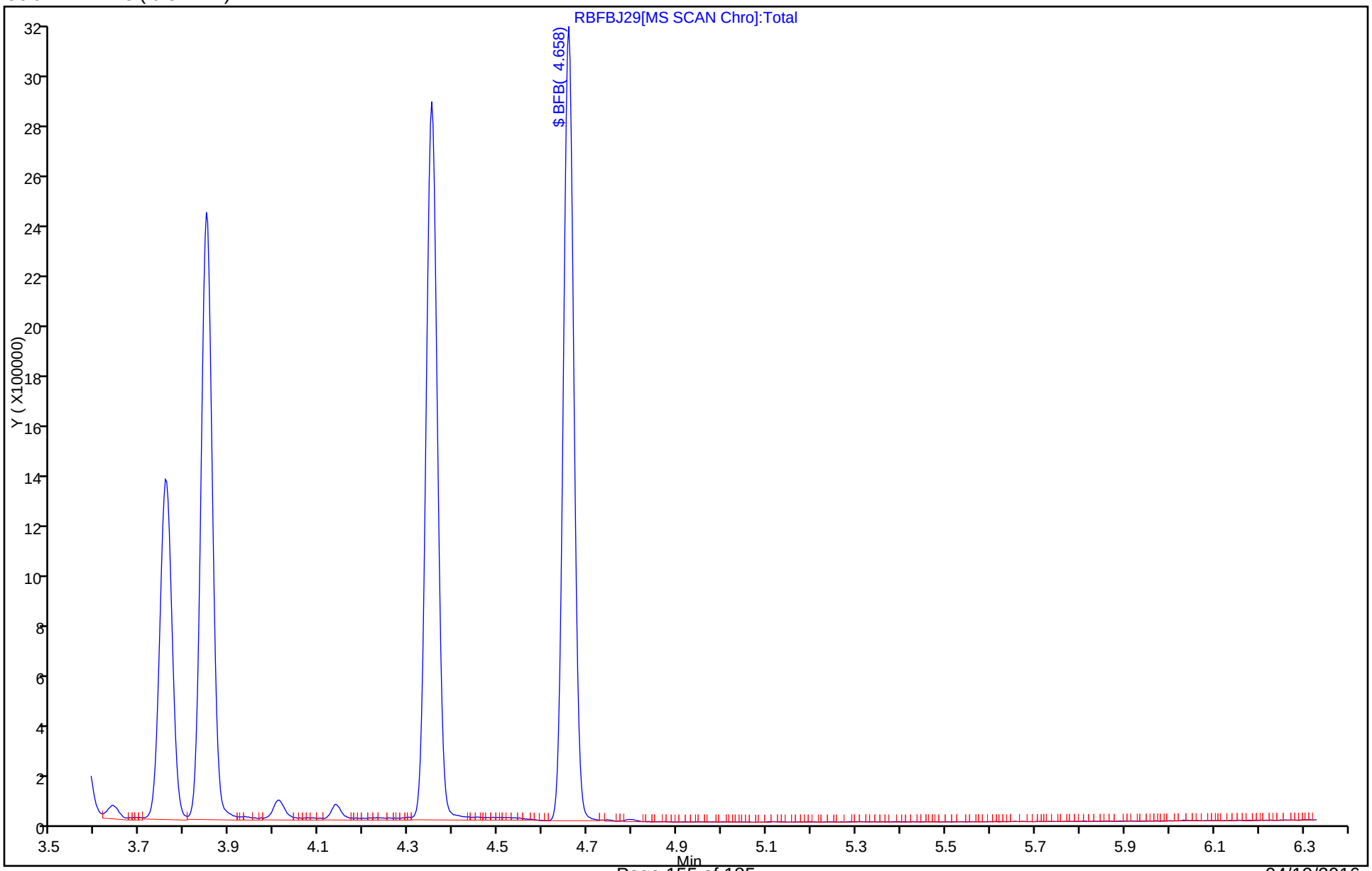
Report Date: 04-Nov-2015 15:47:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D

Injection Date:	29-Oct-2015 12:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RBFBD12.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 12-Apr-2016 13:33:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0002734-001
Misc. Info.: BFB
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Apr-2016 11:12:08 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: tajh Date: 13-Apr-2016 11:12:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.675	4.675	0.000	0	962020	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

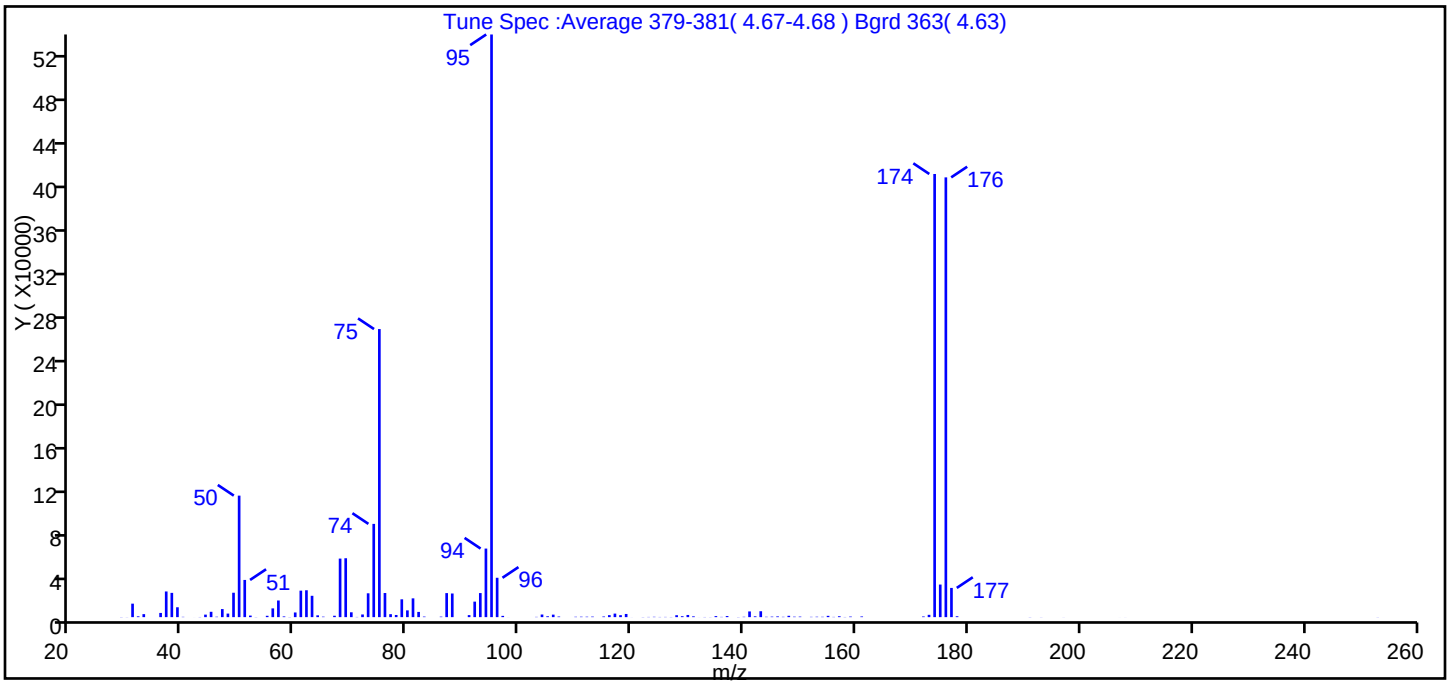
MAbfb1_00003 Amount Added: 40.00 Units: ml

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RBFBD12.D
Injection Date: 12-Apr-2016 13:33:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	20.9
75	30 to 60% of m/z 95	49.4
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	76.1
175	5 to 9% of m/z 174	5.6 (7.4)
176	Greater than 95% but less than 101% of m/z 174	75.5 (99.2)
177	5 to 9% of m/z 176	5.0 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RBFBD12.D\MR_TO15.rslt\spectra.d
Injection Date: 12-Apr-2016 13:33:30
Spectrum: Tune Spec :Average 379-381(4.67-4.68) Bgrd 363(4.63)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	134	64.00	1663	105.00	795	142.00	752
30.00	81	65.00	438	106.00	2324	143.00	5461
31.00	12477	67.00	1296	107.00	558	144.00	337
32.00	727	68.00	54152	110.00	347	145.00	476
33.00	2779	69.00	54472	111.00	413	146.00	680
36.00	3889	70.00	4485	112.00	404	147.00	297
37.00	23752	71.00	177	113.00	490	148.00	1249
38.00	22448	72.00	2475	115.00	589	149.00	429
39.00	9135	73.00	22056	116.00	1848	150.00	500
40.00	274	74.00	86256	117.00	3274	152.00	271
41.00	10	75.00	266432	118.00	1819	153.00	380
42.00	23	76.00	22312	119.00	2937	154.00	322
43.00	145	77.00	2744	120.00	37	155.00	1214
44.00	2331	78.00	1999	122.00	129	156.00	215
45.00	4954	79.00	16496	123.00	190	157.00	818
46.00	375	80.00	6266	124.00	308	158.00	148
47.00	7461	81.00	17376	125.00	171	159.00	527
48.00	3292	82.00	4835	126.00	207	161.00	625
49.00	22576	83.00	509	127.00	142	172.00	611
50.00	112384	86.00	464	128.00	1778	173.00	2149
51.00	34408	87.00	22232	129.00	841	174.00	409856
52.00	1445	88.00	21872	130.00	2016	175.00	30144
53.00	116	91.00	1874	131.00	724	176.00	406720
55.00	1250	92.00	14350	132.00	35	177.00	27032
56.00	8099	93.00	22264	133.00	145	178.00	807
57.00	15397	94.00	63424	134.00	93	191.00	116
58.00	652	95.00	538880	135.00	957	193.00	81
59.00	131	96.00	36408	136.00	224	197.00	50
60.00	4320	97.00	1176	137.00	1009	207.00	21
61.00	24504	98.00	33	139.00	131	208.00	36
62.00	24856	103.00	241	140.00	324	253.00	92
63.00	19744	104.00	2431	141.00	5279		

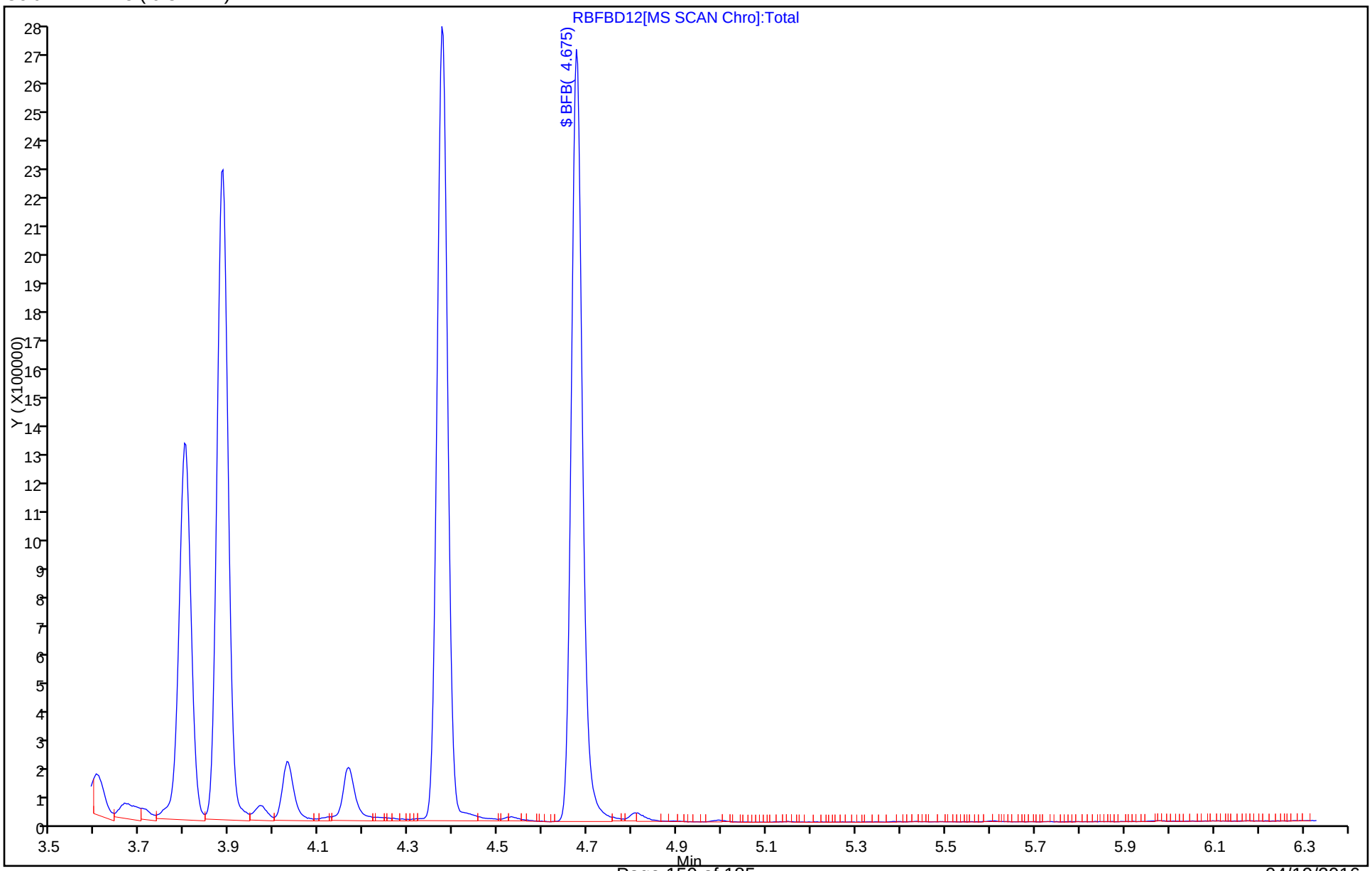
Report Date: 13-Apr-2016 11:12:09 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RBFBD12.D

Injection Date:	12-Apr-2016 13:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-4632/7

Matrix: Air | Lab File ID: Rmb500D12.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 04/12/2016 18:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-4632/7

Matrix: Air Lab File ID: Rmb500D12.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 04/12/2016 18:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4632 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	94		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\Rmb500D12.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 12-Apr-2016 18:57:30 ALS Bottle#: 16 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002734-007
Misc. Info.: mblk 500mL
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Apr-2016 11:13:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: tajh Date: 13-Apr-2016 09:54:40

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.415	8.425	-0.010	94	342197	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.599	10.604	-0.006	95	1709198	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.811	16.816	-0.005	86	1538679	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.561	19.560	0.001	91	1069847	4.00	3.76	
31 Methylene Chloride	84	6.074	6.074	0.000	98	7329		0.0636	
65 4-Methyl-2-pentanone (MIBK	43	12.820	12.804	0.016	97	31459		0.0911	
T 126 Propane TIC	29	3.777	3.795	-0.023	1	194636		2.28	
T 127 Methanol TIC	31	4.165	4.195	-0.035	89	128433		1.50	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

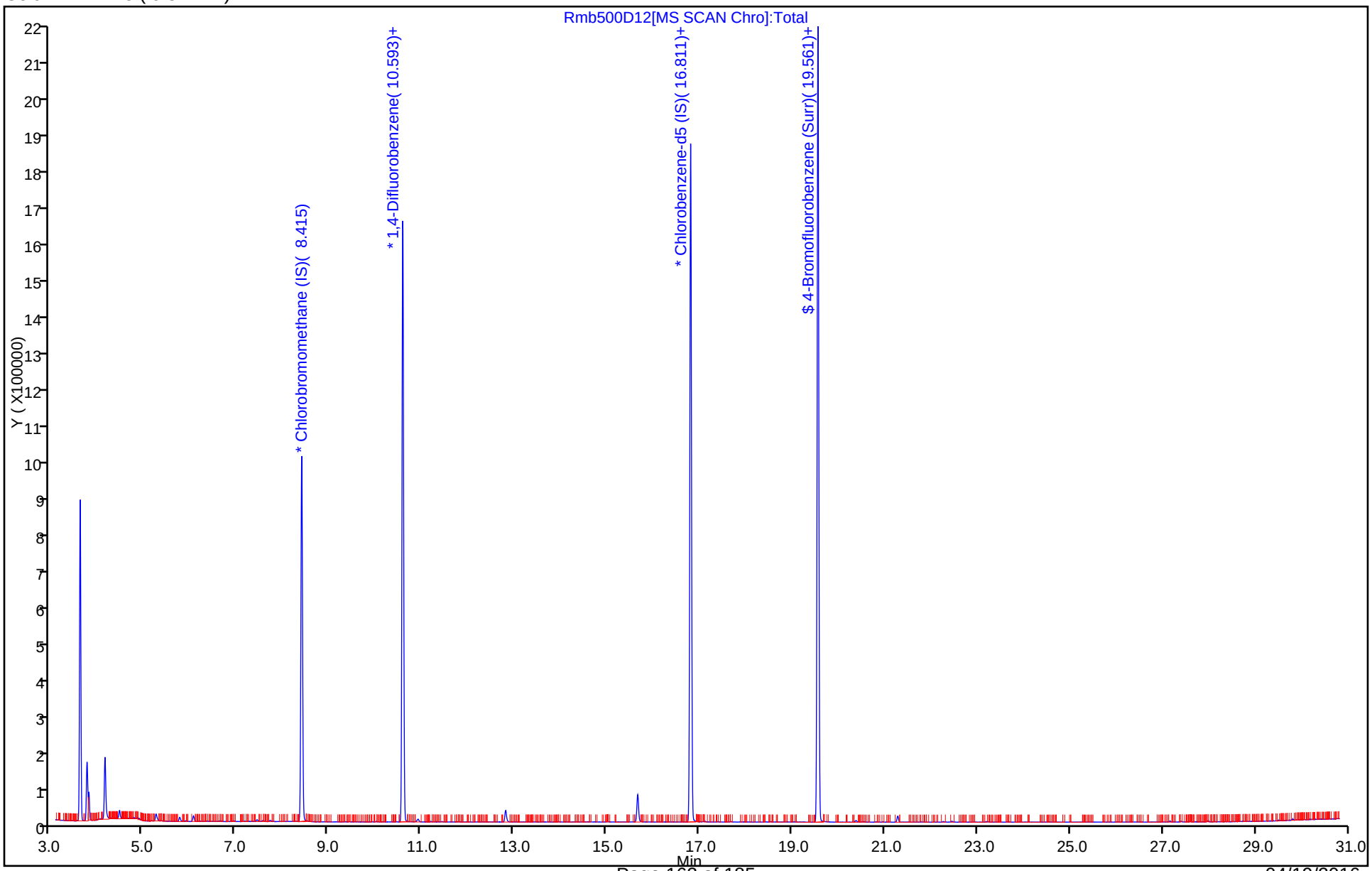
Report Date: 13-Apr-2016 11:15:18 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\Rmb500D12.D

Injection Date:	12-Apr-2016 18:57:30	Instrument ID:	MR	Operator ID:	
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4736-1

SDG No.:

Client Sample ID: | Lab Sample ID: LCS 140-4632/1002

Matrix: Air | Lab File ID: RCCVD12-LCS.d

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 04/12/2016 14:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4632 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.05		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.29		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.14		0.080	0.015
67-66-3	Chloroform	119.38	2.07		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.03		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.63		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.14		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.18		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.95		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.08		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.94		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.05		0.40	0.068
91-20-3	Naphthalene	128.17	1.85		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.03		0.080	0.016
108-88-3	Toluene	92.14	2.15		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.95		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.85		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.11		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.10		0.080	0.021
79-01-6	Trichloroethene	131.39	2.18		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.21		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.09		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.06		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.17		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.29		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RCCVD12-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 12-Apr-2016 14:05:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002734-002
Misc. Info.: S10
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Apr-2016 11:13:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK020

First Level Reviewer: tajh Date: 13-Apr-2016 11:13:20

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.425	0.000	98	287029	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.604	10.604	0.000	95	1469572	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.816	16.816	0.000	87	1326124	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.560	19.560	0.000	81	990695	4.00	4.05	
7 Chlorodifluoromethane	67	3.799	3.799	0.000	96	53142	2.00	2.14	
6 Propene	41	3.799	3.799	0.000	96	189802	2.00	1.91	
8 Dichlorodifluoromethane	85	3.847	3.847	0.000	100	358651	2.00	1.63	
9 Chloromethane	52	4.003	4.003	0.000	99	71188	2.00	2.22	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.030	4.030	0.000	94	380767	2.00	1.93	
11 Acetaldehyde	44	4.154	4.154	0.000	96	443868	10.0	7.44	
12 Vinyl chloride	62	4.160	4.160	0.000	99	229647	2.00	2.17	
13 Butadiene	54	4.241	4.241	0.000	96	183803	2.00	2.20	
14 Butane	43	4.246	4.246	0.000	92	341008	2.00	2.41	
15 Bromomethane	94	4.516	4.516	0.000	99	194690	2.00	1.92	
16 Chloroethane	64	4.640	4.640	0.000	96	109427	2.00	2.06	
17 Ethanol	31	4.758	4.758	0.000	90	334123	10.0	11.9	
18 Vinyl bromide	106	4.909	4.909	0.000	98	199907	2.00	2.02	
19 2-Methylbutane	43	4.969	4.969	0.000	91	256774	2.00	2.30	
20 Acrolein	56	5.147	5.147	0.000	92	89528	2.00	2.48	
21 Trichlorofluoromethane	101	5.157	5.157	0.000	100	520367	2.00	2.05	
22 Acetonitrile	40	5.206	5.206	0.000	99	99011	2.00	2.34	
23 Acetone	58	5.249	5.249	0.000	97	347121	6.00	5.18	
25 Isopropyl alcohol	45	5.357	5.357	0.000	94	943389	6.00	6.77	
24 Pentane	72	5.362	5.362	0.000	94	41212	2.00	2.14	
26 Ethyl ether	31	5.497	5.497	0.000	96	220769	2.00	2.30	
27 1,1-Dichloroethene	96	5.772	5.772	0.000	96	194402	2.00	1.95	
28 Acrylonitrile	53	5.848	5.848	0.000	94	174057	2.00	2.28	
29 2-Methyl-2-propanol	59	5.875	5.875	0.000	94	384582	2.00	2.08	
30 1,1,2-Trichloro-1,2,2-trif	101	5.955	5.955	0.000	98	436744	2.00	2.04	
31 Methylene Chloride	84	6.074	6.074	0.000	99	187530	2.00	1.94	
32 3-Chloro-1-propene	39	6.096	6.096	0.000	95	185020	2.00	2.15	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.220	6.220	0.000	99	583168	2.00	2.04	
34 trans-1,2-Dichloroethene	96	6.824	6.824	0.000	97	202360	2.00	1.95	
35 2-Methylpentane	43	6.872	6.872	0.000	96	505243	2.00	2.49	
36 Methyl tert-butyl ether	73	6.948	6.948	0.000	97	538375	2.00	2.05	
37 1,1-Dichloroethane	63	7.201	7.201	0.000	99	397796	2.00	2.14	
38 Vinyl acetate	43	7.304	7.304	0.000	100	589485	2.00	2.26	
39 2-Butanone (MEK)	72	7.697	7.697	0.000	99	100648	2.00	1.72	
40 Hexane	56	7.789	7.789	0.000	89	181464	2.00	2.19	
41 Isopropyl ether	45	7.924	7.924	0.000	98	784097	2.00	2.22	
42 cis-1,2-Dichloroethene	96	8.123	8.123	0.000	95	217429	2.00	2.03	
43 Ethyl acetate	43	8.301	8.301	0.000	99	480195	2.00	2.16	
44 Chloroform	83	8.452	8.452	0.000	97	436271	2.00	2.07	
45 Tert-butyl ethyl ether	59	8.565	8.565	0.000	95	678977	2.00	2.25	
46 Tetrahydrofuran	42	8.813	8.813	0.000	96	251893	2.00	2.29	
47 1,1,1-Trichloroethane	97	9.439	9.439	0.000	97	426533	2.00	2.11	
48 1,2-Dichloroethane	62	9.520	9.520	0.000	97	299523	2.00	2.18	
49 n-Butanol	31	10.000	10.000	0.000	81	72796	2.00	2.11	
50 Benzene	78	10.027	10.027	0.000	97	640602	2.00	2.05	
51 Cyclohexane	69	10.054	10.054	0.000	96	97474	2.00	2.07	
52 Carbon tetrachloride	117	10.064	10.064	0.000	98	460601	2.00	2.29	
53 2,3-Dimethylpentane	71	10.205	10.205	0.000	90	131894	2.00	1.90	
54 Thiophene	84	10.302	10.302	0.000	97	367366	2.00	2.13	
55 Tert-amyl methyl ether	73	10.550	10.550	0.000	97	585535	2.00	2.04	
56 Isooctane	57	10.900	10.900	0.000	99	1130106	2.00	2.17	
57 n-Heptane	71	11.326	11.326	0.000	91	225477	2.00	2.07	
58 1,2-Dichloropropane	63	11.326	11.326	0.000	94	260201	2.00	2.14	
59 Trichloroethene	130	11.396	11.396	0.000	96	321060	2.00	2.18	
60 Dibromomethane	93	11.450	11.450	0.000	95	259479	2.00	2.07	
61 Dichlorobromomethane	83	11.634	11.634	0.000	99	453996	2.00	2.16	
62 1,4-Dioxane	88	11.639	11.639	0.000	91	96146	2.00	2.01	
63 Methyl methacrylate	41	11.779	11.779	0.000	95	303302	2.00	2.33	
64 Methylcyclohexane	83	12.329	12.329	0.000	93	364562	2.00	1.62	
65 4-Methyl-2-pentanone (MIBK	43	12.804	12.804	0.000	97	566396	2.00	1.91	
66 cis-1,3-Dichloropropene	75	12.869	12.869	0.000	94	373663	2.00	2.14	
67 trans-1,3-Dichloropropene	75	13.780	13.780	0.000	99	340961	2.00	2.23	
68 Toluene	91	13.963	13.963	0.000	94	774851	2.00	2.15	
69 1,1,2-Trichloroethane	83	14.039	14.039	0.000	99	222694	2.00	2.10	
70 2-Methylthiophene	97	14.157	14.157	0.000	97	634964	2.00	2.17	
71 3-Methylthiophene	97	14.432	14.432	0.000	99	645994	2.00	2.23	
72 2-Hexanone	58	14.610	14.610	0.000	93	267395	2.00	2.11	
73 Chlorodibromomethane	129	14.999	14.999	0.000	98	455133	2.00	2.17	
74 n-Octane	85	15.031	15.031	0.000	94	257043	2.00	2.15	
75 Ethylene Dibromide	107	15.408	15.408	0.000	98	409652	2.00	2.08	
76 Tetrachloroethene	129	15.581	15.581	0.000	96	266230	2.00	2.03	
77 Chlorobenzene	112	16.891	16.891	0.000	93	600760	2.00	2.05	
78 2,3-Dimethylheptane	43	17.080	17.080	0.000	98	738035	2.00	2.43	
79 Ethylbenzene	91	17.398	17.398	0.000	98	975666	2.00	2.08	
80 2-Ethylthiophene	97	17.549	17.549	0.000	98	703438	2.00	2.04	
81 m-Xylene & p-Xylene	91	17.673	17.673	0.000	99	1526277	4.00	4.22	
82 Bromoform	173	18.304	18.304	0.000	95	409964	2.00	2.09	
83 Styrene	104	18.428	18.428	0.000	99	565794	2.00	2.13	
84 n-Nonane	57	18.520	18.520	0.000	94	545954	2.00	2.28	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	18.531	18.531	0.000	99	774123	2.00	2.07	
86 1,1,2,2-Tetrachloroethane	83	19.059	19.059	0.000	99	487129	2.00	1.81	
87 1,2,3-Trichloropropane	110	19.323	19.323	0.000	97	168092	2.00	2.06	
88 Isopropylbenzene	105	19.560	19.560	0.000	95	1131529	2.00	2.13	
89 N-Propylbenzene	120	20.526	20.526	0.000	98	313289	2.00	2.05	
90 2-Chlorotoluene	126	20.542	20.542	0.000	92	284609	2.00	2.06	
91 4-Ethyltoluene	105	20.817	20.817	0.000	98	1018500	2.00	1.94	
92 1,3,5-Trimethylbenzene	120	20.968	20.968	0.000	93	520068	2.00	2.06	
93 Alpha Methyl Styrene	118	21.394	21.394	0.000	89	434270	2.00	2.02	
94 n-Decane	57	21.701	21.701	0.000	89	700280	2.00	2.27	
95 tert-Butylbenzene	119	21.771	21.771	0.000	93	996599	2.00	2.07	
96 1,2,4-Trimethylbenzene	105	21.804	21.804	0.000	96	934018	2.00	2.09	
97 1,3-Dichlorobenzene	146	22.267	22.267	0.000	99	627091	2.00	1.95	
98 sec-Butylbenzene	105	22.332	22.332	0.000	98	1367067	2.00	2.11	
99 Benzyl chloride	91	22.440	22.440	0.000	98	850713	2.00	2.10	
100 1,4-Dichlorobenzene	146	22.456	22.456	0.000	95	647703	2.00	1.95	
101 4-Isopropyltoluene	119	22.699	22.699	0.000	97	1199365	2.00	2.05	
102 1,2,3-Trimethylbenzene	105	22.747	22.747	0.000	98	795361	2.00	2.21	
103 Butylcyclohexane	83	22.952	22.952	0.000	93	712176	2.00	2.07	
104 1,2-Dichlorobenzene	146	23.195	23.195	0.000	95	608257	2.00	1.93	
105 2,3-Dihydroindene	117	23.227	23.227	0.000	94	838885	2.00	1.92	
106 Indene	116	23.497	23.497	0.000	92	814206	2.00	2.57	
107 n-Butylbenzene	91	23.642	23.642	0.000	99	1167606	2.00	2.17	
108 1,2-Dimethyl-4-Ethylbenzen	119	24.500	24.500	0.000	98	1076060	2.00	2.51	
109 1,2-Dibromo-3-Chloropropan	157	24.548	24.548	0.000	97	203082	2.00	1.46	
110 Undecane	57	24.575	24.575	0.000	96	830982	2.00	2.34	
111 1,2,4,5-Tetramethylbenzene	119	25.411	25.411	0.000	98	1100562	2.00	2.23	
112 1,2,3,5-Tetramethylbenzene	119	25.535	25.535	0.000	96	680962	2.00	2.27	
113 1,2,3,4-Tetramethylbenzene	119	26.463	26.463	0.000	98	888217	2.00	2.16	
114 Dodecane	57	27.121	27.121	0.000	96	788500	2.00	2.37	
115 1,2,4-Trichlorobenzene	180	27.158	27.158	0.000	94	532382	2.00	1.85	
116 Naphthalene	128	27.396	27.396	0.000	99	1247327	2.00	1.85	
117 Benzo(b)thiophene	134	27.595	27.595	0.000	99	803964	2.00	2.03	
118 Hexachlorobutadiene	225	27.962	27.962	0.000	93	430617	2.00	1.96	
119 1,2,3-Trichlorobenzene	180	27.983	27.983	0.000	95	515065	2.00	1.86	
120 2-Methylnaphthalene	142	29.466	29.466	0.000	99	664911	6.25	7.33	
121 1-Methylnaphthalene	142	29.768	29.768	0.000	99	583315	6.25	8.15	
A 122 C6 Range	1	7.800	(7.730-7.859)		0	1489260	2.00	2.21	
S 124 Xylenes, Total	100				0		6.00	6.29	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.97	

Reagents:

40CV101S_00010	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

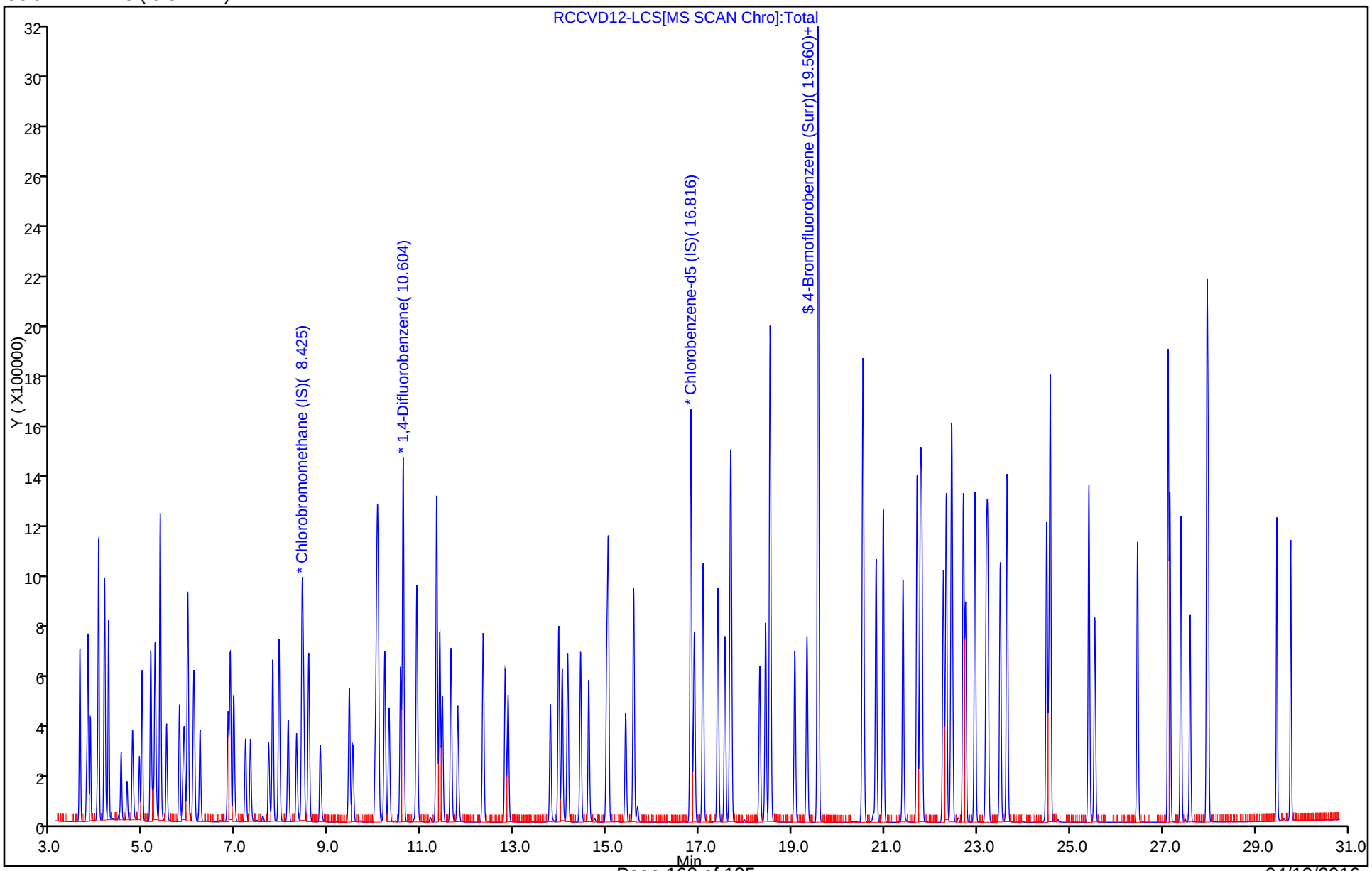
Report Date: 13-Apr-2016 11:13:24 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20160408-2734.b\RCCVD12-LCS.d

Injection Date:	12-Apr-2016 14:05:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Instrument ID: MR Start Date: 10/29/2015 12:53

Analysis Batch Number: 3621 End Date: 10/29/2015 22:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-3621/1		10/29/2015 12:53	1	RBFBJ29.D	RTX-5 0.32(mm)
IC 140-3621/2		10/29/2015 14:14	1	RJ29IC01.D	RTX-5 0.32(mm)
IC 140-3621/3		10/29/2015 15:07	1	RJ29IC02.D	RTX-5 0.32(mm)
IC 140-3621/4		10/29/2015 15:58	1	RJ29IC03.D	RTX-5 0.32(mm)
IC 140-3621/5		10/29/2015 16:50	1	RJ29IC04.D	RTX-5 0.32(mm)
IC 140-3621/6		10/29/2015 17:41	1	RJ29IC05.D	RTX-5 0.32(mm)
ICIS 140-3621/7		10/29/2015 18:33	1	RJ29ICIS06.D	RTX-5 0.32(mm)
IC 140-3621/8		10/29/2015 19:26	1	RJ29IC07.D	RTX-5 0.32(mm)
IC 140-3621/9		10/29/2015 20:18	1	RJ29IC08.D	RTX-5 0.32(mm)
IC 140-3621/10		10/29/2015 21:11	1	RJ29IC09.D	RTX-5 0.32(mm)
ICV 140-3621/12		10/29/2015 22:54	1	RJ29ICV.D	RTX-5 0.32(mm)

TestAmerica Laboratories
Worklist Run Log Report

Worklist Name: R102915ICAL Worklist Num: 2223
Instrument: MR Method: MR_TO15
Batch Directory: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b
Anaylysis Type: VOA Creator: Barlozhetskaya, Anna F
Inj Volume: 500.00 Inj Vol Units: mL
Run Reagents:
MAissur1_00002, Amount Added: 40.00 , Units: mL

Lab ID	Worklist ID	Sample Type	Cal Lvl	Inj Date/Time	File Name	Vial	Dil Factor	Fract
BFB	140-0002223-001	BFB	0	29-Oct-2015 12:53:30	RBFBJ29.D 100mL	16	1.0	air
IC L1	140-0002223-002	IC	1	29-Oct-2015 14:14:30	RJ29IC01.D "	9	1.0	air
IC L2	140-0002223-003	IC	2	29-Oct-2015 15:07:30	RJ29IC02.D 200mL	9	1.0	air
IC L3	140-0002223-004	IC	3	29-Oct-2015 15:58:30	RJ29IC03.D 80mL	9	10 1.0	air
IC L4	140-0002223-005	IC	4	29-Oct-2015 16:50:30	RJ29IC04.D 200mL	9	10 1.0	air
IC L5	140-0002223-006	IC	5	29-Oct-2015 17:41:30	RJ29IC05.D 100mL	10	11 1.0	air
ICIS L6	140-0002223-007	ICIS	6	29-Oct-2015 18:33:30	RJ29ICIS06.D 200mL	11	1.0	air
IC L7	140-0002223-008	IC	7	29-Oct-2015 19:26:30	RJ29IC07.D	12	1.0	air
IC L8	140-0002223-009	IC	8	29-Oct-2015 20:18:30	RJ29IC08.D	13	1.0	air
IC L9	140-0002223-010	IC	9	29-Oct-2015 21:11:30	RJ29IC09.D	14	1.0	air
dnuPRIME	140-0002223-011	Client	0	29-Oct-2015 22:02:30	dnuPrimeJ29.D —	15	1.0	air
ICV	140-0002223-012	ICV	0	29-Oct-2015 22:54:30	RJ29ICV.D 100mL	15	1.0	air
dnuFLUSH	140-0002223-013	Client	0	29-Oct-2015 23:44:30	dnuFlushJ29.D —	16	1.0	air
MB	140-0002223-014	MB	0	30-Oct-2015 00:30:30	RJ29MB500.D 500mL	16	1.0	air
LCS	140-0002223-015	LCS	0	30-Oct-2015 01:21:30	RJ29LCS.D 100mL	15	2 1.0	air
MDL	140-0002223-016	Client	0	29-Oct-2015 13:23:30	RJ29MDL.D 50mL	8	9 1.0	air
EXPstd	140-0002223-017	Client	0	30-Oct-2015 02:13:30	RJ29expstd.D 100mL	15	3 1.0	air
test	140-0002223-018	Client	0	30-Oct-2015 03:05:30	RJ29test.D "	16	4 1.0	air

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2 ✓

Analysis Date:	10/29/15	Instrument:	MR	Chrom WL #:	2223	TALS Batch & Event #	TO14/15: 3621 / 393	AFCEE: 3624 / 396
							DOD: 3622 / 394	OHIO: 3623 / 395

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓		11/4/15
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]		1, 2, 3, 4, 5, 6, 7, 8, 9 ✓	
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3-, 1,4-, and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	TPH as Hexane only (DNU TPH as acetone or to here)	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓	Acetone C 35%	✓			
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓			
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓			
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA					NA			
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA					NA			
19. Is the intercept less than the RL for each curve? [F6]	NA					NA			
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA					NA			
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓			
22. **Analyst/Date:**	AHS 11/3/15 (ic r/out)				**2nd Level Reviewer/Date:**				11/3/15
Comments:	DNU Acetaldehyde				UR propene @ 8				

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓					✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓					✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓					✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	✓					NA			
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							✓		
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst:	**Date:** 11/4/15				**2nd Level Reviewer :**			**Date:** 11/4/15	
Comments:					**Comments:**				

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-4736-1

SDG No.:

Instrument ID: MR Start Date: 04/12/2016 13:33

Analysis Batch Number: 4632 End Date: 04/13/2016 05:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-4632/1		04/12/2016 13:33	1	RBFBD12.D	RTX-5 0.32(mm)
CCVIS 140-4632/2		04/12/2016 14:05	1	RCCVD12.D	RTX-5 0.32(mm)
LCS 140-4632/1002		04/12/2016 14:05	1	RCCVD12-LCS.d	RTX-5 0.32(mm)
MB 140-4632/7		04/12/2016 18:57	1	Rmb500D12.D	RTX-5 0.32(mm)
140-4736-1		04/12/2016 21:34	3.07	RD12p103.D	RTX-5 0.32(mm)
140-4736-2		04/12/2016 22:26	10.16	RD12p104.D	RTX-5 0.32(mm)
140-4736-3		04/12/2016 23:19	10.44	RD12p105.D	RTX-5 0.32(mm)
ZZZZZ		04/13/2016 00:11	1		RTX-5 0.32(mm)
ZZZZZ		04/13/2016 01:10	1		RTX-5 0.32(mm)
ZZZZZ		04/13/2016 02:08	1		RTX-5 0.32(mm)
ZZZZZ		04/13/2016 03:00	1		RTX-5 0.32(mm)
ZZZZZ		04/13/2016 04:00	1		RTX-5 0.32(mm)
ZZZZZ		04/13/2016 05:03	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

Instrument/Date	MR 4/12/16	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	2734	CCAL Batch #	4632		4646
ICAL Chrom WL #	2223	ICAL Batch # / Event #	3621 / 393	/	3623 / 395

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]		□ [Failed TO-14A, but passes TO-15] (NCM#_____)	
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		✓
7. Has the RT been updated to the method?	✓		✓
Analyst:	**Date:** 4/13/16	**2nd Level Reviewer:**	**Date:** 04/13/16
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	NA	□ ICAL – Range Exceeded; Minimum Dilution	NA
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?			

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			MS
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4632/7 4646/7 **200 mL blank ID:** —	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 4/13/16
Comments:	
2nd Level Reviewer :	**Date:** 04/3/16
Comments:	

Example Calculation: 4736-1 11Dec
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF
0.8664 x 30mL x 3.07 = 44.37

Summa Canister Dilution Worksheet

Client: Tetra Tech GEO

Job No.: 140-4736-1

Lab Sample ID	Canister Volume (L)	Preadjusted Pressure ("Hg)	Preadjusted Pressure (atm)	Preadjusted Volume (L)	Adjusted Pressure (psig)	Adjusted Pressure (atm)	Adjusted Volume (L)	Initial Volume (mL)	Dilution Factor	Final Dilution Factor	Date	Analyst
140-4736-1	1	0	1.00	1.00	30.5	3.07	3.07		3.07	3.07	04/12/16 12:22	Barlozhetskaya, Anna F
140-4736-2	1	0	1.00	1.00	32.0	3.18	3.18		3.18	3.18	04/12/16 12:22	Barlozhetskaya, Anna F
140-4736-2	1	0	1.00	1.00	32.3	3.20	3.20		3.20	10.16	04/12/16 12:24	Barlozhetskaya, Anna F
140-4736-3	1	0	1.00	1.00	33.2	3.26	3.26		3.26	3.26	04/12/16 12:22	Barlozhetskaya, Anna F
140-4736-3	1	0	1.00	1.00	32.4	3.20	3.20		3.20	10.44	04/12/16 12:24	Barlozhetskaya, Anna F

Formulae:

Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg

Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig

Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

29.92 "Hg = Standard atmospheric pressure in inches of Mercury (“Hg)

14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4567-1

SDG No.:

Client Sample ID: 10974 | Lab Sample ID: 140-4567-1

Matrix: Air | Lab File ID: LOT4567-1.D

Analysis Method: TO-15 | Date Collected: 03/07/2016 16:00

Sample wt/vol: 200(mL) | Date Analyzed: 03/14/2016 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4489 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4567-1

SDG No.:

Client Sample ID: 10974 | Lab Sample ID: 140-4567-1

Matrix: Air | Lab File ID: LOT4567-1.D

Analysis Method: TO-15 | Date Collected: 03/07/2016 16:00

Sample wt/vol: 200(mL) | Date Analyzed: 03/14/2016 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4489 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4567-1

SDG No.:

Client Sample ID: 10974 | Lab Sample ID: 140-4567-1

Matrix: Air | Lab File ID: LOT4567-1.D

Analysis Method: TO-15 | Date Collected: 03/07/2016 16:00

Sample wt/vol: 200(mL) | Date Analyzed: 03/14/2016 18:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4489 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4567-1

SDG No.:

Client Sample ID: 10974 Lab Sample ID: 140-4567-1

Matrix: Air Lab File ID: LOT4567-1.D

Analysis Method: TO-15 Date Collected: 03/07/2016 16:00

Sample wt/vol: 200(mL) Date Analyzed: 03/14/2016 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4489 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160310-2650.b\LOT4567-1.D				
Lims ID:	140-4567-A-1	Lab Sample ID:	140-4567-1		
Client ID:	10974				
Sample Type:	Client				
Inject. Date:	14-Mar-2016 18:03:30	ALS Bottle#:	2	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0002650-010				
Misc. Info.:	10974				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160310-2650.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	15-Mar-2016 12:58:39	Calib Date:	28-Jan-2016 00:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160127-2524.b\JA27ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK017				
First Level Reviewer: barlozhetskayaa		Date:	15-Mar-2016 12:58:53		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.447	9.452	-0.005	95	363618	4.00	
* 2 1,4-Difluorobenzene	114	11.610	11.615	-0.005	96	1805061	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.279	16.284	-0.005	89	1476140	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.904	17.903	0.001	91	879479	3.52	
28 2-Methyl-2-propanol	59	6.510	6.483	0.027	93	6906	0.0397	
31 Methylene Chloride	84	6.779	6.784	-0.005	98	9294	0.0795	
65 4-Methyl-2-pentanone (MIBK	43	13.450	13.444	0.006	97	31451	0.1506	
113 1,2,3,4-Tetramethylbenzene	119	21.073	21.061	0.011	61	15348	0.0738	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

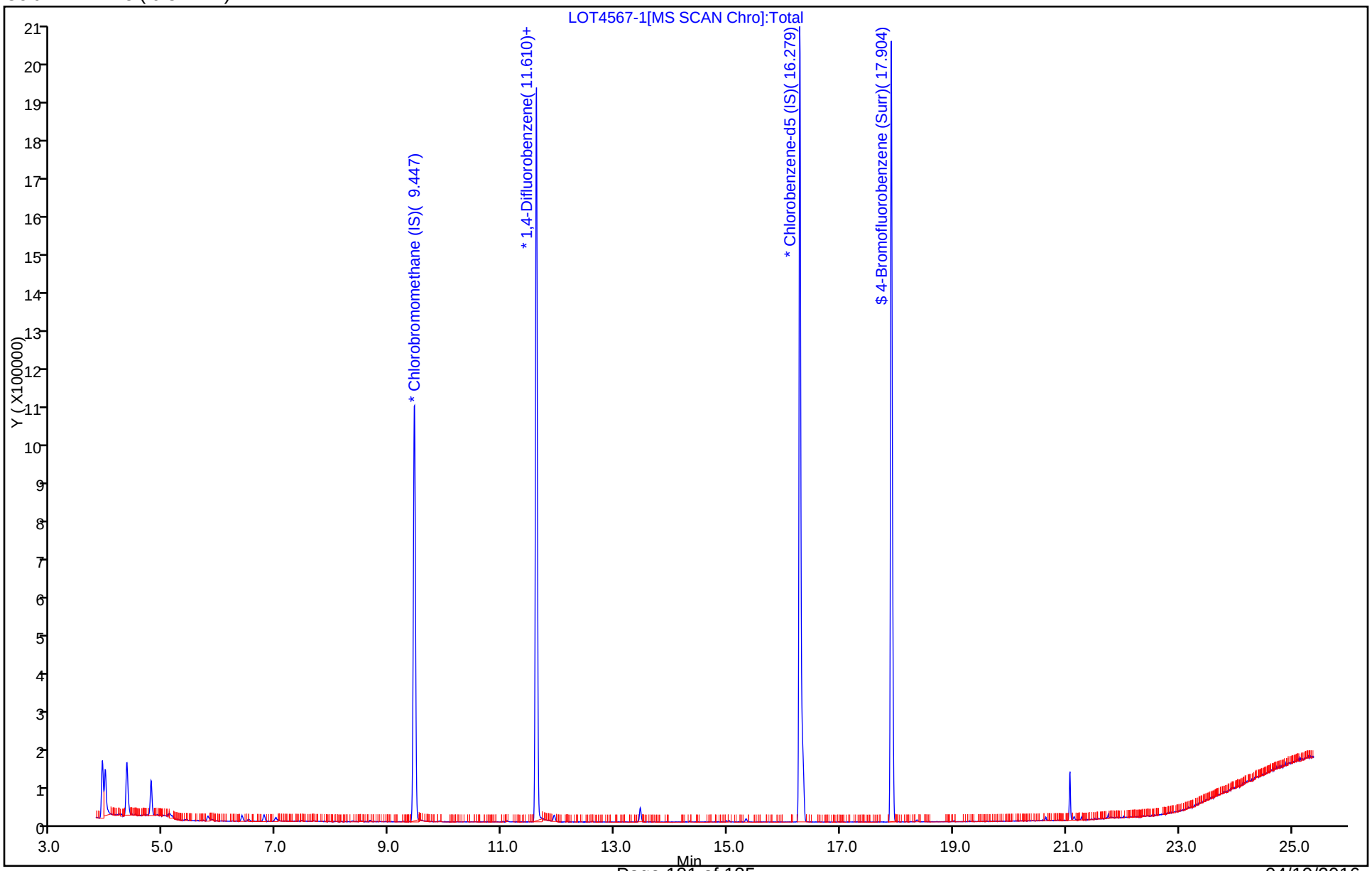
Report Date: 15-Mar-2016 12:58:54 Chrom Revision: 2.2 08-Feb-2016 08:11:40

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160310-2650.b\LOT4567-1.D

Injection Date:	14-Mar-2016 18:03:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-4567-A-1	Lab Sample ID:	140-4567-1	Worklist Smp#:	10
Client ID:	10974				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

180325

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: Dawn Monico	1 of 1 COCs
Company: TetraTech	Phone: 410-990-4607		
Address: 51 Franklin St. Suite 400	Site Contact: Dawn Monico		
City/State/Zip Annapolis, MD 21401	TAL Contact:		
Phone: 410-990-4607			
FAX:			
Project Name: SSD Oem	Analysis Turnaround Time		
Site/location: MRC	Standard (Specify)		
PO# 117-05121124	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
A-INFLUENT	4/7/16	1335	N/A	-29.5	0.0	28	10941	X											
A-MID-GAC	↓	1333	↓	-30.0	-11.0	139	10747	X											
A-EFFLUENT	↓	1331	↓	-28.0	0.0	71	09796	X											

Sampled by :

140-4736 Chain of Custody

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

CUSTODY SEALS INTACT
RECEIVED AT AMBIENT TEMP 20.1°C
AKD 4-9-16
FEDEX # 782791037879

3 CANS / 3 FLOWS (A)

Special Instructions/QC Requirements & Comments:

A-MID-GAC would not fill past -11.0. H_2O was noted to have come from sample port. Please contact me if this sample needs redone.

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: Michael Wilks	Date/Time: 4/08/16 0900	Received by:
Relinquished by:	Date/Time: 4/8/16 / 1730	Received by: 4-9-16 09:30

04/19/2016

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 4/11/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-4736-a-1	10941	4567	B	1	0	1215	
AFB	140-4736-a-2	10747	4567	B	1	1.1	1216	
AFB	140-4736-a-3	09796	4567	B	1	0	1217	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 140-4736-1

Login Number: 4736
List Number: 1
Creator: Dameron, Bryan K

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	CHECKED IN LAB
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

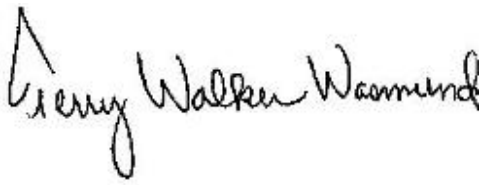
ANALYTICAL REPORT

Job Number: 140-4836-1

Job Description: LMMRC SSDS - Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
5/3/2016 12:56 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
05/03/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-4836-1

Receipt
The samples were received on 4/28/2016 at 9:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-4836-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	23		4.0	1.2	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.4		4.0	0.50	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	17		4.0	0.70	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	90		4.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	180		2.0	0.70	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	90		16	4.8	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		16	2.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	68		16	2.8	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	490		22	3.3	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	950		11	3.8	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID-GAC — Lab Sample ID: 140-4836-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.4		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.51		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.85		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	54		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.56		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.3		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.16	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	18		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.70		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	45		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	3.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.19	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	14		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	4.2		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	210		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.8		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.64	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	71		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Toluene	4.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	250		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	17		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.50	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-4836-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.46		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.50		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.099	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-EFFLUENT (Continued)

Lab Sample ID: 140-4836-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	0.86		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.095	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	0.68		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.084	J	0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.40	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	3.4		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.64	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	3.7		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	0.45	J	1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-4836-1

Date Collected: 04/27/16 11:19

Matrix: Air

Date Received: 04/28/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		4.0	1.2	ppb v/v			04/28/16 16:54	1
Carbon tetrachloride	ND		4.0	0.75	ppb v/v			04/28/16 16:54	1
Chlorodifluoromethane	ND		4.0	0.75	ppb v/v			04/28/16 16:54	1
Chloroform	ND		4.0	0.75	ppb v/v			04/28/16 16:54	1
cis-1,2-Dichloroethene	**23**		4.0	1.2	ppb v/v			04/28/16 16:54	1
Dichlorodifluoromethane	ND		4.0	1.4	ppb v/v			04/28/16 16:54	1
1,1-Dichloroethane	**4.4**		4.0	0.50	ppb v/v			04/28/16 16:54	1
1,2-Dichloroethane	ND		4.0	0.95	ppb v/v			04/28/16 16:54	1
1,1-Dichloroethene	**17**		4.0	0.70	ppb v/v			04/28/16 16:54	1
Ethylbenzene	ND		4.0	1.4	ppb v/v			04/28/16 16:54	1
Methylene Chloride	ND		10	6.5	ppb v/v			04/28/16 16:54	1
Methyl tert-butyl ether	ND		20	3.4	ppb v/v			04/28/16 16:54	1
Naphthalene	ND		2.0	2.0	ppb v/v			04/28/16 16:54	1
Tetrachloroethene	ND		4.0	0.80	ppb v/v			04/28/16 16:54	1
Toluene	ND		6.0	6.0	ppb v/v			04/28/16 16:54	1
trans-1,2-Dichloroethene	ND		4.0	1.0	ppb v/v			04/28/16 16:54	1
1,2,4-Trichlorobenzene	ND		4.0	2.0	ppb v/v			04/28/16 16:54	1
1,1,1-Trichloroethane	**90**		4.0	0.60	ppb v/v			04/28/16 16:54	1
1,1,2-Trichloroethane	ND		4.0	1.1	ppb v/v			04/28/16 16:54	1
Trichloroethene	**180**		2.0	0.70	ppb v/v			04/28/16 16:54	1
1,2,3-Trimethylbenzene	ND		4.0	1.7	ppb v/v			04/28/16 16:54	1
1,2,4-Trimethylbenzene	ND		4.0	1.3	ppb v/v			04/28/16 16:54	1
1,3,5-Trimethylbenzene	ND		4.0	1.3	ppb v/v			04/28/16 16:54	1
Vinyl chloride	ND		2.0	1.5	ppb v/v			04/28/16 16:54	1
Xylenes, Total	ND		8.0	1.2	ppb v/v			04/28/16 16:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		13	3.7	ug/m3			04/28/16 16:54	1
Carbon tetrachloride	ND		25	4.7	ug/m3			04/28/16 16:54	1
Chlorodifluoromethane	ND		14	2.7	ug/m3			04/28/16 16:54	1
Chloroform	ND		20	3.7	ug/m3			04/28/16 16:54	1
cis-1,2-Dichloroethene	**90**		16	4.8	ug/m3			04/28/16 16:54	1
Dichlorodifluoromethane	ND		20	6.7	ug/m3			04/28/16 16:54	1
1,1-Dichloroethane	**18**		16	2.0	ug/m3			04/28/16 16:54	1
1,2-Dichloroethane	ND		16	3.8	ug/m3			04/28/16 16:54	1
1,1-Dichloroethene	**68**		16	2.8	ug/m3			04/28/16 16:54	1
Ethylbenzene	ND		17	5.9	ug/m3			04/28/16 16:54	1
Methylene Chloride	ND		35	23	ug/m3			04/28/16 16:54	1
Methyl tert-butyl ether	ND		72	12	ug/m3			04/28/16 16:54	1
Naphthalene	ND		10	10	ug/m3			04/28/16 16:54	1
Tetrachloroethene	ND		27	5.4	ug/m3			04/28/16 16:54	1
Toluene	ND		23	23	ug/m3			04/28/16 16:54	1
trans-1,2-Dichloroethene	ND		16	4.0	ug/m3			04/28/16 16:54	1
1,2,4-Trichlorobenzene	ND		30	14	ug/m3			04/28/16 16:54	1
1,1,1-Trichloroethane	**490**		22	3.3	ug/m3			04/28/16 16:54	1
1,1,2-Trichloroethane	ND		22	5.7	ug/m3			04/28/16 16:54	1
Trichloroethene	**950**		11	3.8	ug/m3			04/28/16 16:54	1
1,2,3-Trimethylbenzene	ND		20	8.4	ug/m3			04/28/16 16:54	1
1,2,4-Trimethylbenzene	ND		20	6.1	ug/m3			04/28/16 16:54	1

Client Sample ID: A-INFLUENT

Date Collected: 04/27/16 11:19
Date Received: 04/28/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4836-1

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		20	6.4	ug/m3			04/28/16 16:54	1
Vinyl chloride	ND		5.1	3.7	ug/m3			04/28/16 16:54	1
Xylenes, Total	ND		35	5.2	ug/m3			04/28/16 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*04/28/16 16:54*	*1*

Client Sample ID: A-MID-GAC

Date Collected: 04/27/16 11:17
Date Received: 04/28/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4836-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.4**		0.40	0.12	ppb v/v			04/28/16 17:46	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			04/28/16 17:46	1
Chlorodifluoromethane	**0.51**		0.40	0.075	ppb v/v			04/28/16 17:46	1
Chloroform	**0.85**		0.40	0.075	ppb v/v			04/28/16 17:46	1
cis-1,2-Dichloroethene	**54**		0.40	0.12	ppb v/v			04/28/16 17:46	1
Dichlorodifluoromethane	**0.56**		0.40	0.14	ppb v/v			04/28/16 17:46	1
1,1-Dichloroethane	**4.3**		0.40	0.050	ppb v/v			04/28/16 17:46	1
1,2-Dichloroethane	**0.16**	**J**	0.40	0.095	ppb v/v			04/28/16 17:46	1
1,1-Dichloroethene	**18**		0.40	0.070	ppb v/v			04/28/16 17:46	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			04/28/16 17:46	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			04/28/16 17:46	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			04/28/16 17:46	1
Naphthalene	ND		0.20	0.20	ppb v/v			04/28/16 17:46	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			04/28/16 17:46	1
Toluene	**1.3**		0.60	0.60	ppb v/v			04/28/16 17:46	1
trans-1,2-Dichloroethene	**0.70**		0.40	0.10	ppb v/v			04/28/16 17:46	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			04/28/16 17:46	1
1,1,1-Trichloroethane	**45**		0.40	0.060	ppb v/v			04/28/16 17:46	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			04/28/16 17:46	1
Trichloroethene	**3.1**		0.20	0.070	ppb v/v			04/28/16 17:46	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			04/28/16 17:46	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			04/28/16 17:46	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			04/28/16 17:46	1
Vinyl chloride	**0.19**	**J**	0.20	0.15	ppb v/v			04/28/16 17:46	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			04/28/16 17:46	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**14**		1.3	0.37	ug/m3			04/28/16 17:46	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			04/28/16 17:46	1
Chlorodifluoromethane	**1.8**		1.4	0.27	ug/m3			04/28/16 17:46	1
Chloroform	**4.2**		2.0	0.37	ug/m3			04/28/16 17:46	1
cis-1,2-Dichloroethene	**210**		1.6	0.48	ug/m3			04/28/16 17:46	1
Dichlorodifluoromethane	**2.8**		2.0	0.67	ug/m3			04/28/16 17:46	1
1,1-Dichloroethane	**17**		1.6	0.20	ug/m3			04/28/16 17:46	1
1,2-Dichloroethane	**0.64**	**J**	1.6	0.38	ug/m3			04/28/16 17:46	1
1,1-Dichloroethene	**71**		1.6	0.28	ug/m3			04/28/16 17:46	1
Ethylbenzene	ND		1.7	0.59	ug/m3			04/28/16 17:46	1
Methylene Chloride	ND		3.5	2.3	ug/m3			04/28/16 17:46	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			04/28/16 17:46	1
Naphthalene	ND		1.0	1.0	ug/m3			04/28/16 17:46	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			04/28/16 17:46	1
Toluene	**4.9**		2.3	2.3	ug/m3			04/28/16 17:46	1
trans-1,2-Dichloroethene	**2.8**		1.6	0.40	ug/m3			04/28/16 17:46	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			04/28/16 17:46	1
1,1,1-Trichloroethane	**250**		2.2	0.33	ug/m3			04/28/16 17:46	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			04/28/16 17:46	1
Trichloroethene	**17**		1.1	0.38	ug/m3			04/28/16 17:46	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			04/28/16 17:46	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			04/28/16 17:46	1

Client Sample ID: A-MID-GAC

Date Collected: 04/27/16 11:17
Date Received: 04/28/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4836-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			04/28/16 17:46	1
Vinyl chloride	**0.50**	**J**	0.51	0.37	ug/m3			04/28/16 17:46	1
Xylenes, Total	ND		3.5	0.52	ug/m3			04/28/16 17:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*04/28/16 17:46*	*1*

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-4836-3

Date Collected: 04/27/16 11:15

Matrix: Air

Date Received: 04/28/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.46**		0.40	0.12	ppb v/v			04/28/16 18:38	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			04/28/16 18:38	1
Chlorodifluoromethane	**0.53**		0.40	0.075	ppb v/v			04/28/16 18:38	1
Chloroform	ND		0.40	0.075	ppb v/v			04/28/16 18:38	1
cis-1,2-Dichloroethene	ND		0.40	0.12	ppb v/v			04/28/16 18:38	1
Dichlorodifluoromethane	**0.50**		0.40	0.14	ppb v/v			04/28/16 18:38	1
1,1-Dichloroethane	**0.099**	**J**	0.40	0.050	ppb v/v			04/28/16 18:38	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			04/28/16 18:38	1
1,1-Dichloroethene	**0.86**		0.40	0.070	ppb v/v			04/28/16 18:38	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			04/28/16 18:38	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			04/28/16 18:38	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			04/28/16 18:38	1
Naphthalene	ND		0.20	0.20	ppb v/v			04/28/16 18:38	1
Tetrachloroethene	**0.095**	**J**	0.40	0.080	ppb v/v			04/28/16 18:38	1
Toluene	ND		0.60	0.60	ppb v/v			04/28/16 18:38	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			04/28/16 18:38	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			04/28/16 18:38	1
1,1,1-Trichloroethane	**0.68**		0.40	0.060	ppb v/v			04/28/16 18:38	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			04/28/16 18:38	1
Trichloroethene	**0.084**	**J**	0.20	0.070	ppb v/v			04/28/16 18:38	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			04/28/16 18:38	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			04/28/16 18:38	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			04/28/16 18:38	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			04/28/16 18:38	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			04/28/16 18:38	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.5**		1.3	0.37	ug/m3			04/28/16 18:38	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			04/28/16 18:38	1
Chlorodifluoromethane	**1.9**		1.4	0.27	ug/m3			04/28/16 18:38	1
Chloroform	ND		2.0	0.37	ug/m3			04/28/16 18:38	1
cis-1,2-Dichloroethene	ND		1.6	0.48	ug/m3			04/28/16 18:38	1
Dichlorodifluoromethane	**2.5**		2.0	0.67	ug/m3			04/28/16 18:38	1
1,1-Dichloroethane	**0.40**	**J**	1.6	0.20	ug/m3			04/28/16 18:38	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			04/28/16 18:38	1
1,1-Dichloroethene	**3.4**		1.6	0.28	ug/m3			04/28/16 18:38	1
Ethylbenzene	ND		1.7	0.59	ug/m3			04/28/16 18:38	1
Methylene Chloride	ND		3.5	2.3	ug/m3			04/28/16 18:38	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			04/28/16 18:38	1
Naphthalene	ND		1.0	1.0	ug/m3			04/28/16 18:38	1
Tetrachloroethene	**0.64**	**J**	2.7	0.54	ug/m3			04/28/16 18:38	1
Toluene	ND		2.3	2.3	ug/m3			04/28/16 18:38	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			04/28/16 18:38	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			04/28/16 18:38	1
1,1,1-Trichloroethane	**3.7**		2.2	0.33	ug/m3			04/28/16 18:38	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			04/28/16 18:38	1
Trichloroethene	**0.45**	**J**	1.1	0.38	ug/m3			04/28/16 18:38	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			04/28/16 18:38	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			04/28/16 18:38	1

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-4836-3

Date Collected: 04/27/16 11:15

Matrix: Air

Date Received: 04/28/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			04/28/16 18:38	1
Vinyl chloride	ND		0.51	0.37	ug/m3			04/28/16 18:38	1
Xylenes, Total	ND		3.5	0.52	ug/m3			04/28/16 18:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*04/28/16 18:38*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-4836-1	A-INFLUENT	98
140-4836-2	A-MID-GAC	100
140-4836-3	A-EFFLUENT	99
LCS 140-4733/1002	Lab Control Sample	112
MB 140-4733/13	Method Blank	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-4733/13
Matrix: Air
Analysis Batch: 4733

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			04/28/16 16:03	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			04/28/16 16:03	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			04/28/16 16:03	1
Chloroform	ND		0.080	0.015	ppb v/v			04/28/16 16:03	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			04/28/16 16:03	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			04/28/16 16:03	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			04/28/16 16:03	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			04/28/16 16:03	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			04/28/16 16:03	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			04/28/16 16:03	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			04/28/16 16:03	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			04/28/16 16:03	1
Naphthalene	ND		0.040	0.040	ppb v/v			04/28/16 16:03	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			04/28/16 16:03	1
Toluene	ND		0.12	0.12	ppb v/v			04/28/16 16:03	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			04/28/16 16:03	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			04/28/16 16:03	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			04/28/16 16:03	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			04/28/16 16:03	1
Trichloroethene	ND		0.040	0.014	ppb v/v			04/28/16 16:03	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			04/28/16 16:03	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			04/28/16 16:03	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			04/28/16 16:03	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			04/28/16 16:03	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			04/28/16 16:03	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			04/28/16 16:03	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			04/28/16 16:03	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			04/28/16 16:03	1
Chloroform	ND		0.39	0.073	ug/m3			04/28/16 16:03	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			04/28/16 16:03	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			04/28/16 16:03	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			04/28/16 16:03	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			04/28/16 16:03	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			04/28/16 16:03	1
Ethylbenzene	ND		0.35	0.12	ug/m3			04/28/16 16:03	1
Methylene Chloride	ND		0.69	0.45	ug/m3			04/28/16 16:03	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			04/28/16 16:03	1
Naphthalene	ND		0.21	0.21	ug/m3			04/28/16 16:03	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			04/28/16 16:03	1
Toluene	ND		0.45	0.45	ug/m3			04/28/16 16:03	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			04/28/16 16:03	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			04/28/16 16:03	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			04/28/16 16:03	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			04/28/16 16:03	1
Trichloroethene	ND		0.21	0.075	ug/m3			04/28/16 16:03	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			04/28/16 16:03	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-4733/13
Matrix: Air
Analysis Batch: 4733

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			04/28/16 16:03	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			04/28/16 16:03	1
Vinyl chloride	ND		0.10	0.074	ug/m3			04/28/16 16:03	1
Xylenes, Total	ND		0.69	0.10	ug/m3			04/28/16 16:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*04/28/16 16:03*	*1*

Lab Sample ID: LCS 140-4733/1002
Matrix: Air
Analysis Batch: 4733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.83		ppb v/v		92	70 - 130
Carbon tetrachloride	2.00	2.22		ppb v/v		111	70 - 130
Chlorodifluoromethane	2.00	2.25		ppb v/v		113	60 - 140
Chloroform	2.00	2.03		ppb v/v		102	70 - 130
cis-1,2-Dichloroethene	2.00	1.80		ppb v/v		90	70 - 130
Dichlorodifluoromethane	2.00	2.32		ppb v/v		116	60 - 140
1,1-Dichloroethane	2.00	2.04		ppb v/v		102	70 - 130
1,2-Dichloroethane	2.00	2.17		ppb v/v		109	70 - 130
1,1-Dichloroethene	2.00	1.74		ppb v/v		87	70 - 130
Ethylbenzene	2.00	1.90		ppb v/v		95	70 - 130
Methylene Chloride	2.00	1.84		ppb v/v		92	70 - 130
Methyl tert-butyl ether	2.00	1.89		ppb v/v		94	60 - 140
Naphthalene	2.00	2.10		ppb v/v		105	60 - 140
Tetrachloroethene	2.00	1.77		ppb v/v		88	70 - 130
Toluene	2.00	1.79		ppb v/v		89	70 - 130
trans-1,2-Dichloroethene	2.00	1.75		ppb v/v		87	70 - 130
1,2,4-Trichlorobenzene	2.00	1.98		ppb v/v		99	60 - 140
1,1,1-Trichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,1,2-Trichloroethane	2.00	1.92		ppb v/v		96	70 - 130
Trichloroethene	2.00	1.65		ppb v/v		83	70 - 130
1,2,3-Trimethylbenzene	2.00	2.28		ppb v/v		114	70 - 130
1,2,4-Trimethylbenzene	2.00	2.21		ppb v/v		110	70 - 130
1,3,5-Trimethylbenzene	2.00	2.05		ppb v/v		102	70 - 130
Vinyl chloride	2.00	2.02		ppb v/v		101	70 - 130
Xylenes, Total	6.00	6.22		ppb v/v		104	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.85		ug/m3		92	70 - 130
Carbon tetrachloride	13	13.9		ug/m3		111	70 - 130
Chlorodifluoromethane	7.1	7.97		ug/m3		113	60 - 140
Chloroform	9.8	9.92		ug/m3		102	70 - 130
cis-1,2-Dichloroethene	7.9	7.14		ug/m3		90	70 - 130
Dichlorodifluoromethane	9.9	11.5		ug/m3		116	60 - 140
1,1-Dichloroethane	8.1	8.25		ug/m3		102	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-4733/1002
Matrix: Air
Analysis Batch: 4733

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.79		ug/m3		109	70 - 130
1,1-Dichloroethene	7.9	6.90		ug/m3		87	70 - 130
Ethylbenzene	8.7	8.26		ug/m3		95	70 - 130
Methylene Chloride	6.9	6.38		ug/m3		92	70 - 130
Methyl tert-butyl ether	7.2	6.81		ug/m3		94	60 - 140
Naphthalene	10	11.0		ug/m3		105	60 - 140
Tetrachloroethene	14	12.0		ug/m3		88	70 - 130
Toluene	7.5	6.74		ug/m3		89	70 - 130
trans-1,2-Dichloroethene	7.9	6.93		ug/m3		87	70 - 130
1,2,4-Trichlorobenzene	15	14.7		ug/m3		99	60 - 140
1,1,1-Trichloroethane	11	11.2		ug/m3		103	70 - 130
1,1,2-Trichloroethane	11	10.5		ug/m3		96	70 - 130
Trichloroethene	11	8.88		ug/m3		83	70 - 130
1,2,3-Trimethylbenzene	9.8	11.2		ug/m3		114	70 - 130
1,2,4-Trimethylbenzene	9.8	10.9		ug/m3		110	70 - 130
1,3,5-Trimethylbenzene	9.8	10.1		ug/m3		102	70 - 130
Vinyl chloride	5.1	5.16		ug/m3		101	70 - 130
Xylenes, Total	26	27.0		ug/m3		104	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*112*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Air - GC/MS VOA

Analysis Batch: 4733

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-4836-1	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-4836-2	A-MID-GAC	Total/NA	Air	TO 15 LL	
140-4836-3	A-EFFLUENT	Total/NA	Air	TO 15 LL	
LCS 140-4733/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-4733/13	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-4836-1
Date Collected: 04/27/16 11:19
Matrix: Air
Date Received: 04/28/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	10 mL	500 mL	4733	04/28/16 16:54	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-MID-GAC
Lab Sample ID: 140-4836-2
Date Collected: 04/27/16 11:17
Matrix: Air
Date Received: 04/28/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	4733	04/28/16 17:46	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-4836-3
Date Collected: 04/27/16 11:15
Matrix: Air
Date Received: 04/28/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	4733	04/28/16 18:38	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-4733/1002
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	4733	04/28/16 10:09	HMT	TAL KNX
	Instrument ID: MR									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-4733/13
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	4733	04/28/16 16:03	HMT	TAL KNX
	Instrument ID: MR									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-4836-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-4836-1	A-INFLUENT	Air	04/27/16 11:19	04/28/16 09:30
140-4836-2	A-MID-GAC	Air	04/27/16 11:17	04/28/16 09:30
140-4836-3	A-EFFLUENT	Air	04/27/16 11:15	04/28/16 09:30

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
A-INFLUENT	140-4836-1	98
A-MID-GAC	140-4836-2	100
A-EFFLUENT	140-4836-3	99
	MB 140-4733/13	97
	LCS 140-4733/1002	112

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Matrix: Air Level: Low Lab File ID: RCCVD28-LCS.d

Lab ID: LCS 140-4733/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.83	92	70-130	
Carbon tetrachloride	2.00	2.22	111	70-130	
Chlorodifluoromethane	2.00	2.25	113	60-140	
Chloroform	2.00	2.03	102	70-130	
cis-1,2-Dichloroethene	2.00	1.80	90	70-130	
Dichlorodifluoromethane	2.00	2.32	116	60-140	
1,1-Dichloroethane	2.00	2.04	102	70-130	
1,2-Dichloroethane	2.00	2.17	109	70-130	
1,1-Dichloroethene	2.00	1.74	87	70-130	
Ethylbenzene	2.00	1.90	95	70-130	
Methylene Chloride	2.00	1.84	92	70-130	
Methyl tert-butyl ether	2.00	1.89	94	60-140	
Naphthalene	2.00	2.10	105	60-140	
Tetrachloroethene	2.00	1.77	88	70-130	
Toluene	2.00	1.79	89	70-130	
trans-1,2-Dichloroethene	2.00	1.75	87	70-130	
1,2,4-Trichlorobenzene	2.00	1.98	99	60-140	
1,1,1-Trichloroethane	2.00	2.05	103	70-130	
1,1,2-Trichloroethane	2.00	1.92	96	70-130	
Trichloroethene	2.00	1.65	83	70-130	
1,2,3-Trimethylbenzene	2.00	2.28	114	70-130	
1,2,4-Trimethylbenzene	2.00	2.21	110	70-130	
1,3,5-Trimethylbenzene	2.00	2.05	102	70-130	
Vinyl chloride	2.00	2.02	101	70-130	
Xylenes, Total	6.00	6.22	104	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab File ID: R500D28R.D Lab Sample ID: MB 140-4733/13

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MR Date Analyzed: 04/28/2016 16:03

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-4733/1002	RCCVD28-LCS.d	04/28/2016 10:09
A-INFLUENT	140-4836-1	RD28P101.D	04/28/2016 16:54
A-MID-GAC	140-4836-2	RD28P102.D	04/28/2016 17:46
A-EFFLUENT	140-4836-3	RD28P103.D	04/28/2016 18:38

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab File ID: RBFBJ29.D BFB Injection Date: 10/29/2015

Instrument ID: MR BFB Injection Time: 12:53

Analysis Batch No.: 3621

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.8	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	75.7	
175	5.0 - 9.0 % of mass 174	5.5	(7.2) 1
176	95.0 - 101.0 % of mass 174	73.7	(97.4) 1
177	5.0 - 9.0 % of mass 176	4.8	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-3621/2	RJ29IC01.D	10/29/2015	14:14
	IC 140-3621/3	RJ29IC02.D	10/29/2015	15:07
	IC 140-3621/4	RJ29IC03.D	10/29/2015	15:58
	IC 140-3621/5	RJ29IC04.D	10/29/2015	16:50
	IC 140-3621/6	RJ29IC05.D	10/29/2015	17:41
	ICIS 140-3621/7	RJ29ICIS06.D	10/29/2015	18:33
	IC 140-3621/8	RJ29IC07.D	10/29/2015	19:26
	IC 140-3621/9	RJ29IC08.D	10/29/2015	20:18
	IC 140-3621/10	RJ29IC09.D	10/29/2015	21:11
	ICV 140-3621/12	RJ29ICV.D	10/29/2015	22:54

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab File ID: RBFBD28.D BFB Injection Date: 04/28/2016

Instrument ID: MR BFB Injection Time: 09:38

Analysis Batch No.: 4733

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.1	
75	30.0 - 60.0 % of mass 95	55.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.0	
173	Less than 2.0 % of mass 174	0.4	(0.6) 1
174	50.0 - 120.00 % of mass 95	64.4	
175	5.0 - 9.0 % of mass 174	4.6	(7.1) 1
176	95.0 - 101.0 % of mass 174	63.5	(98.7) 1
177	5.0 - 9.0 % of mass 176	3.9	(6.2) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-4733/2	RCCVD28.D	04/28/2016	10:09
	LCS 140-4733/1002	RCCVD28-LCS.d	04/28/2016	10:09
	MB 140-4733/13	R500D28R.D	04/28/2016	16:03
A-INFLUENT	140-4836-1	RD28P101.D	04/28/2016	16:54
A-MID-GAC	140-4836-2	RD28P102.D	04/28/2016	17:46
A-EFFLUENT	140-4836-3	RD28P103.D	04/28/2016	18:38

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Sample No.: ICIS 140-3621/7 Date Analyzed: 10/29/2015 18:33

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RJ29ICIS06.D Heated Purge: (Y/N) N

Calibration ID: 393

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		382463	8.43	1942786	10.62	1806380	16.84
UPPER LIMIT		535448	8.76	2719900	10.95	2528932	17.17
LOWER LIMIT		229478	8.10	1165672	10.29	1083828	16.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-3621/12		485034	8.44	2411549	10.63	2232798	16.84

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Sample No.: CCVIS 140-4733/2 Date Analyzed: 04/28/2016 10:09

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): RCCVD28.D Heated Purge: (Y/N) N

Calibration ID: 393

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		221528	8.42	1136375	10.60	1090793	16.81
UPPER LIMIT		310139	8.75	1590925	10.93	1527110	17.14
LOWER LIMIT		132917	8.09	681825	10.27	654476	16.48
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-4733/1002		221528	8.42	1136375	10.60	1090793	16.81
MB 140-4733/13		215012	8.41	1069265	10.59	946511	16.81
140-4836-1	A-INFLUENT	186985	8.41	926247	10.59	818697	16.81
140-4836-2	A-MID-GAC	177969	8.41	875451	10.59	813021	16.81
140-4836-3	A-EFFLUENT	176393	8.40	882204	10.59	834252	16.81

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-4836-1

Matrix: Air Lab File ID: RD28P101.D

Analysis Method: TO 15 LL Date Collected: 04/27/2016 11:19

Sample wt/vol: 10(mL) Date Analyzed: 04/28/2016 16:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4733 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		4.0	1.2
56-23-5	Carbon tetrachloride	153.81	ND		4.0	0.75
75-45-6	Chlorodifluoromethane	86.47	ND		4.0	0.75
67-66-3	Chloroform	119.38	ND		4.0	0.75
156-59-2	cis-1,2-Dichloroethene	96.94	23		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	ND		4.0	1.4
75-34-3	1,1-Dichloroethane	98.96	4.4		4.0	0.50
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.95
75-35-4	1,1-Dichloroethene	96.94	17		4.0	0.70
100-41-4	Ethylbenzene	106.17	ND		4.0	1.4
75-09-2	Methylene Chloride	84.93	ND		10	6.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		20	3.4
91-20-3	Naphthalene	128.17	ND		2.0	2.0
127-18-4	Tetrachloroethene	165.83	ND		4.0	0.80
108-88-3	Toluene	92.14	ND		6.0	6.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	1.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		4.0	2.0
71-55-6	1,1,1-Trichloroethane	133.41	90		4.0	0.60
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.0	1.1
79-01-6	Trichloroethene	131.39	180		2.0	0.70
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.0	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.0	1.3
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.0	1.3
75-01-4	Vinyl chloride	62.50	ND		2.0	1.5
1330-20-7	Xylenes, Total	106.17	ND		8.0	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4836-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-4836-1

Matrix: Air | Lab File ID: RD28P101.D

Analysis Method: TO 15 LL | Date Collected: 04/27/2016 11:19

Sample wt/vol: 10(mL) | Date Analyzed: 04/28/2016 16:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4733 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		13	3.7
56-23-5	Carbon tetrachloride	153.81	ND		25	4.7
75-45-6	Chlorodifluoromethane	86.47	ND		14	2.7
67-66-3	Chloroform	119.38	ND		20	3.7
156-59-2	cis-1,2-Dichloroethene	96.94	90		16	4.8
75-71-8	Dichlorodifluoromethane	120.91	ND		20	6.7
75-34-3	1,1-Dichloroethane	98.96	18		16	2.0
107-06-2	1,2-Dichloroethane	98.96	ND		16	3.8
75-35-4	1,1-Dichloroethene	96.94	68		16	2.8
100-41-4	Ethylbenzene	106.17	ND		17	5.9
75-09-2	Methylene Chloride	84.93	ND		35	23
1634-04-4	Methyl tert-butyl ether	88.15	ND		72	12
91-20-3	Naphthalene	128.17	ND		10	10
127-18-4	Tetrachloroethene	165.83	ND		27	5.4
108-88-3	Toluene	92.14	ND		23	23
156-60-5	trans-1,2-Dichloroethene	96.94	ND		16	4.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		30	14
71-55-6	1,1,1-Trichloroethane	133.41	490		22	3.3
79-00-5	1,1,2-Trichloroethane	133.41	ND		22	5.7
79-01-6	Trichloroethene	131.39	950		11	3.8
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		20	8.4
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		20	6.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		20	6.4
75-01-4	Vinyl chloride	62.50	ND		5.1	3.7
1330-20-7	Xylenes, Total	106.17	ND		35	5.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D
Lims ID: 140-4836-A-1
Client ID: A-INFLUENT
Sample Type: Client
Inject. Date: 28-Apr-2016 16:54:30 ALS Bottle#: 1 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-4836-a-1
Misc. Info.: 140-0002793-007
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Apr-2016 09:59:30 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 29-Apr-2016 09:54:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.409	8.420	-0.011	94	186985	4.00	
* 2 1,4-Difluorobenzene	114	10.593	10.598	-0.005	97	926247	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.805	16.805	0.000	91	818697	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.555	0.000	90	592841	3.92	
27 1,1-Dichloroethene	96	5.772	5.767	0.005	95	22363	0.3437	
31 Methylene Chloride	84	6.069	6.074	-0.005	95	3778	0.0600	
37 1,1-Dichloroethane	63	7.185	7.196	-0.011	100	10551	0.0871	
42 cis-1,2-Dichloroethene	96	8.107	8.113	-0.006	98	31699	0.4537	
47 1,1,1-Trichloroethane	97	9.428	9.434	-0.006	96	236246	1.79	
59 Trichloroethene	130	11.380	11.386	-0.006	92	328444	3.54	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

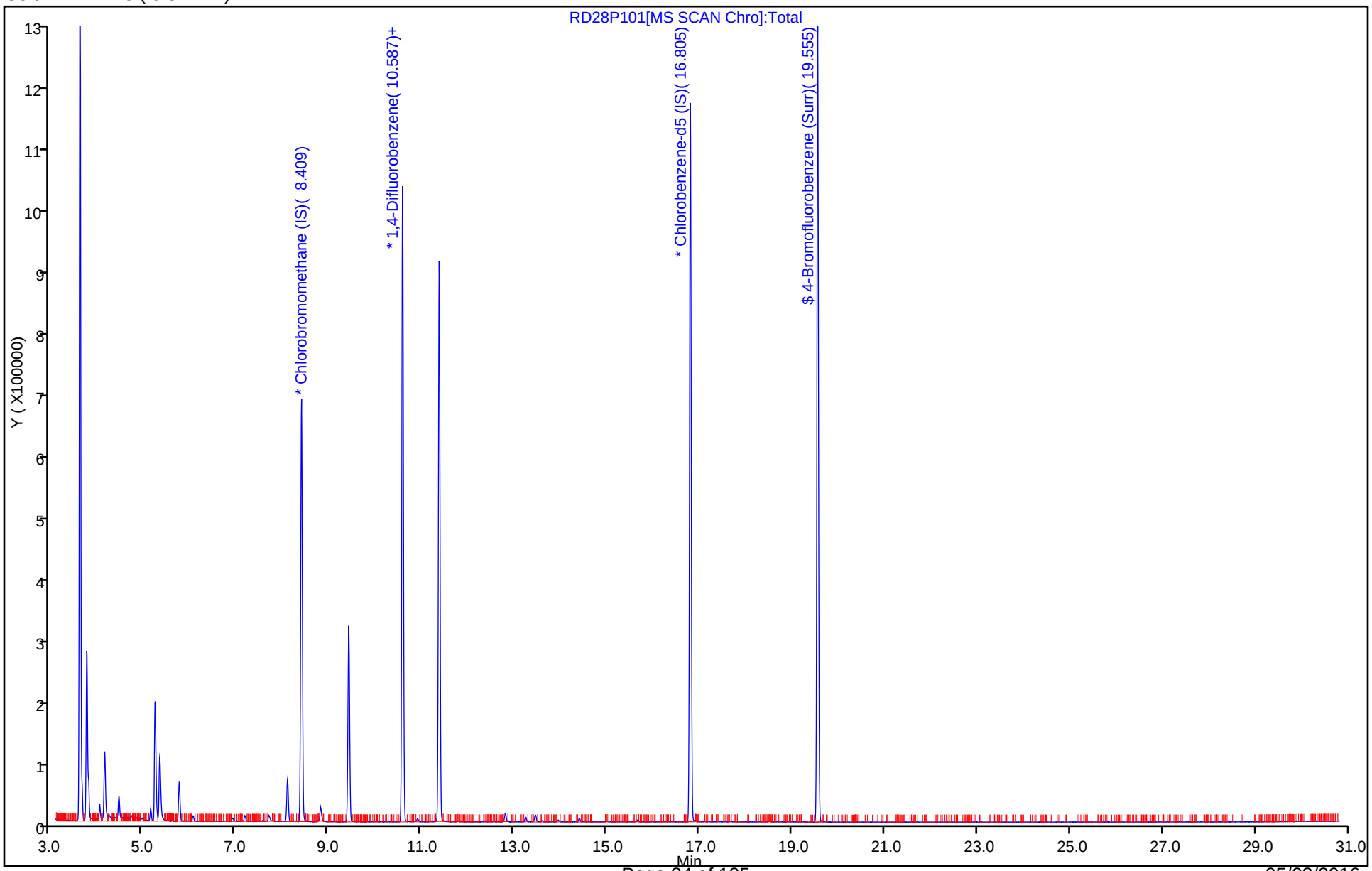
Report Date: 29-Apr-2016 10:00:24 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D

Injection Date:	28-Apr-2016 16:54:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-4836-A-1	Lab Sample ID:	140-4836-1	Worklist Smp#:	7
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

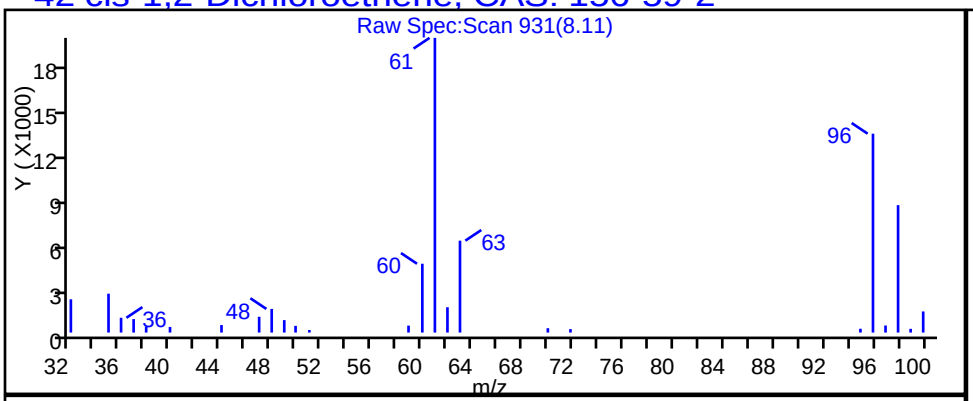
Column: RTX-5 (0.32 mm)

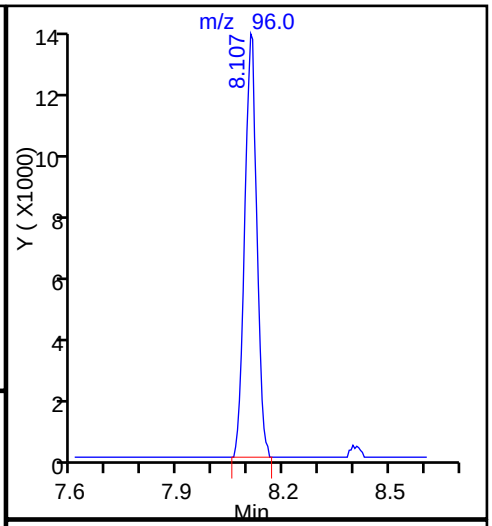


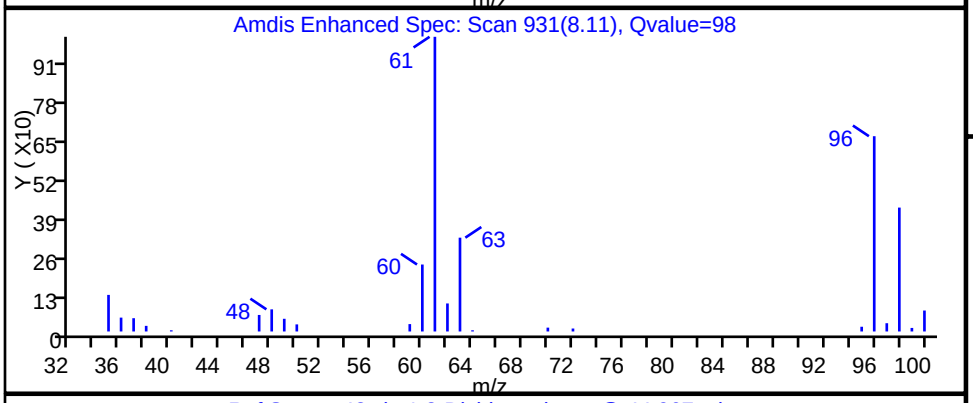
TestAmerica Knoxville

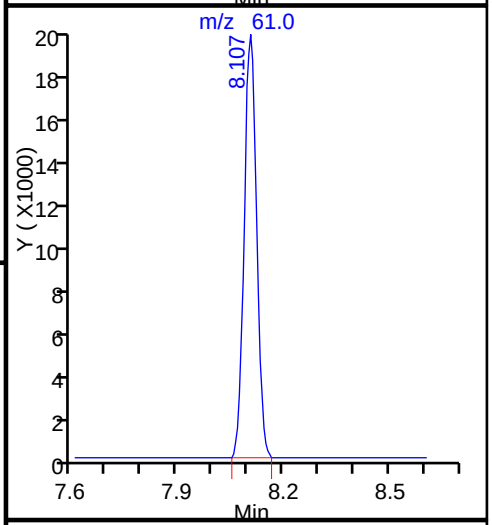
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D				
Injection Date:	28-Apr-2016 16:54:30	Instrument ID:	MR		
Lims ID:	140-4836-A-1	Lab Sample ID:	140-4836-1		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

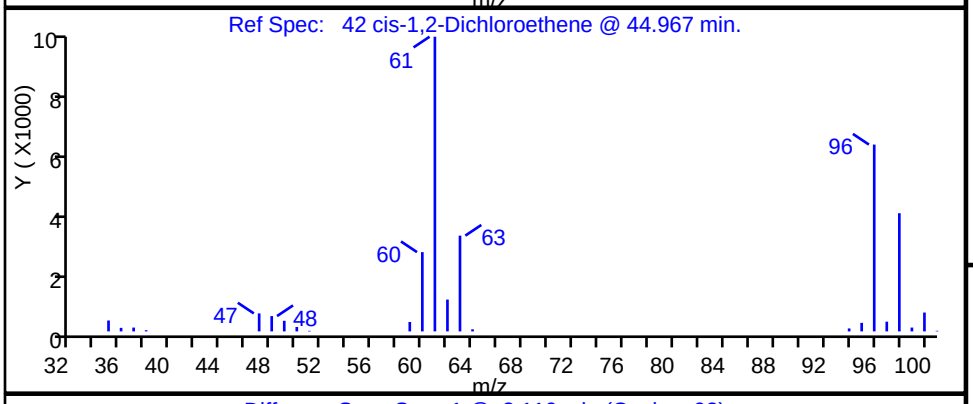
42 cis-1,2-Dichloroethene, CAS: 156-59-2

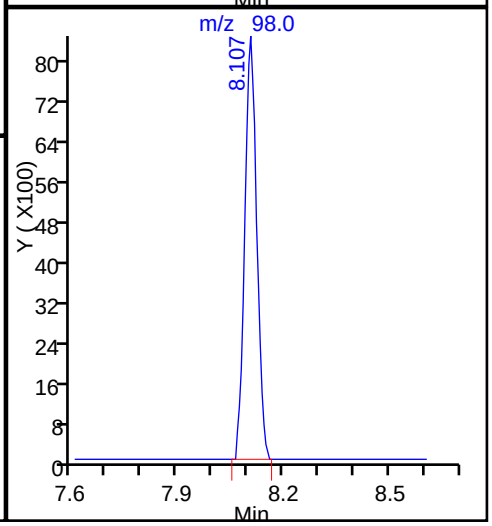


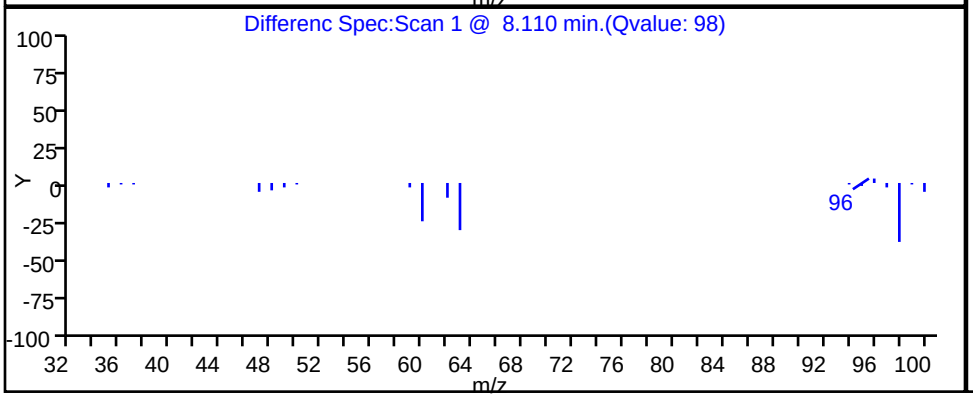








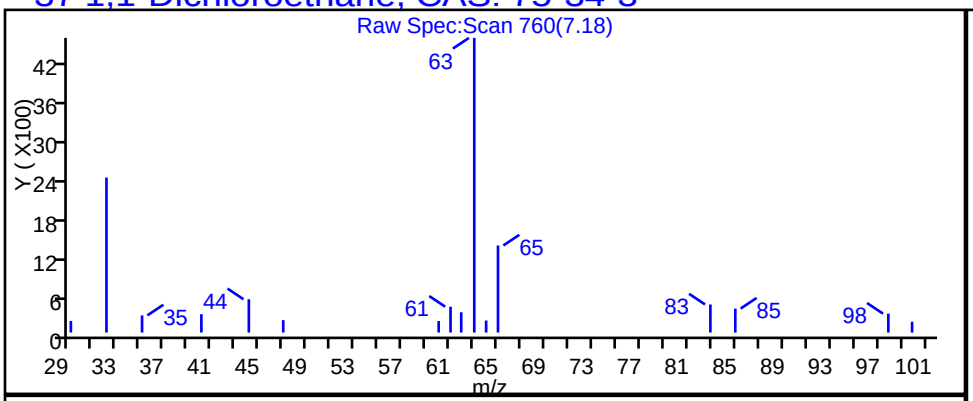


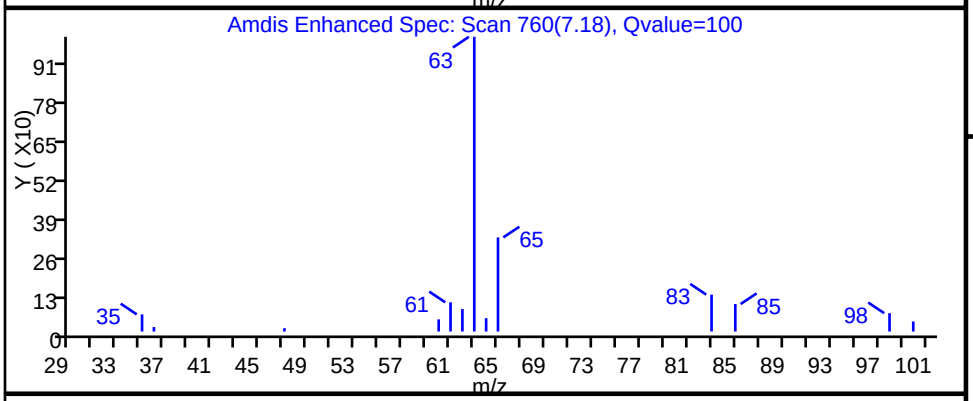


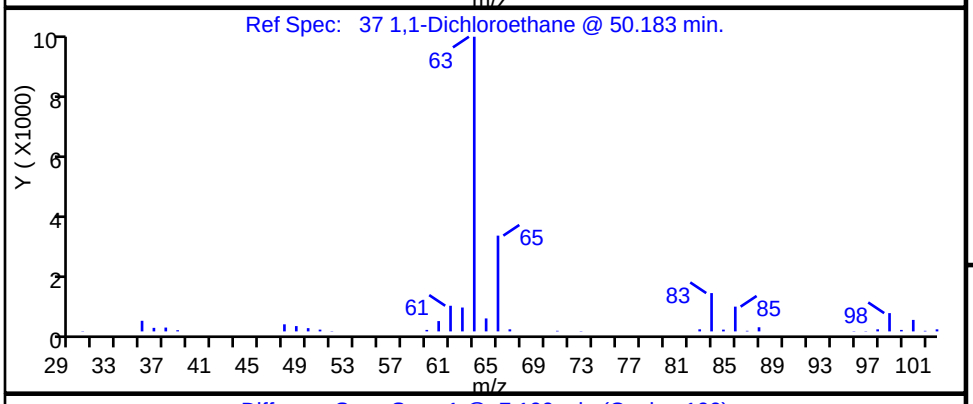
TestAmerica Knoxville

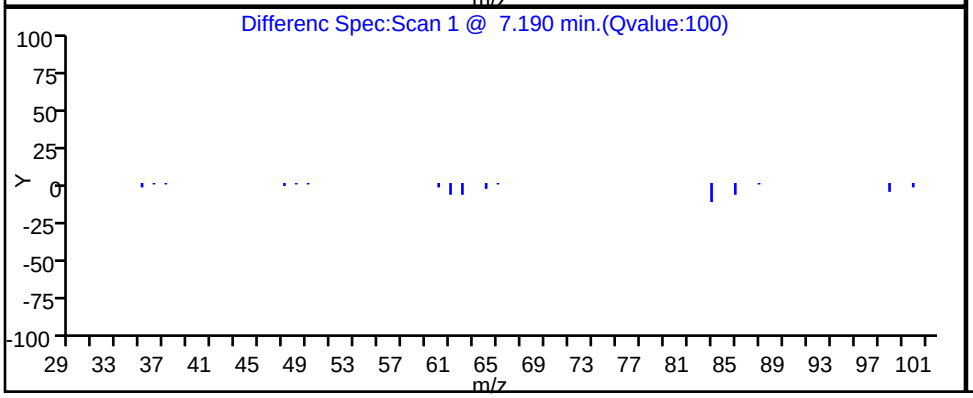
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D		
Injection Date:	28-Apr-2016 16:54:30	Instrument ID:	MR
Lims ID:	140-4836-A-1	Lab Sample ID:	140-4836-1
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

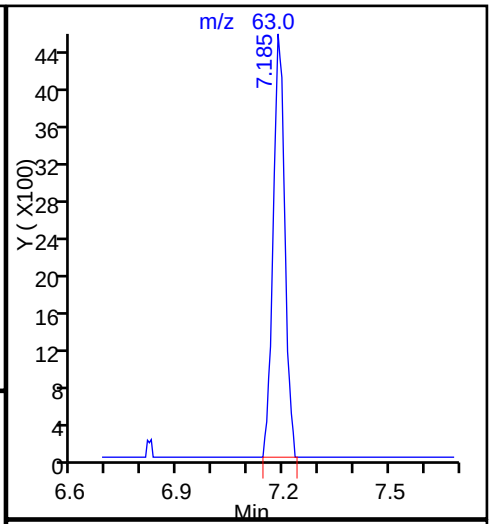
37 1,1-Dichloroethane, CAS: 75-34-3

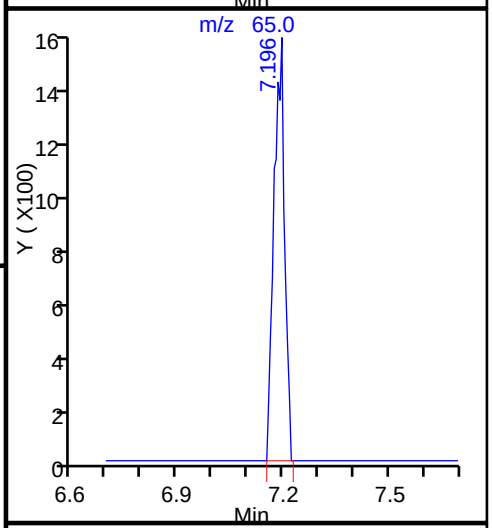


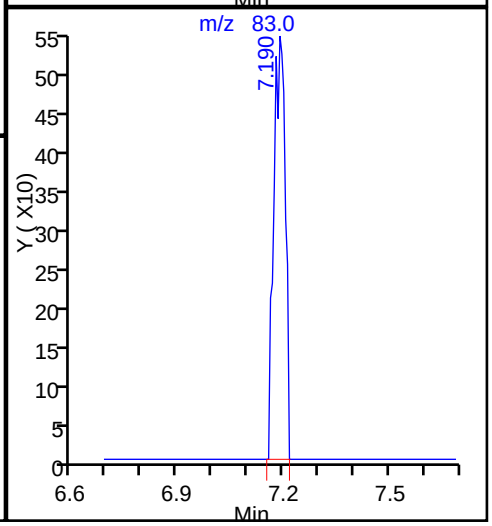








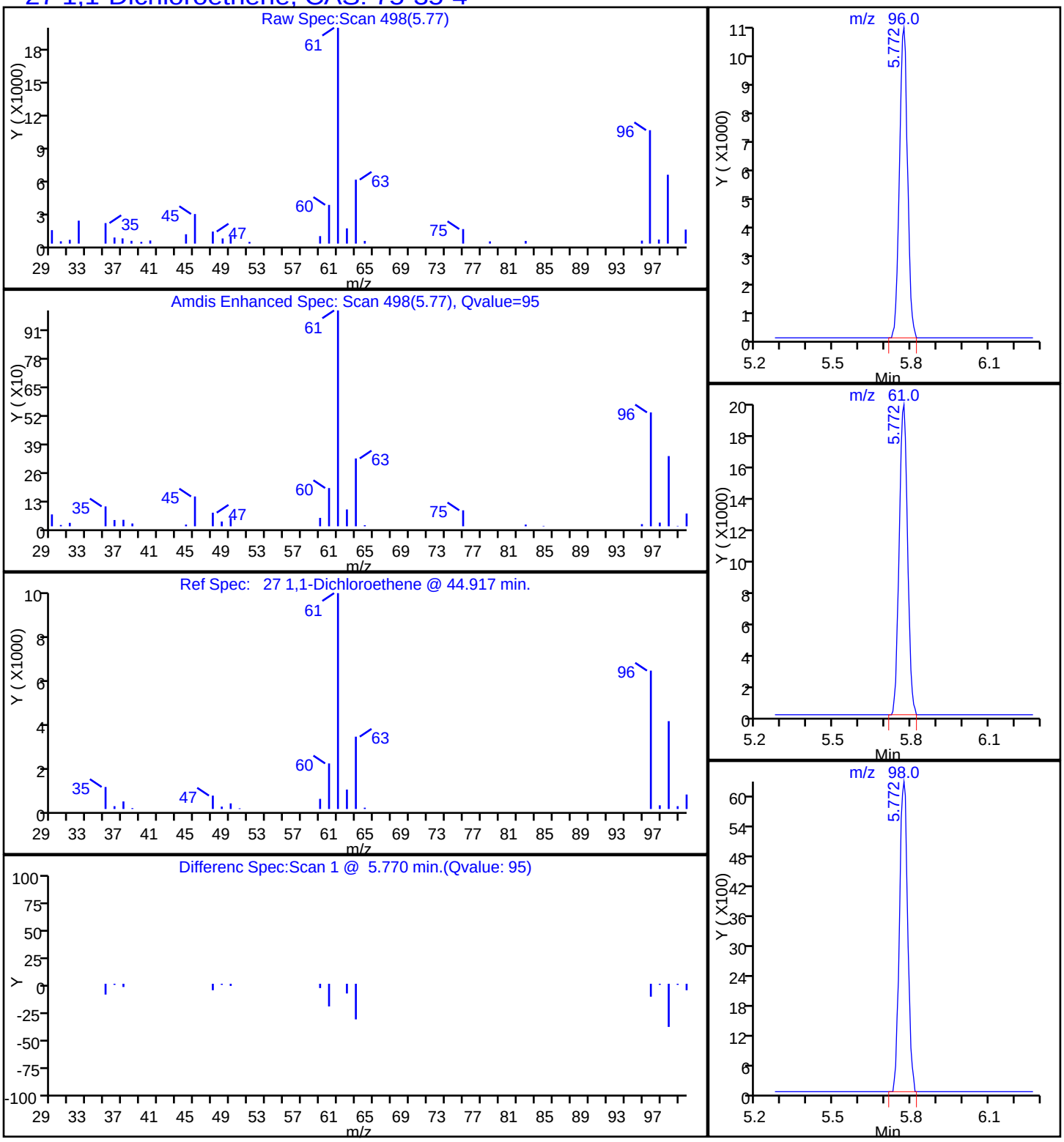




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D		
Injection Date:	28-Apr-2016 16:54:30	Instrument ID:	MR
Lims ID:	140-4836-A-1	Lab Sample ID:	140-4836-1
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

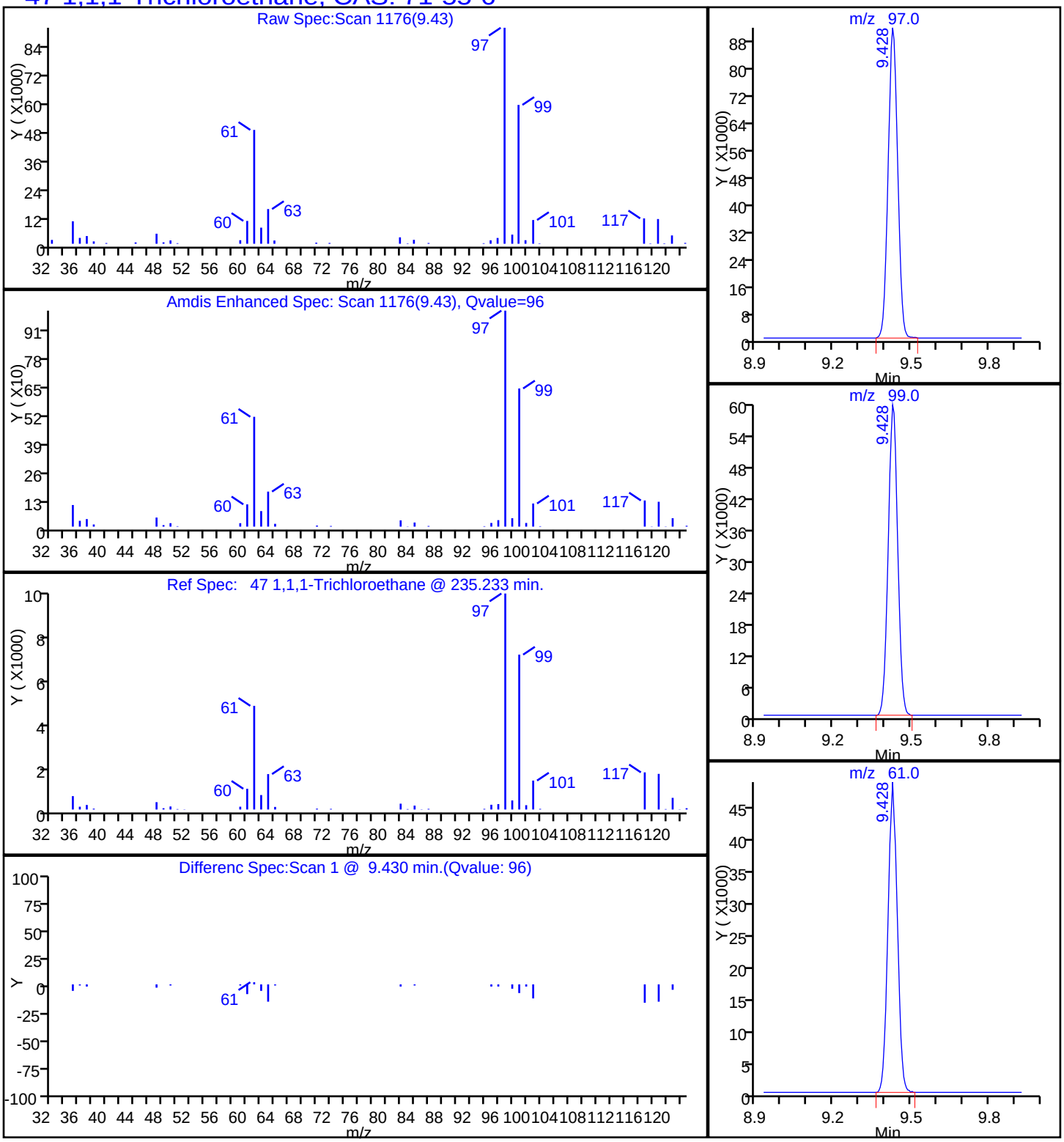
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D				
Injection Date:	28-Apr-2016 16:54:30	Instrument ID:	MR		
Lims ID:	140-4836-A-1	Lab Sample ID:	140-4836-1		
Client ID:	A-INFLUENT				
Operator ID:		ALS Bottle#:	1	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

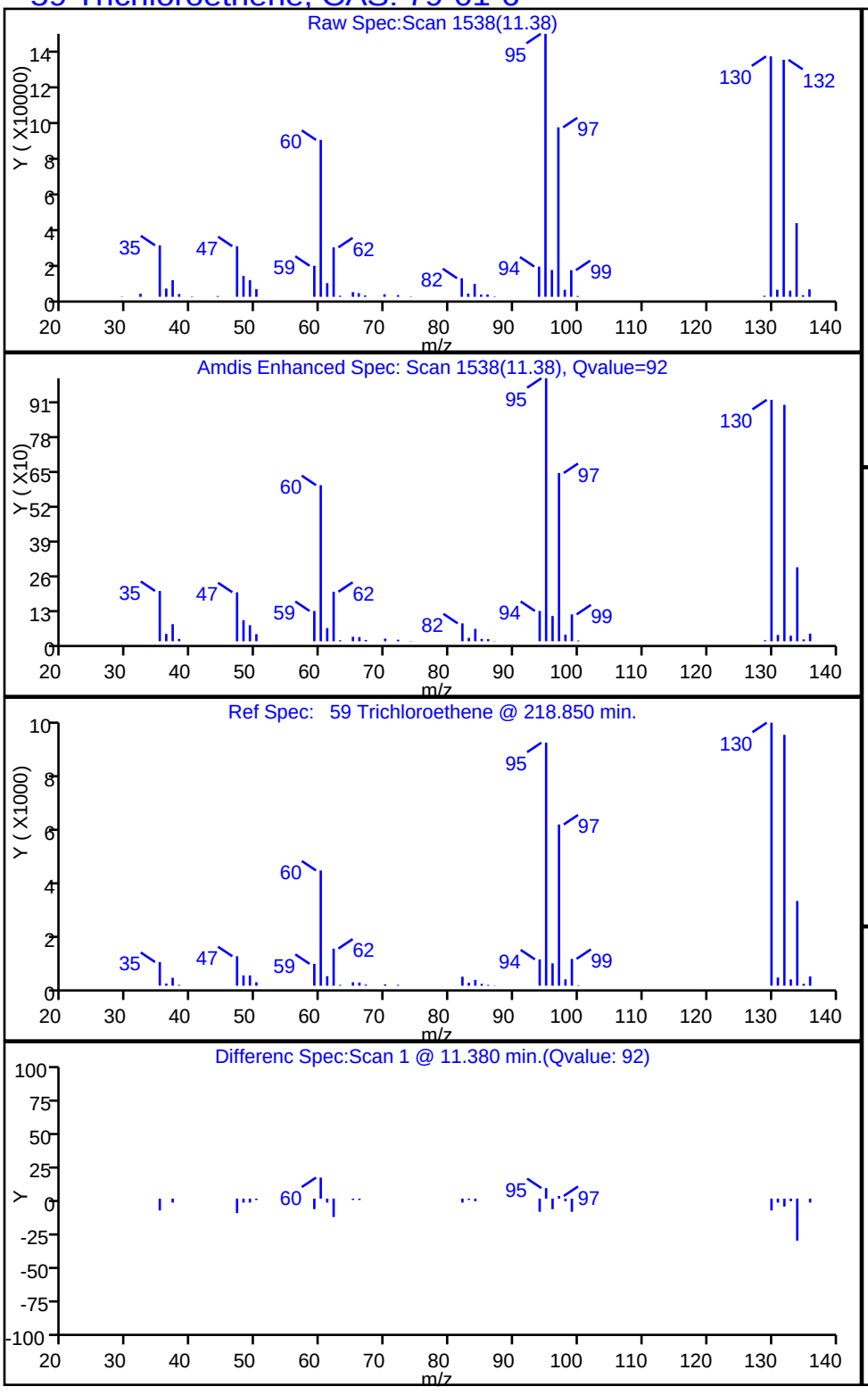
47 1,1,1-Trichloroethane, CAS: 71-55-6

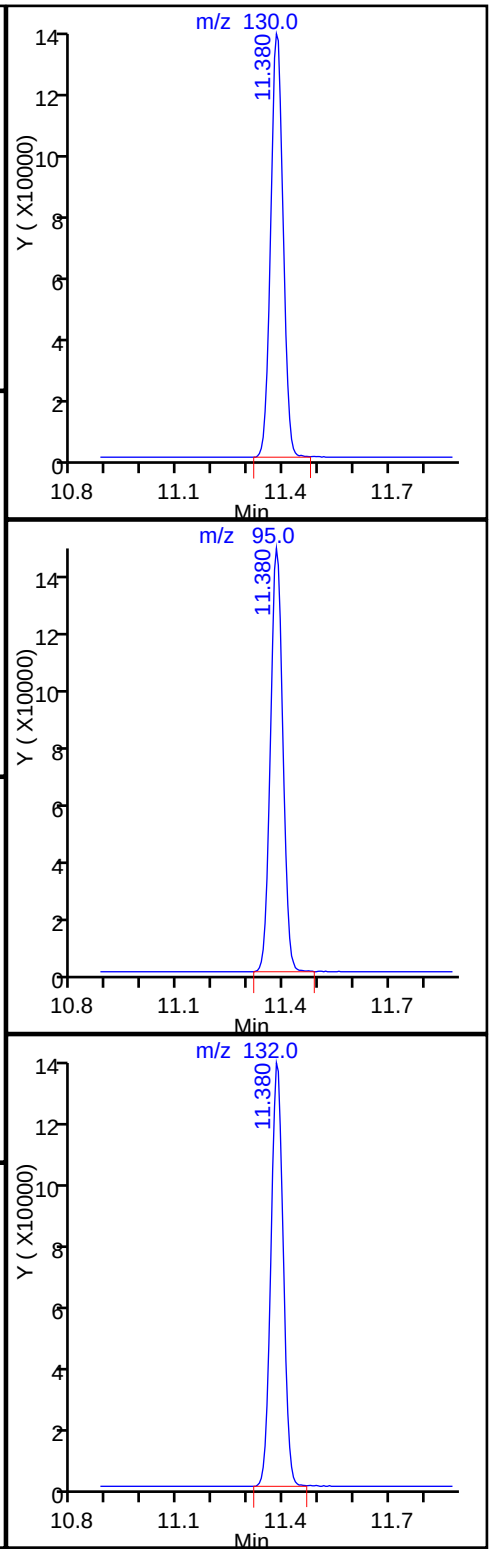


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P101.D		
Injection Date:	28-Apr-2016 16:54:30	Instrument ID:	MR
Lims ID:	140-4836-A-1	Lab Sample ID:	140-4836-1
Client ID:	A-INFLUENT		
Operator ID:		ALS Bottle#:	1 Worklist Smp#: 7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Client Sample ID: A-MID-GAC Lab Sample ID: 140-4836-2

Matrix: Air Lab File ID: RD28P102.D

Analysis Method: TO 15 LL Date Collected: 04/27/2016 11:17

Sample wt/vol: 100(mL) Date Analyzed: 04/28/2016 17:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4733 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.4		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51		0.40	0.075
67-66-3	Chloroform	119.38	0.85		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	54		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.56		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.3		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.16	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	18		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.70		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	45		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.19	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4836-1

SDG No.:

Client Sample ID: A-MID-GAC | Lab Sample ID: 140-4836-2

Matrix: Air | Lab File ID: RD28P102.D

Analysis Method: TO 15 LL | Date Collected: 04/27/2016 11:17

Sample wt/vol: 100(mL) | Date Analyzed: 04/28/2016 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4733 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	14		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	4.2		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	210		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	17		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.64	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	71		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	4.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	250		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	17		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.50	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D
Lims ID: 140-4836-A-2
Client ID: A-MID-GAC
Sample Type: Client
Inject. Date: 28-Apr-2016 17:46:30 ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-4836-a-2
Misc. Info.: 140-0002793-008
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Apr-2016 09:59:30 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 29-Apr-2016 09:54:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.414	8.420	-0.006	94	177969	4.00	
* 2 1,4-Difluorobenzene	114	10.593	10.598	-0.005	97	875451	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.805	16.805	0.000	91	813021	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.555	0.000	95	600678	4.00	
7 Chlorodifluoromethane	67	3.804	3.799	0.005	36	1582	0.1025	
8 Dichlorodifluoromethane	85	3.858	3.847	0.011	100	15267	0.1122	
12 Vinyl chloride	62	4.165	4.160	0.005	32	2563	0.0390	
27 1,1-Dichloroethene	96	5.767	5.767	0.000	94	222049	3.59	
31 Methylene Chloride	84	6.063	6.074	-0.011	94	5162	0.0861	
34 trans-1,2-Dichloroethene	96	6.818	6.818	0.000	93	9024	0.1400	
37 1,1-Dichloroethane	63	7.190	7.196	-0.006	99	99280	0.8608	
42 cis-1,2-Dichloroethene	96	8.107	8.113	-0.006	99	712454	10.7	
44 Chloroform	83	8.441	8.447	-0.006	96	22204	0.1702	
47 1,1,1-Trichloroethane	97	9.434	9.434	0.000	96	1137662	9.06	
48 1,2-Dichloroethane	62	9.504	9.509	-0.005	87	2587	0.0316	
50 Benzene	78	10.021	10.021	0.000	98	163351	0.8793	
59 Trichloroethene	130	11.386	11.386	0.000	92	54223	0.6191	
68 Toluene	91	13.958	13.952	0.006	93	57720	0.2616	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

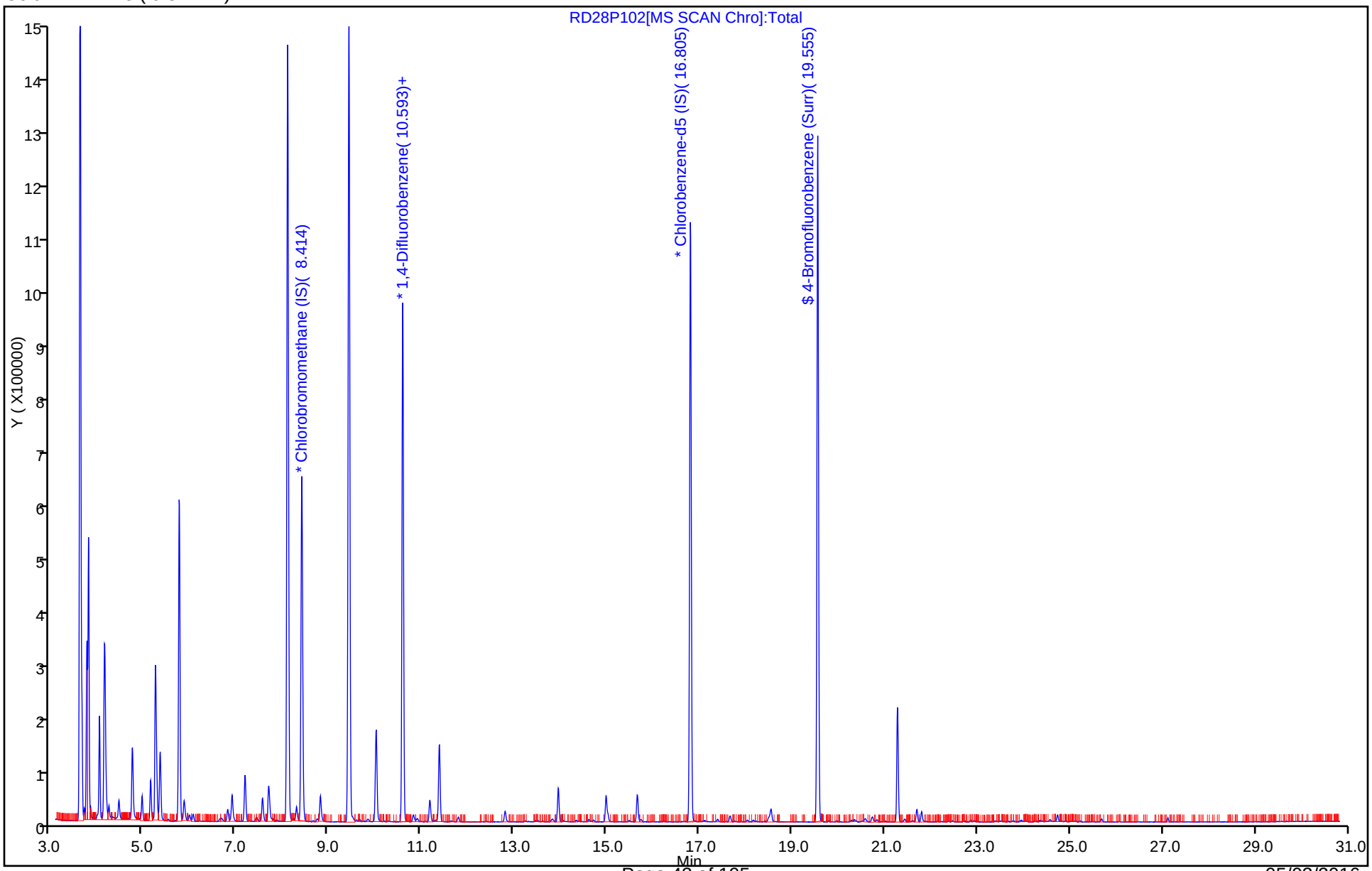
Report Date: 29-Apr-2016 10:00:27 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D

Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2	Worklist Smp#:	8
Client ID:	A-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



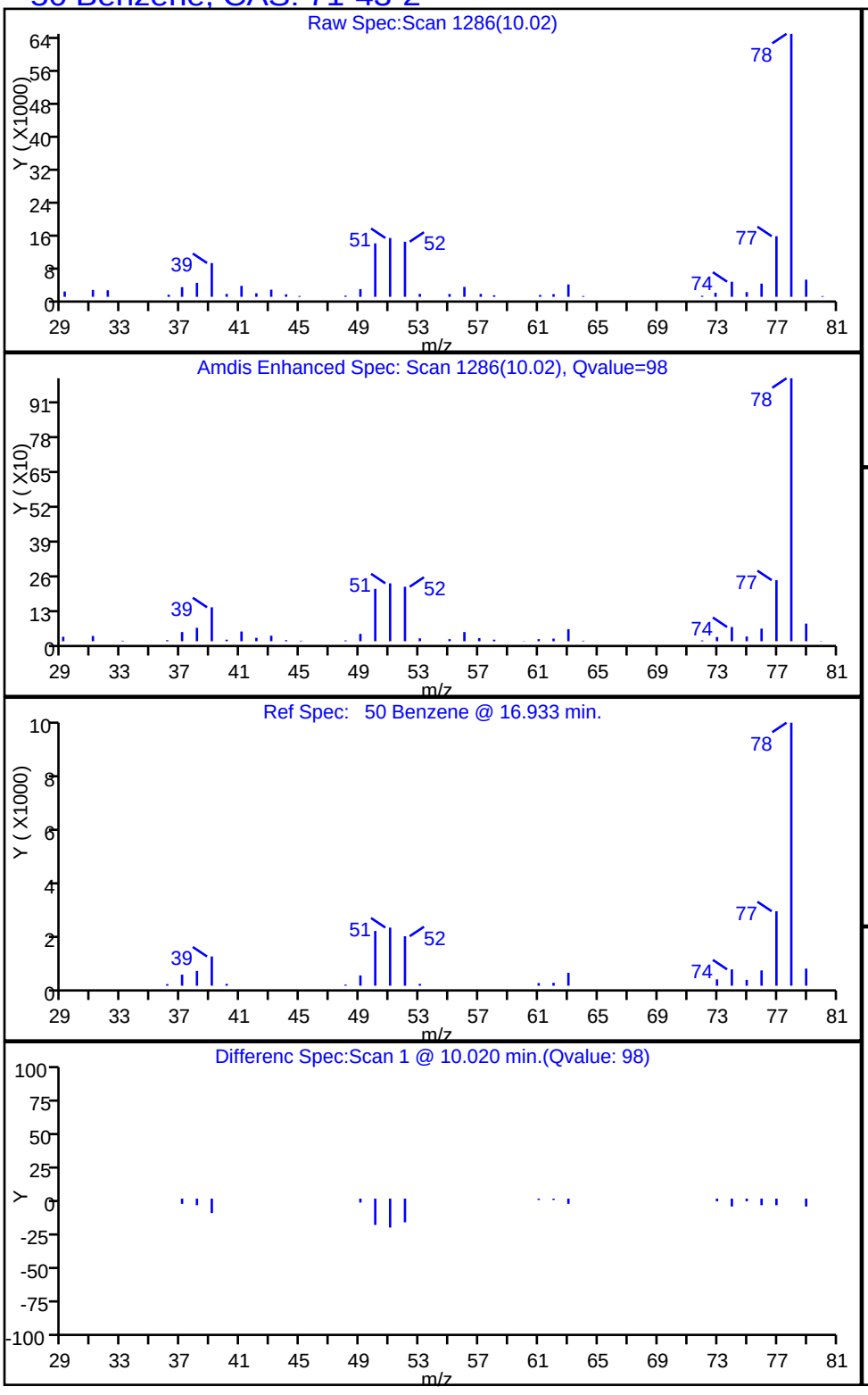
Report Date: 29-Apr-2016 10:00:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

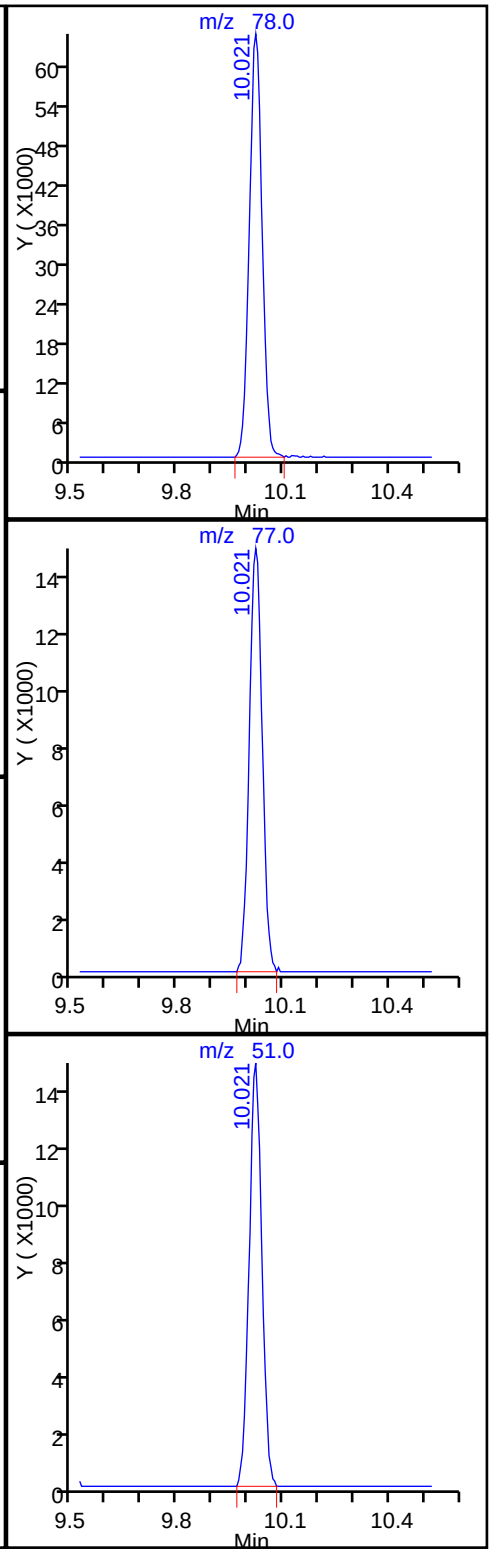
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D

Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

50 Benzene, CAS: 71-43-2





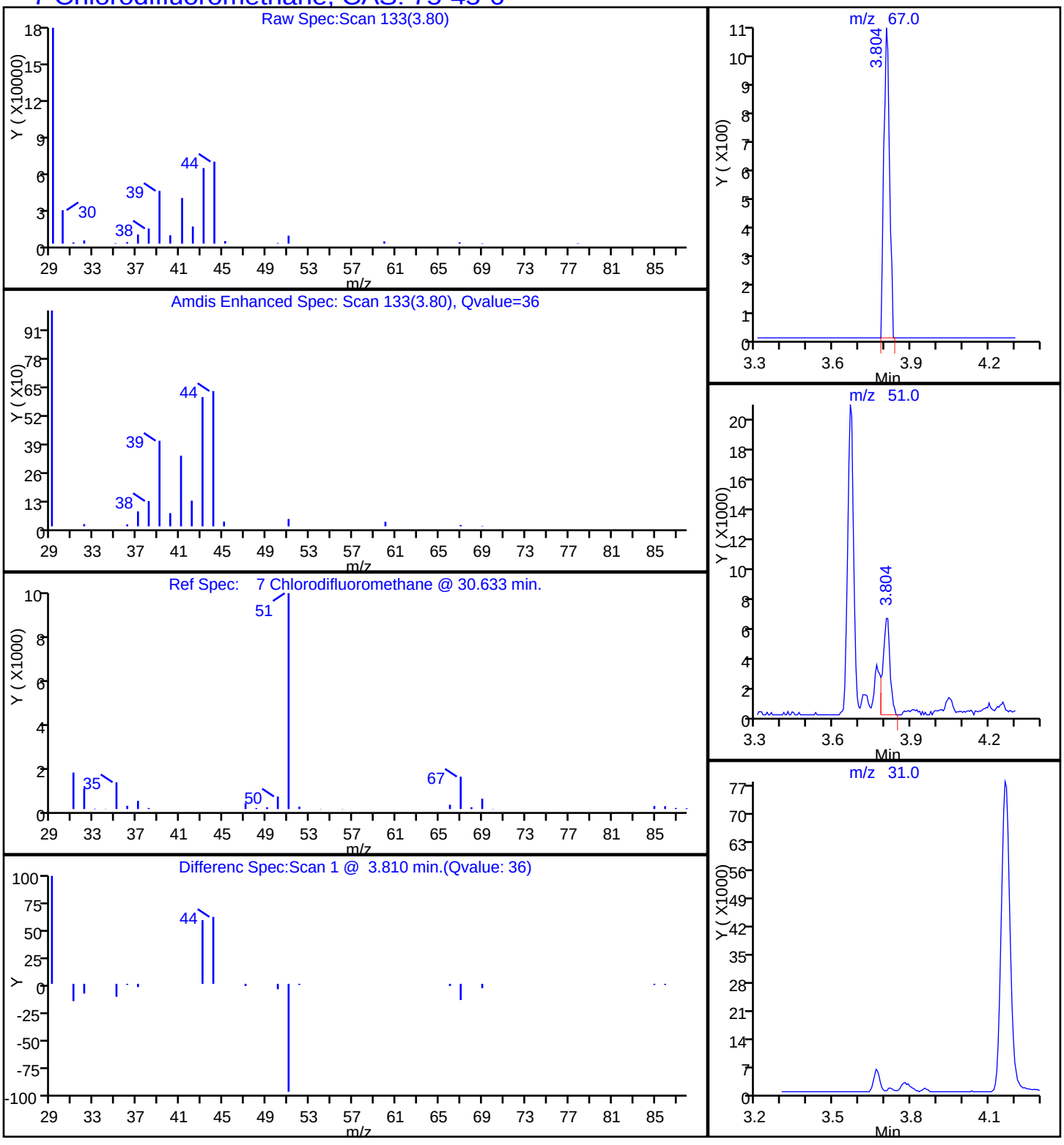
Report Date: 29-Apr-2016 10:00:27 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D

Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

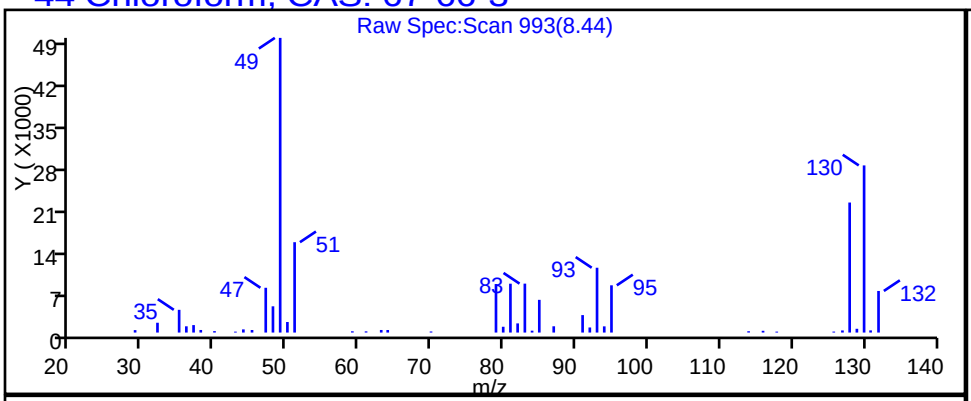
7 Chlorodifluoromethane, CAS: 75-45-6

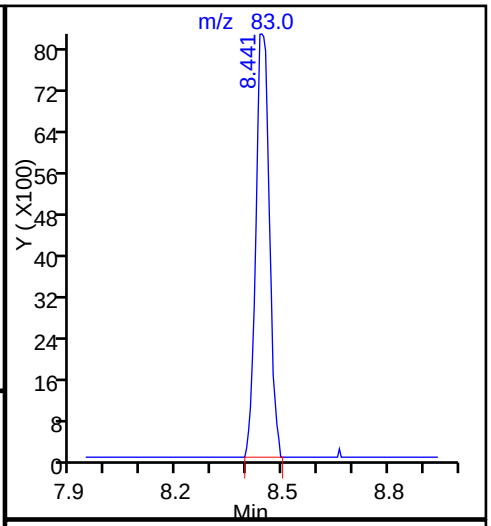


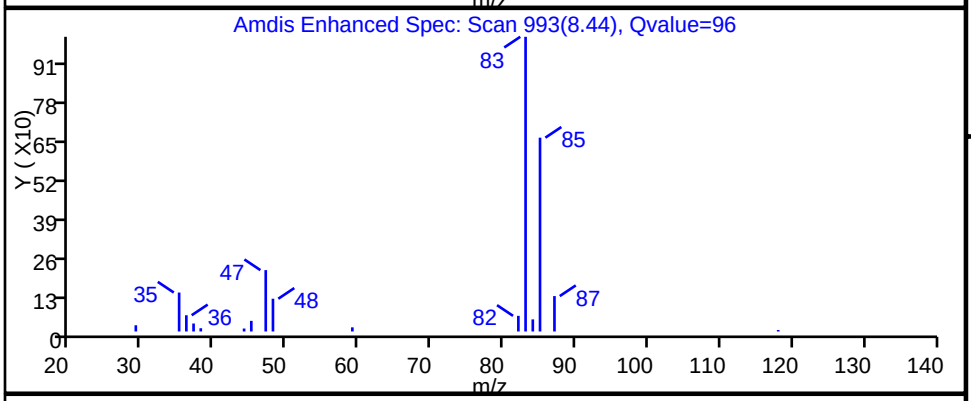
TestAmerica Knoxville

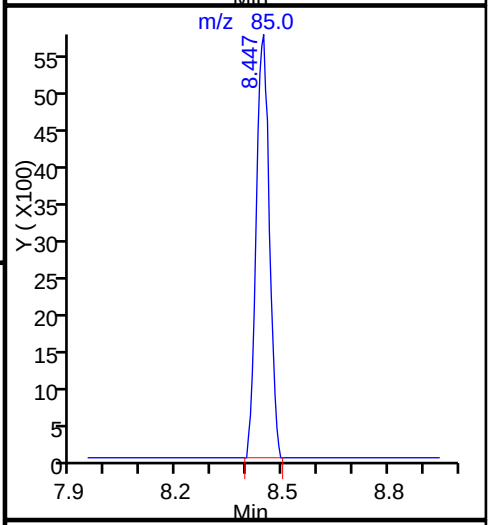
Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D
Injection Date: 28-Apr-2016 17:46:30 Instrument ID: MR
Lims ID: 140-4836-A-2 Lab Sample ID: 140-4836-2
Client ID: A-MID-GAC
Operator ID: ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

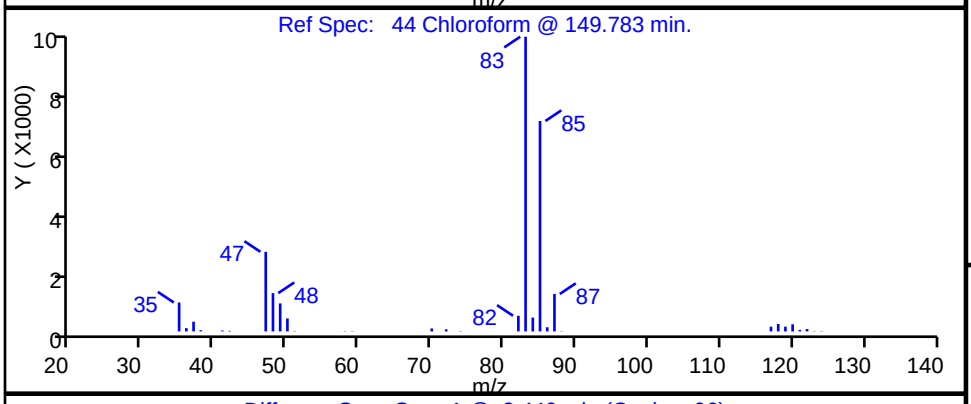
44 Chloroform, CAS: 67-66-3

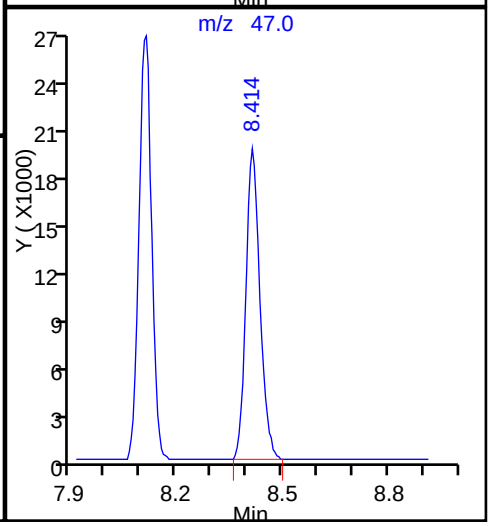


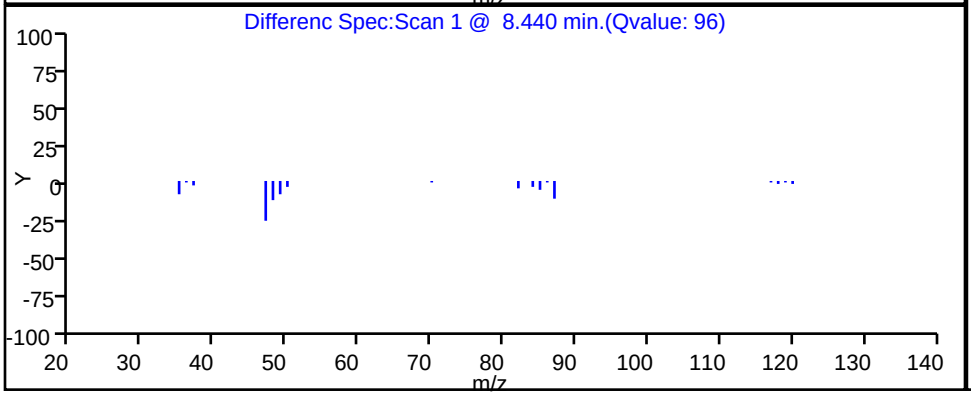








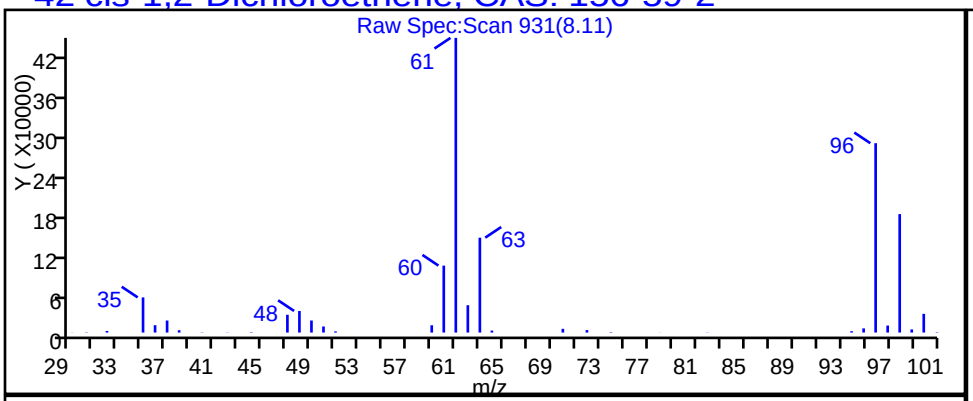


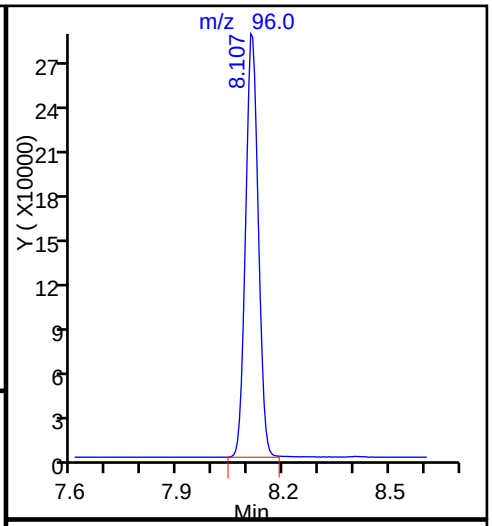


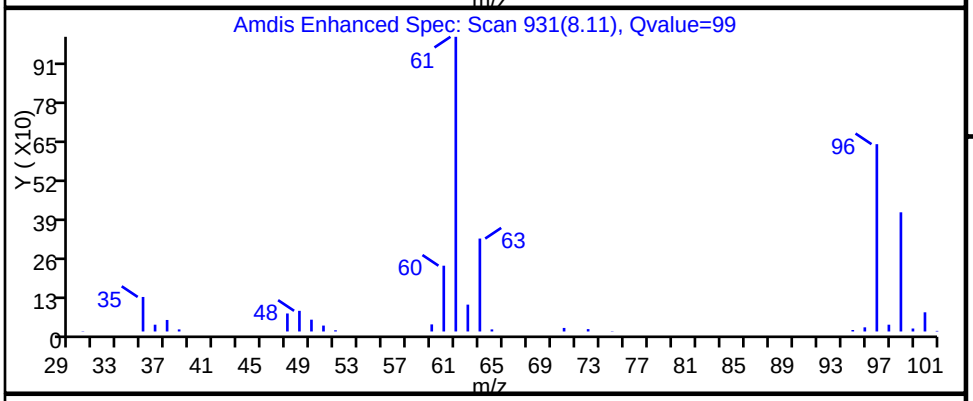
TestAmerica Knoxville

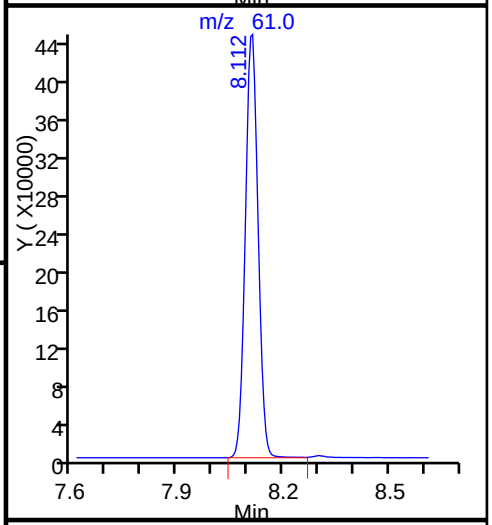
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D		
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

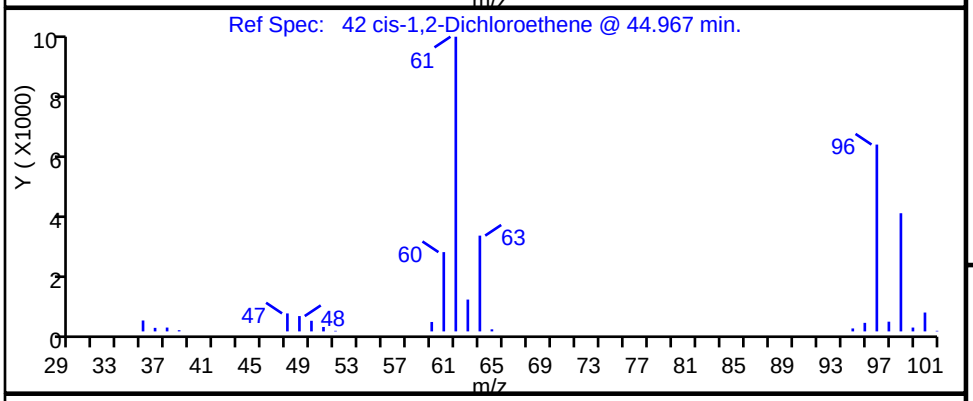
42 cis-1,2-Dichloroethene, CAS: 156-59-2

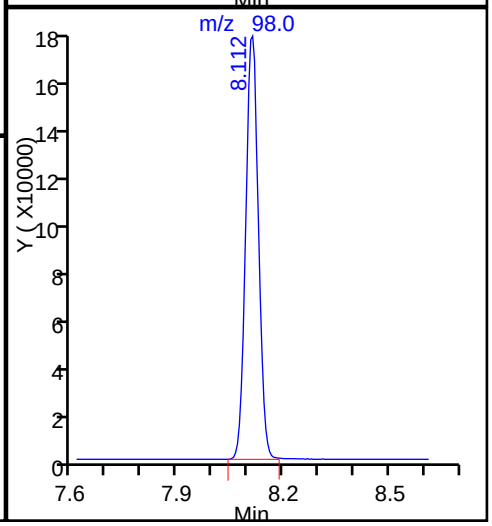


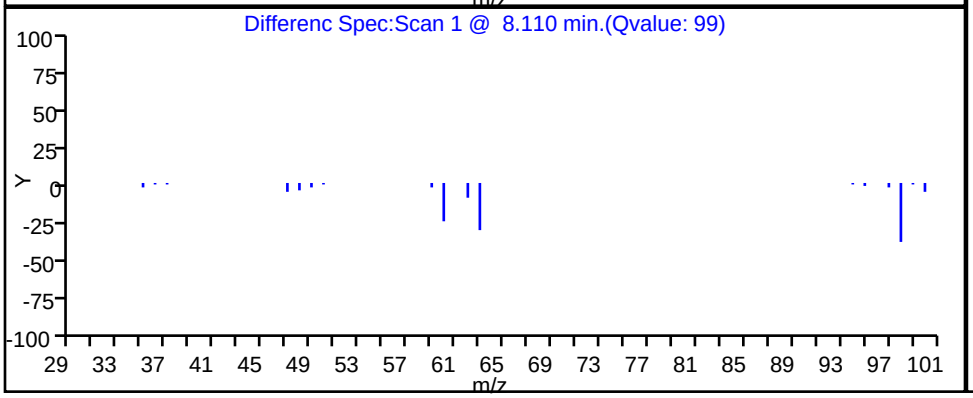








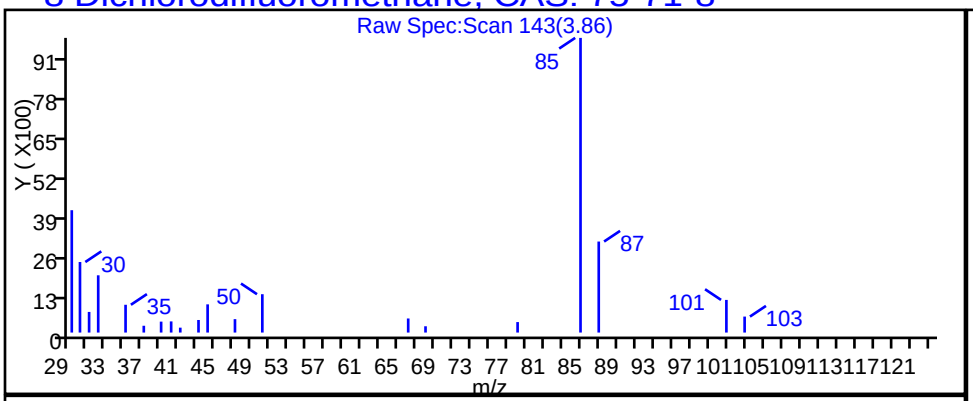


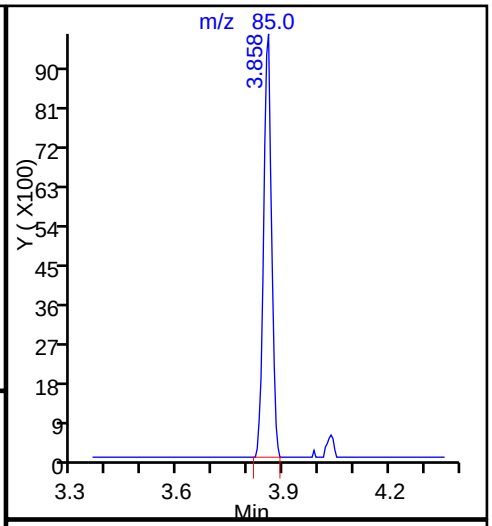


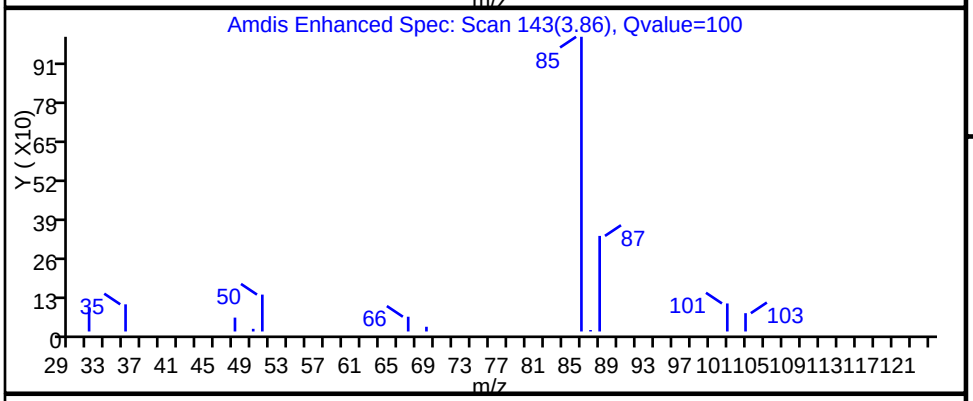
TestAmerica Knoxville

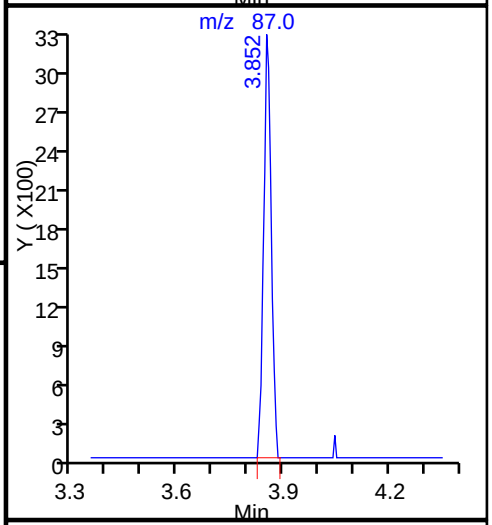
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D				
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

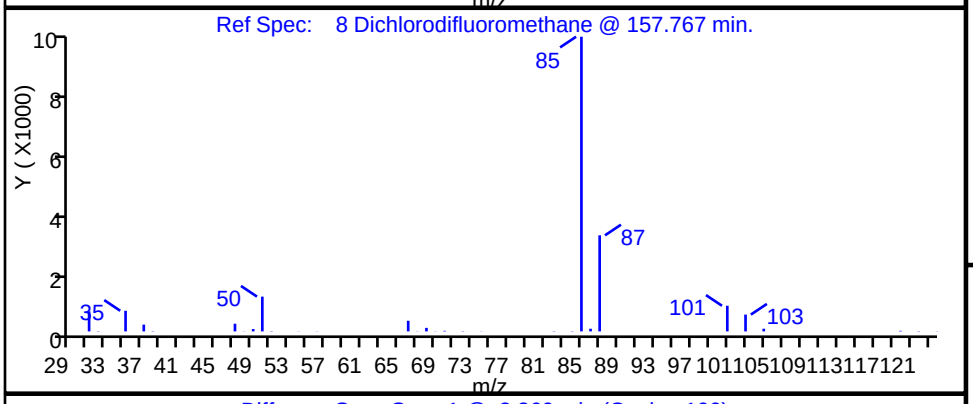
8 Dichlorodifluoromethane, CAS: 75-71-8

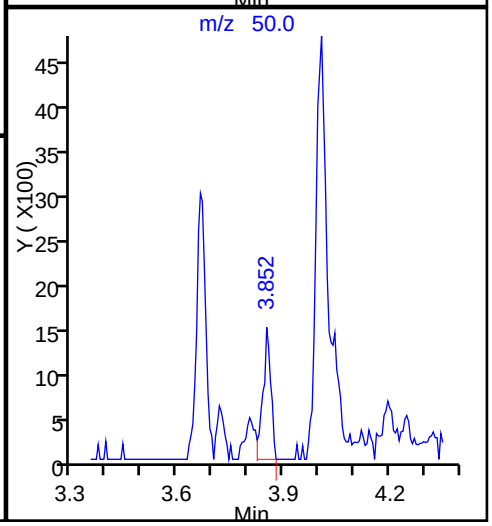


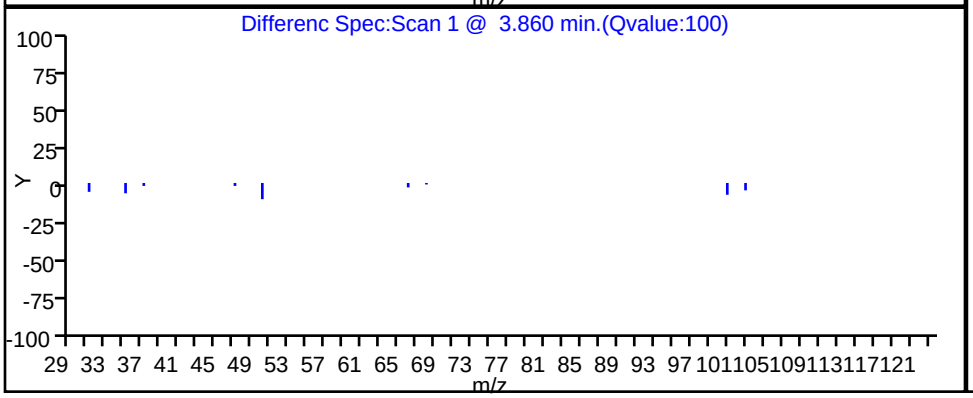








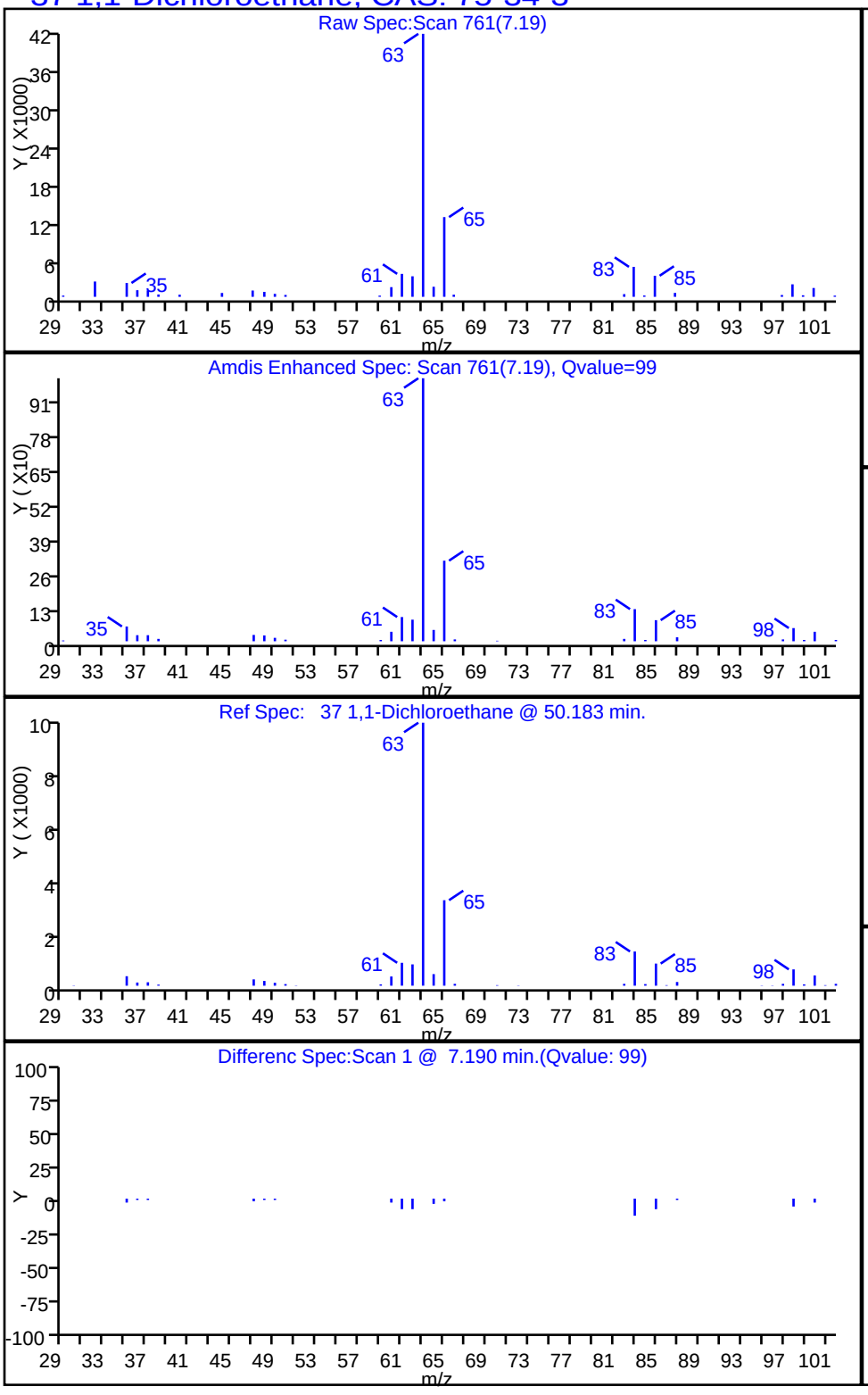


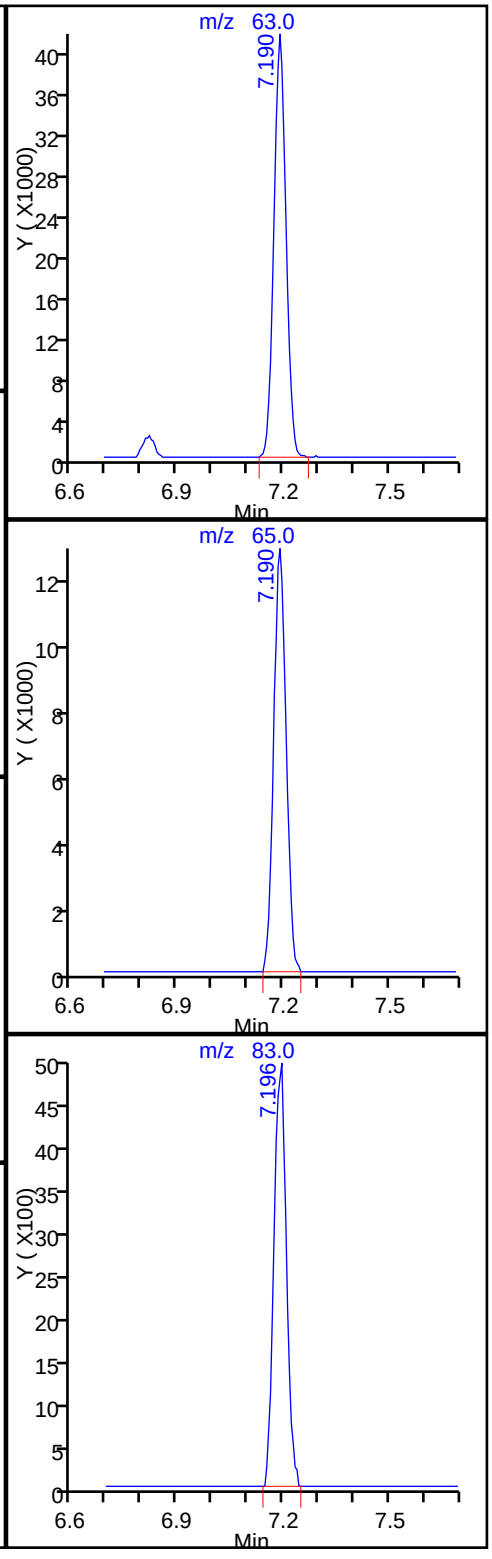


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D				
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 1,1-Dichloroethane, CAS: 75-34-3

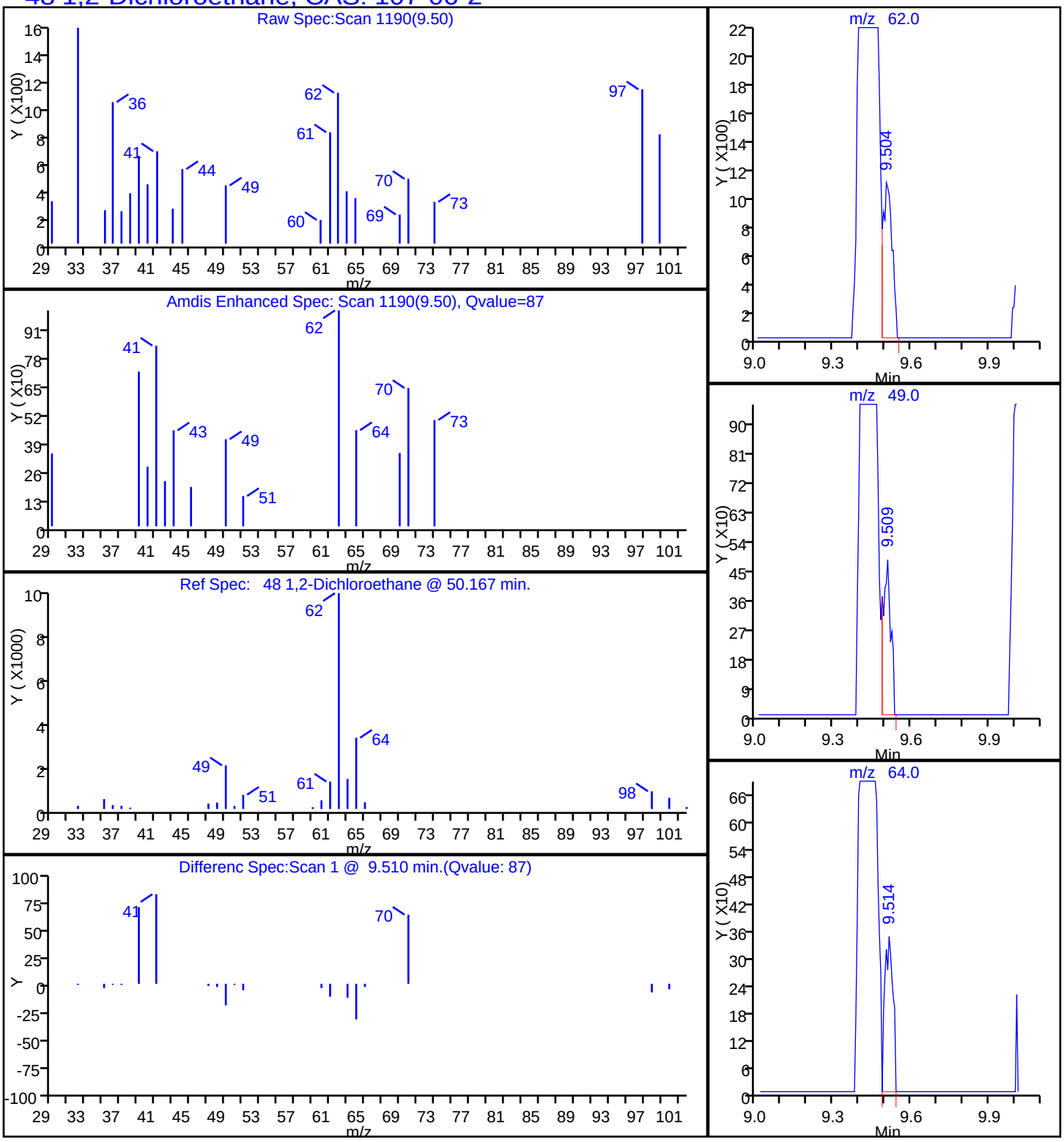




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D		
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

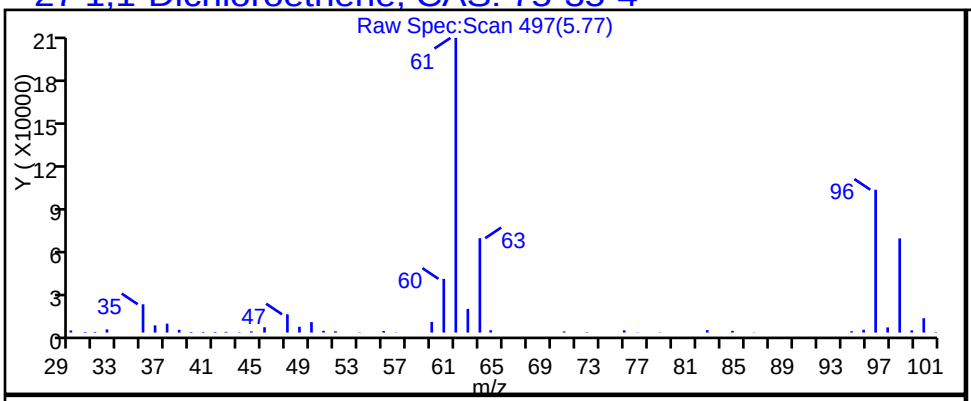
48 1,2-Dichloroethane, CAS: 107-06-2

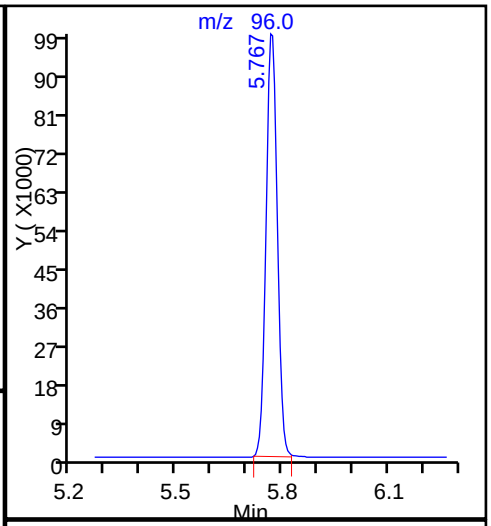


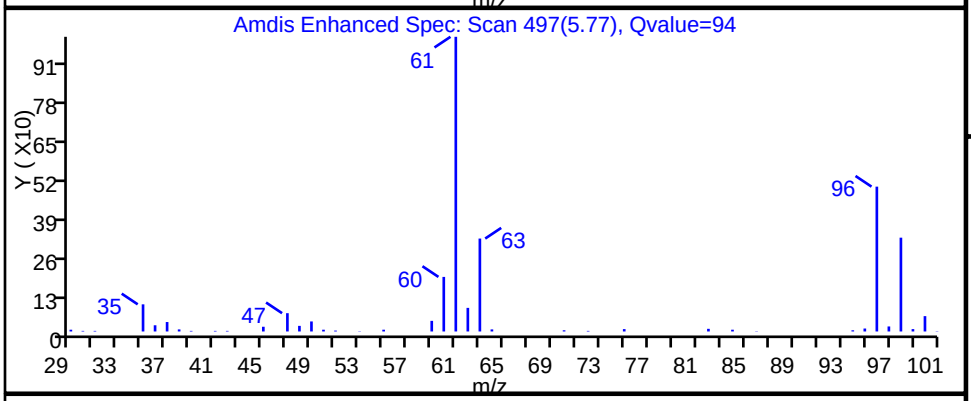
TestAmerica Knoxville

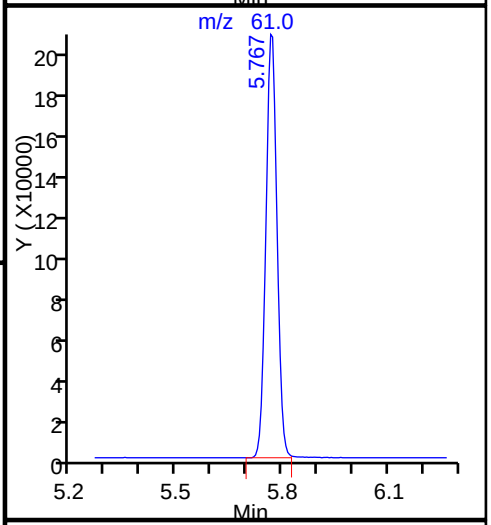
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D		
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2
Client ID:	A-MID-GAC		
Operator ID:		ALS Bottle#:	2 Worklist Smp#: 8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

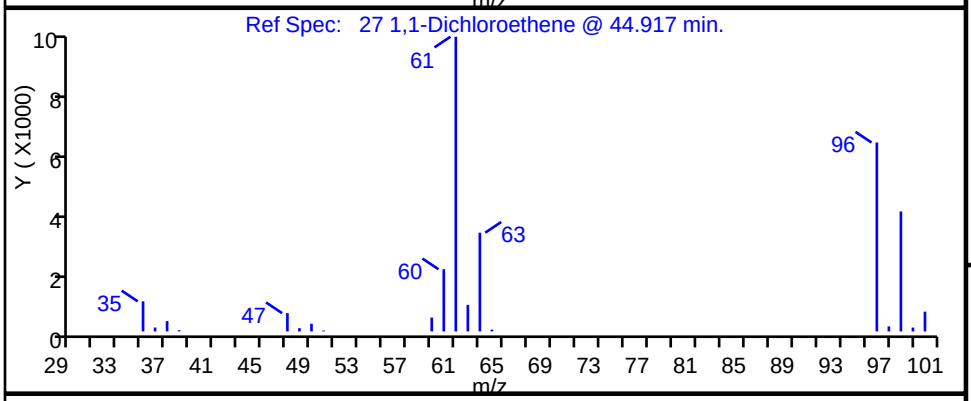
27 1,1-Dichloroethene, CAS: 75-35-4

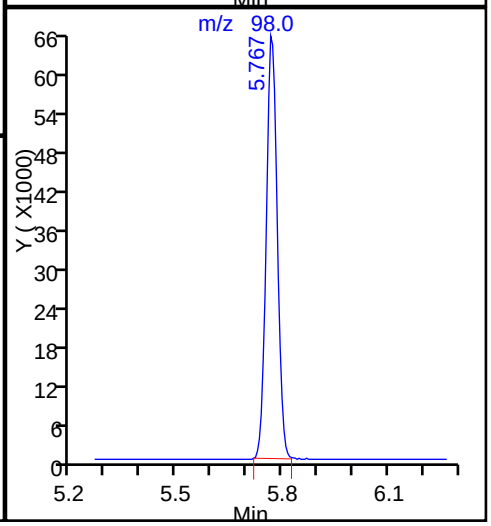


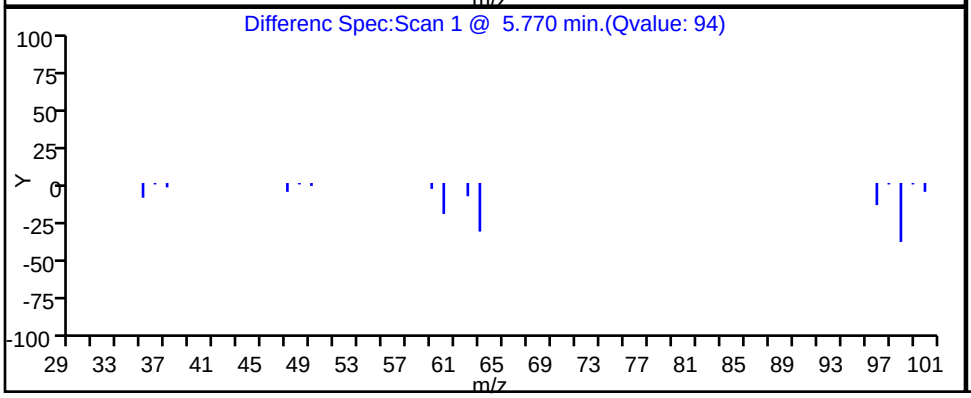








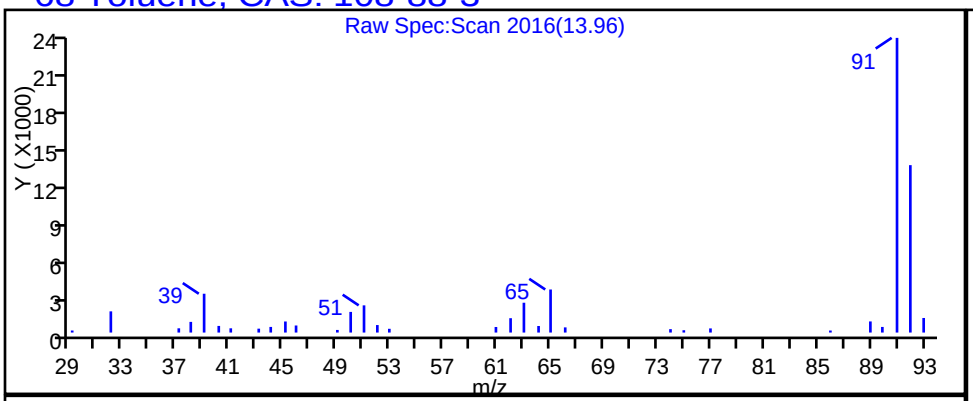


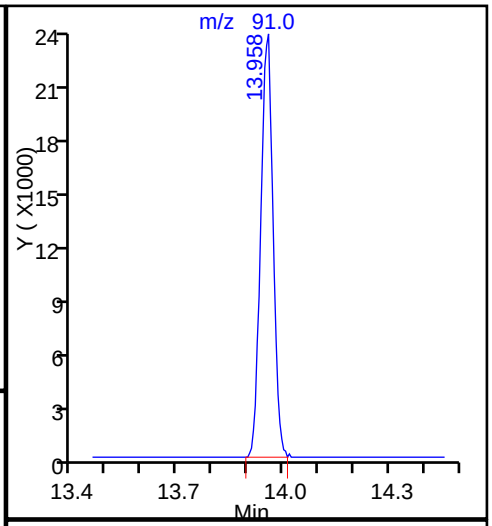


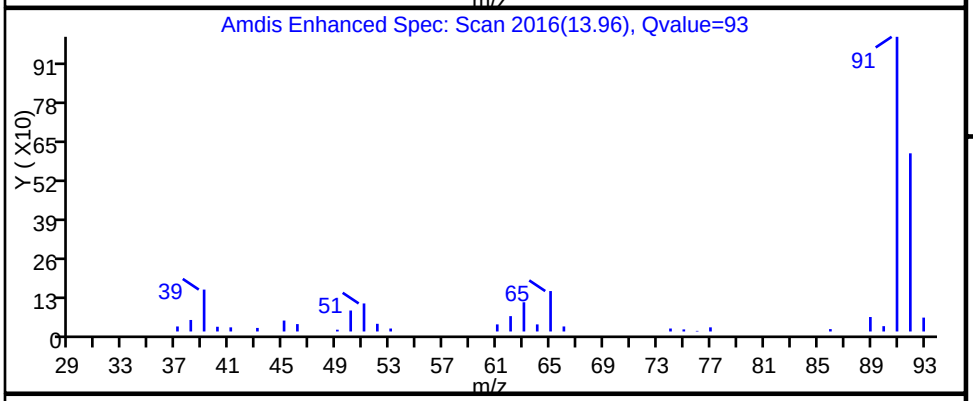
TestAmerica Knoxville

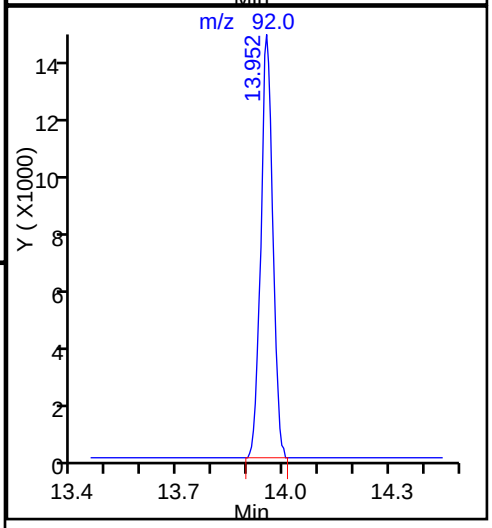
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D				
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

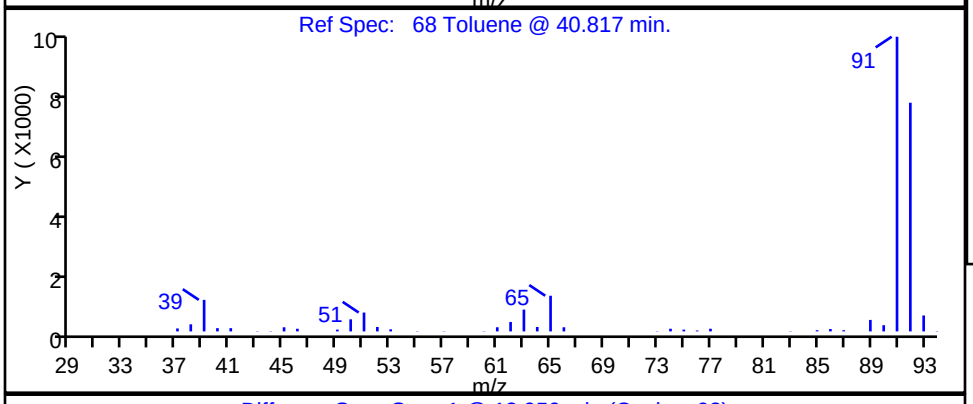
68 Toluene, CAS: 108-88-3

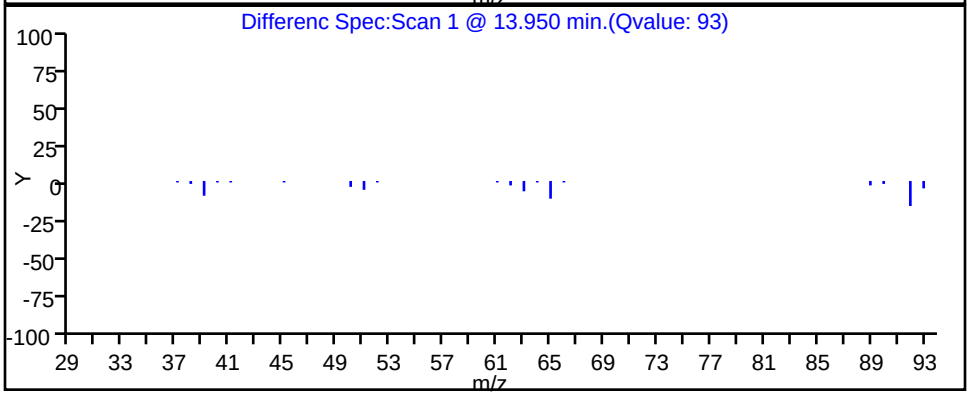








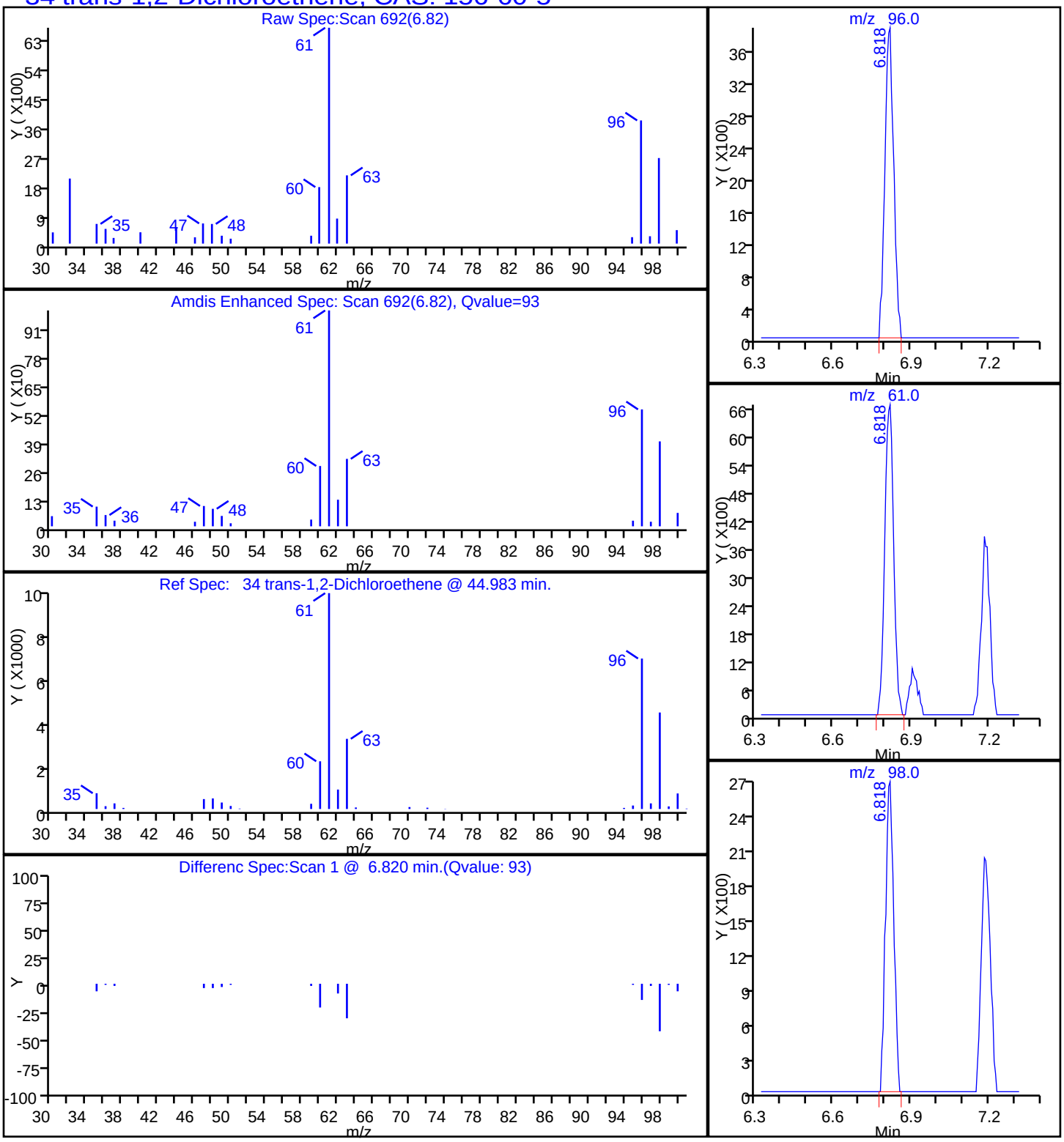




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D				
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

34 trans-1,2-Dichloroethene, CAS: 156-60-5



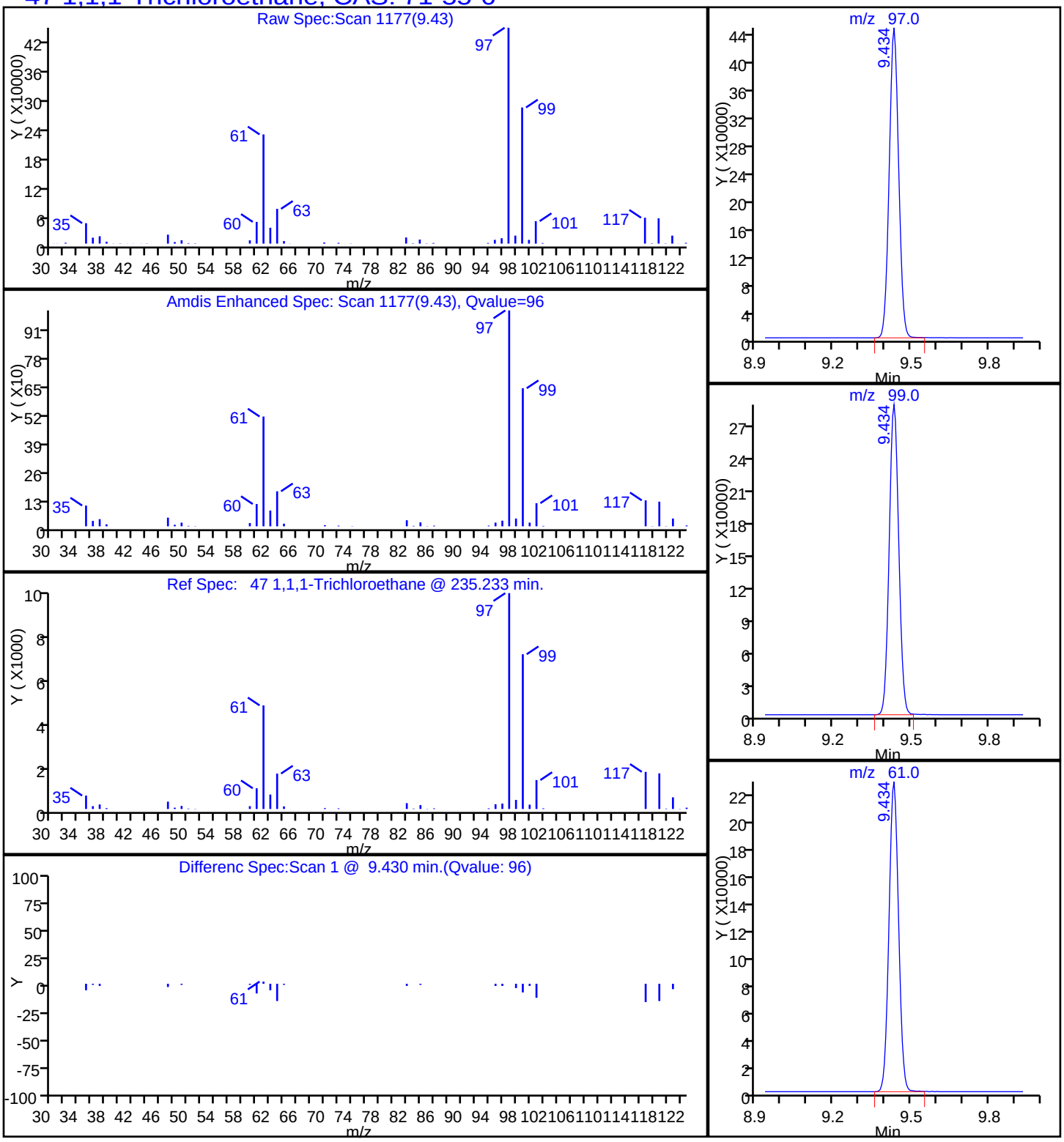
Report Date: 29-Apr-2016 10:00:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D

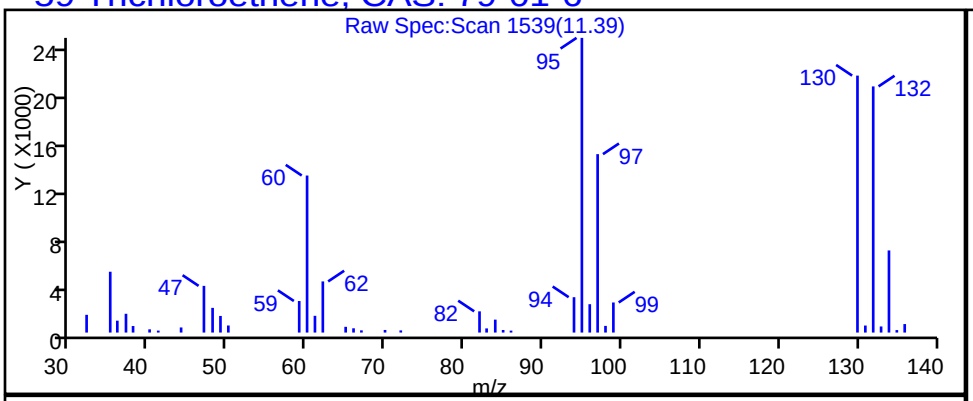
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

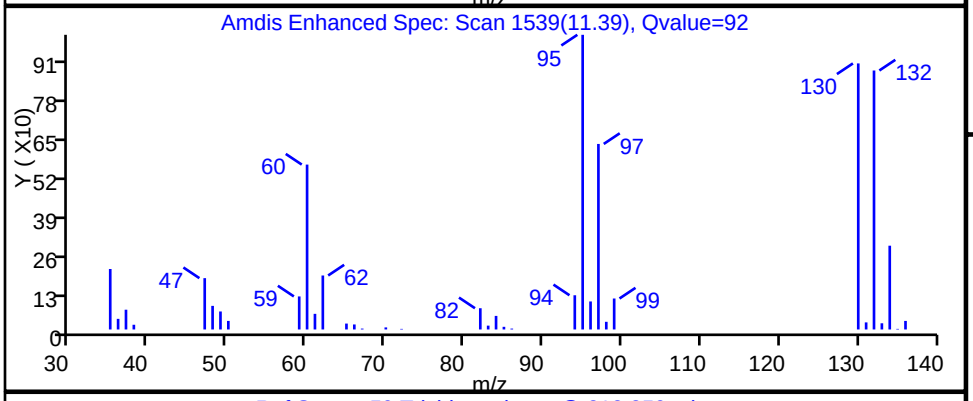
47 1,1,1-Trichloroethane, CAS: 71-55-6

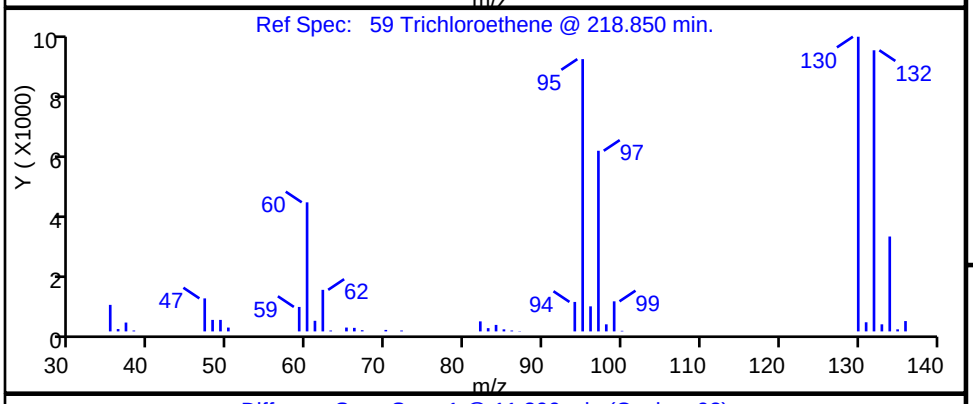


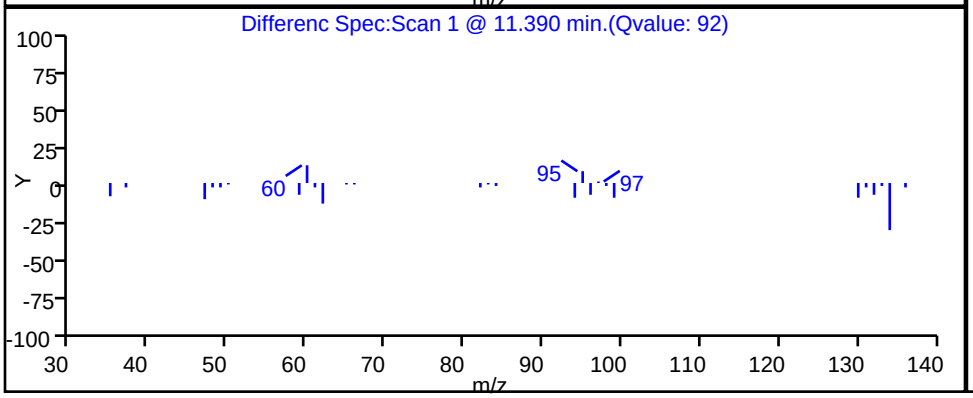
Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D
Injection Date: 28-Apr-2016 17:46:30 Instrument ID: MR
Lims ID: 140-4836-A-2 Lab Sample ID: 140-4836-2
Client ID: A-MID-GAC
Operator ID: ALS Bottle#: 2 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

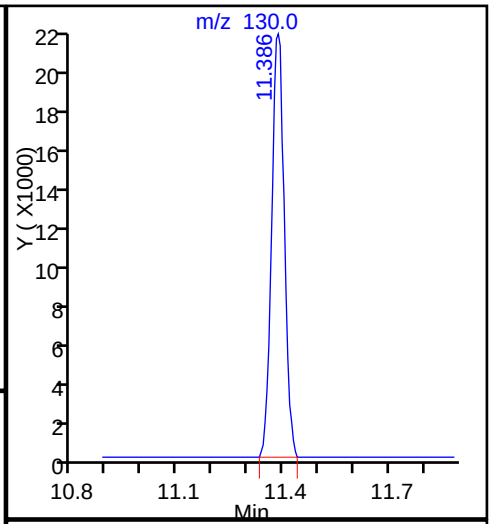
59 Trichloroethene, CAS: 79-01-6

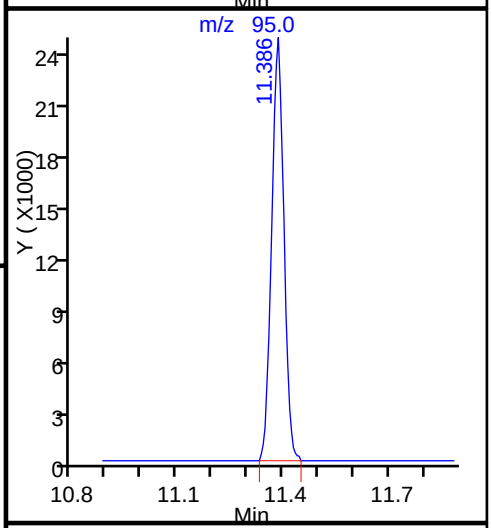


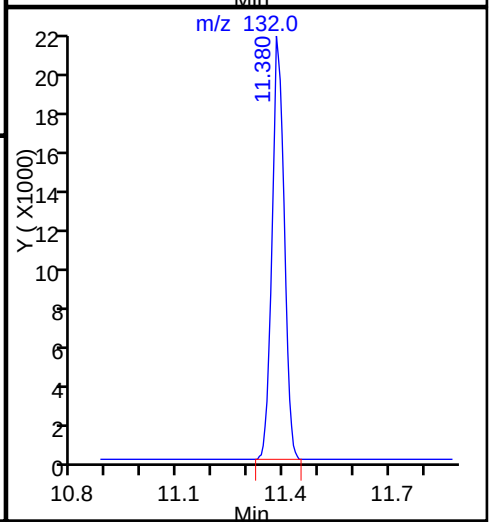












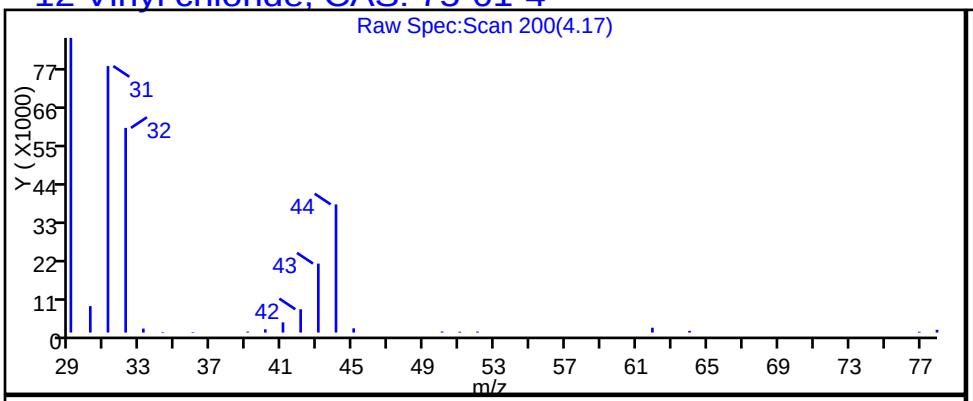
Report Date: 29-Apr-2016 10:00:28 Chrom Revision: 2.2 20-Apr-2016 13:59:46

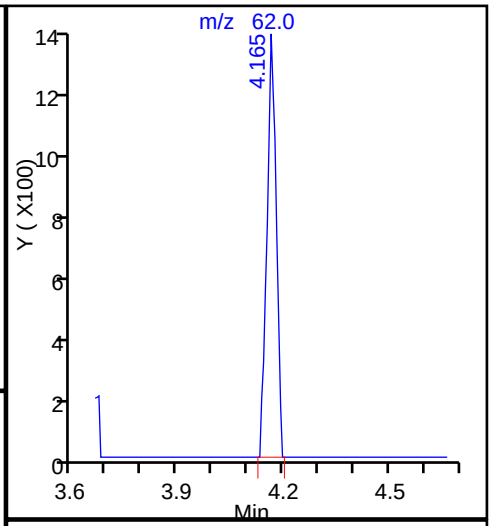
TestAmerica Knoxville

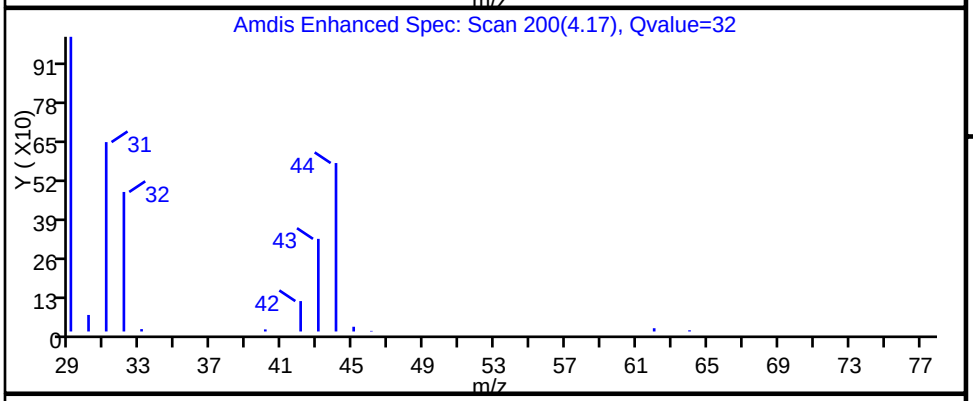
Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P102.D

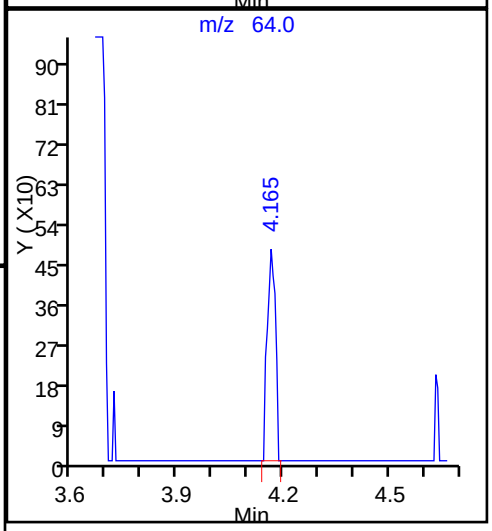
Injection Date:	28-Apr-2016 17:46:30	Instrument ID:	MR		
Lims ID:	140-4836-A-2	Lab Sample ID:	140-4836-2		
Client ID:	A-MID-GAC				
Operator ID:		ALS Bottle#:	2	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

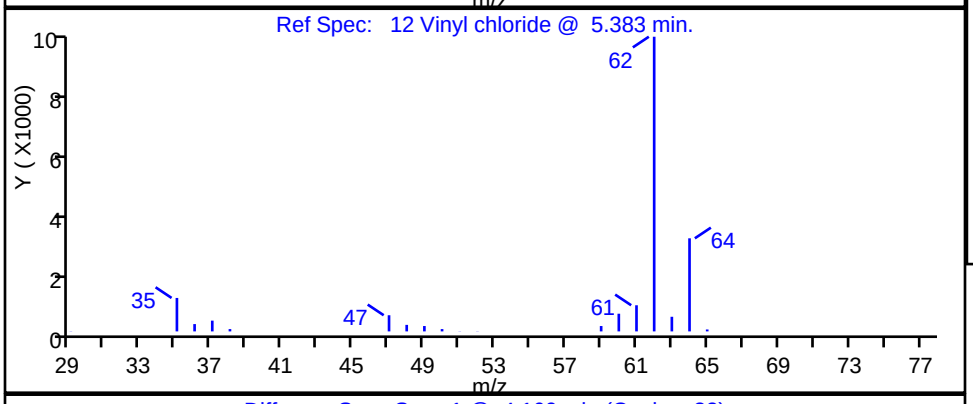
12 Vinyl chloride, CAS: 75-01-4

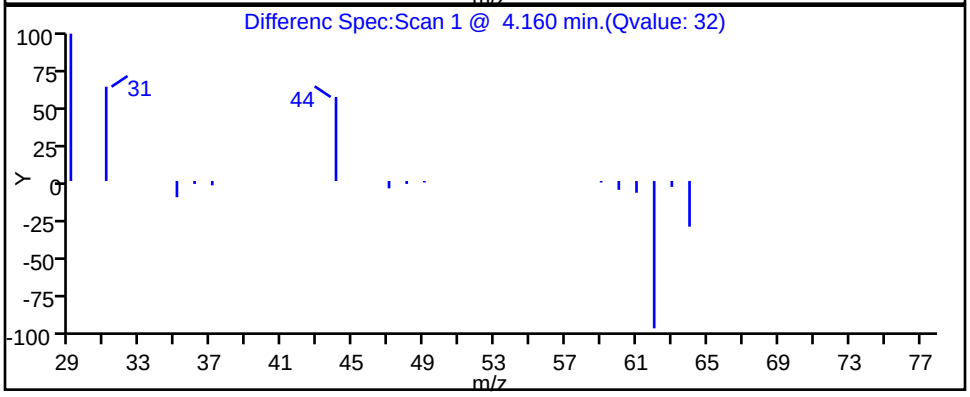












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-4836-3

Matrix: Air Lab File ID: RD28P103.D

Analysis Method: TO 15 LL Date Collected: 04/27/2016 11:15

Sample wt/vol: 100(mL) Date Analyzed: 04/28/2016 18:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4733 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.46		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.53		0.40	0.075
67-66-3	Chloroform	119.38	ND		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.50		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.099	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.86		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.095	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	0.68		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.084	J	0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4836-1

SDG No.:

Client Sample ID: A-EFFLUENT | Lab Sample ID: 140-4836-3

Matrix: Air | Lab File ID: RD28P103.D

Analysis Method: TO 15 LL | Date Collected: 04/27/2016 11:15

Sample wt/vol: 100(mL) | Date Analyzed: 04/28/2016 18:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4733 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.9		1.4	0.27
67-66-3	Chloroform	119.38	ND		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	ND		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.40	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	3.4		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.64	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	3.7		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	0.45	J	1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D
Lims ID: 140-4836-A-3
Client ID: A-EFFLUENT
Sample Type: Client
Inject. Date: 28-Apr-2016 18:38:30 ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-4836-a-3
Misc. Info.: 140-0002793-009
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Apr-2016 09:59:30 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 29-Apr-2016 09:54:34

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.404	8.420	-0.016	94	176393	4.00	
*	2 1,4-Difluorobenzene	114	10.588	10.598	-0.010	97	882204	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.805	16.805	0.000	91	834252	4.00	
$	4 4-Bromofluorobenzene (Surr	95	19.555	19.555	0.000	80	610354	3.96	
	7 Chlorodifluoromethane	67	3.782	3.799	-0.017	39	1635	0.1069	
	8 Dichlorodifluoromethane	85	3.836	3.847	-0.011	99	13457	0.0998	
	27 1,1-Dichloroethene	96	5.761	5.767	-0.006	93	10534	0.1716	
	31 Methylene Chloride	84	6.058	6.074	-0.016	95	6260	0.1053	
	37 1,1-Dichloroethane	63	7.180	7.196	-0.016	92	2255	0.0197	
	47 1,1,1-Trichloroethane	97	9.428	9.434	-0.006	94	16855	0.1354	
	50 Benzene	78	10.011	10.021	-0.010	97	17307	0.0924	
	59 Trichloroethene	130	11.380	11.386	-0.006	91	1478	0.0167	
	68 Toluene	91	13.947	13.952	-0.005	94	13514	0.0597	
	76 Tetrachloroethene	129	15.662	15.570	0.092	32	1564	0.0189	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

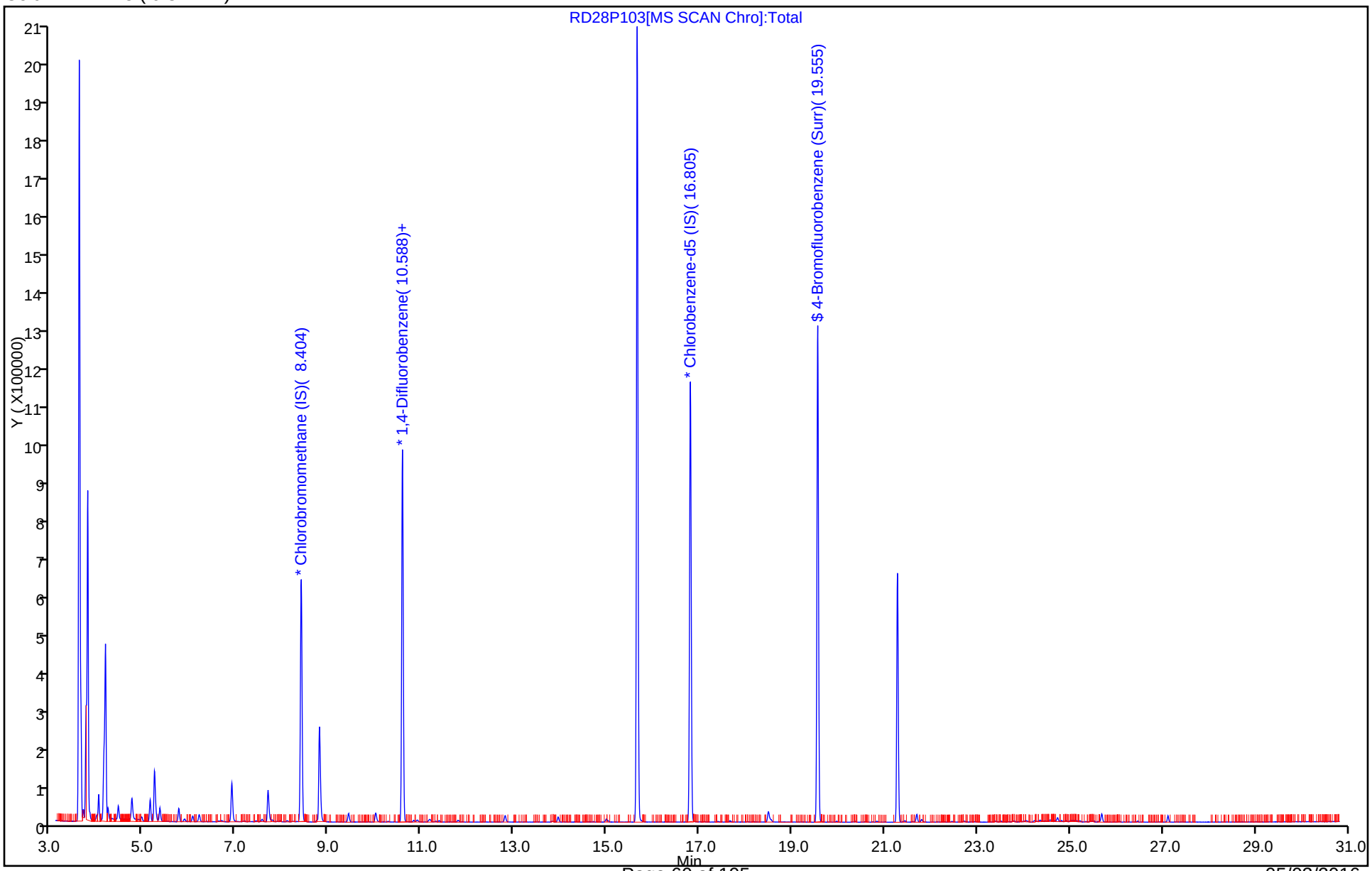
Report Date: 29-Apr-2016 10:00:30 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D

Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3	Worklist Smp#:	9
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

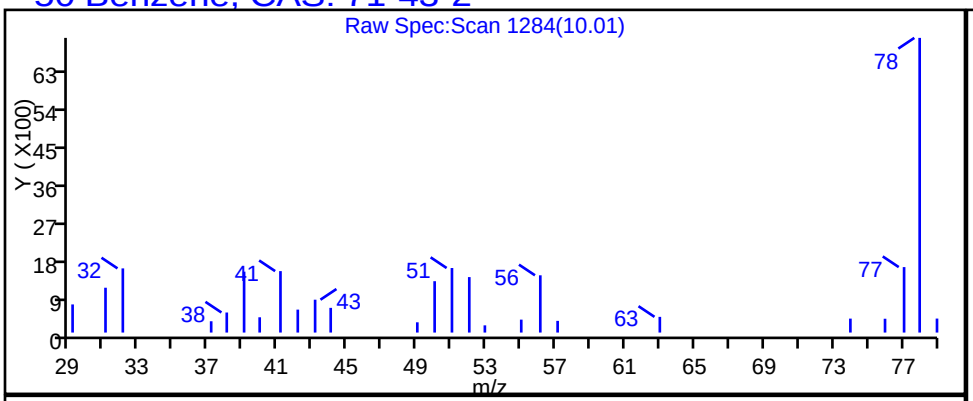
Column: RTX-5 (0.32 mm)

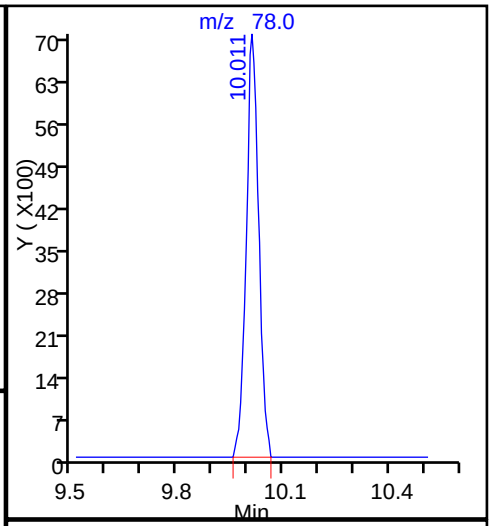


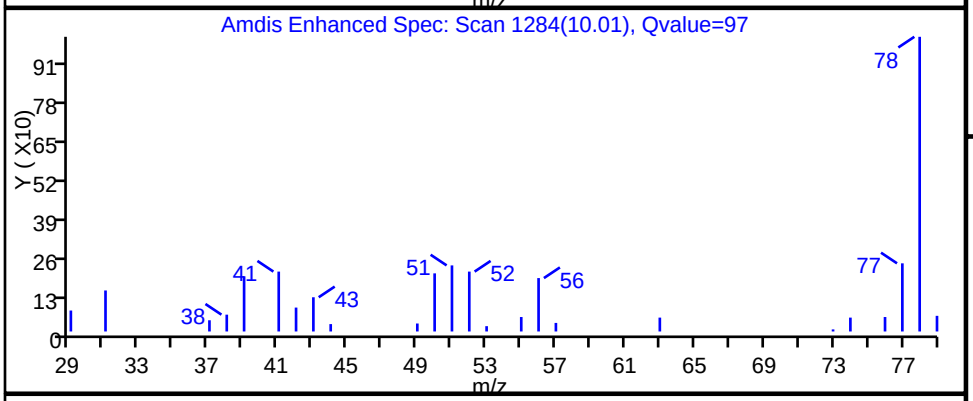
TestAmerica Knoxville

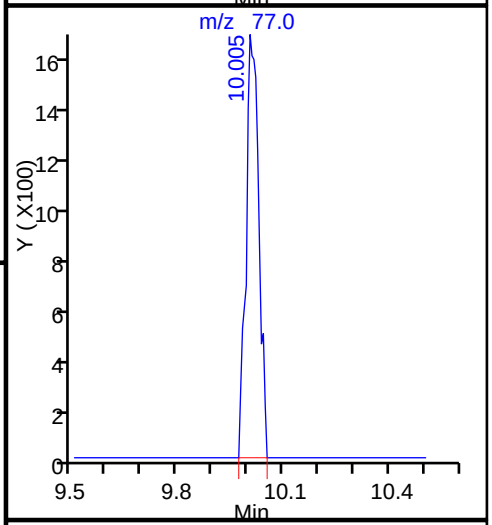
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D		
Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

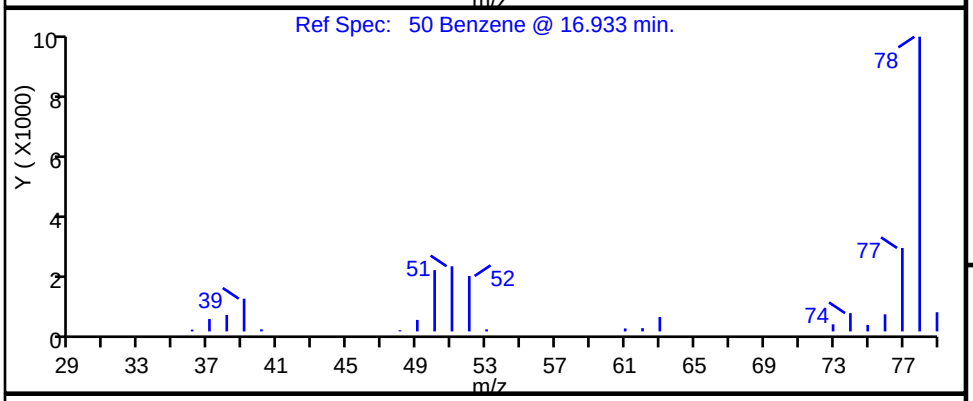
50 Benzene, CAS: 71-43-2

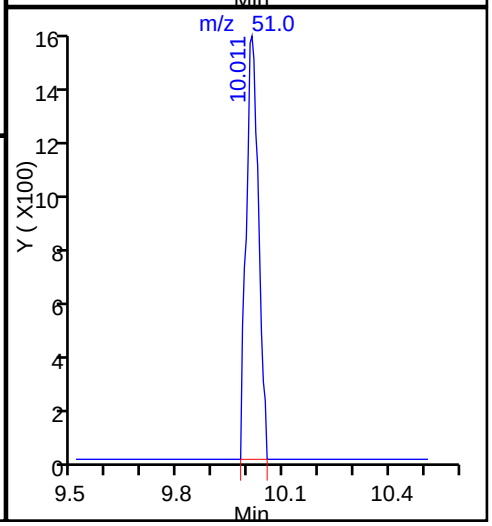


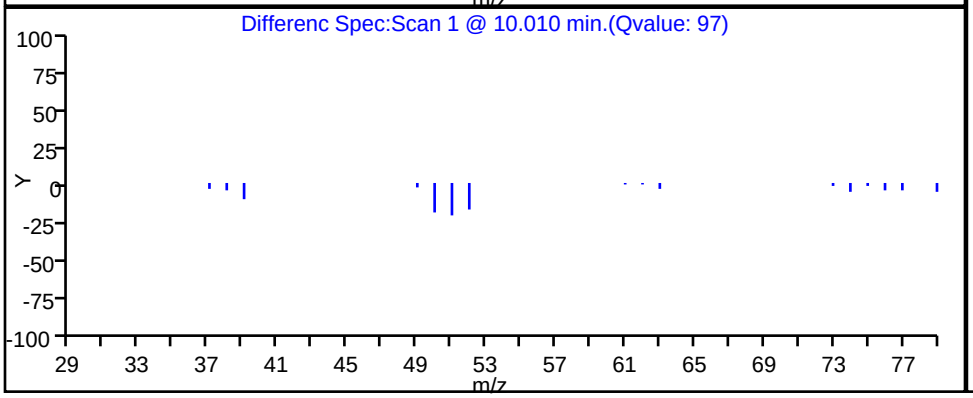












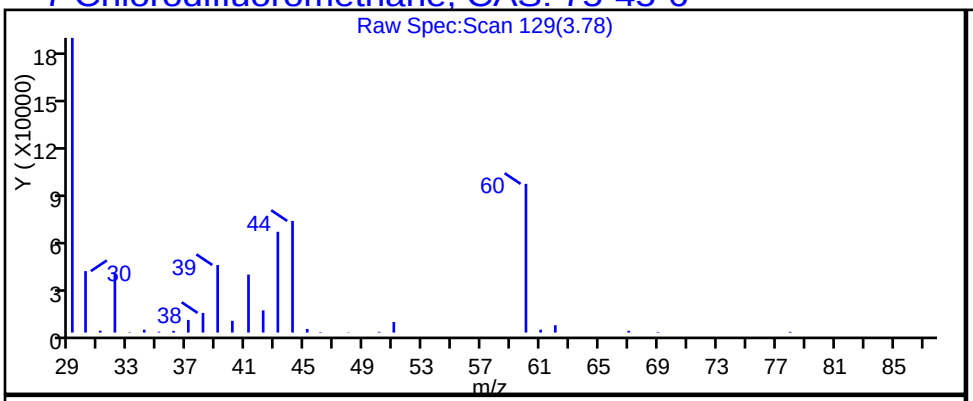
Report Date: 29-Apr-2016 10:00:30 Chrom Revision: 2.2 20-Apr-2016 13:59:46

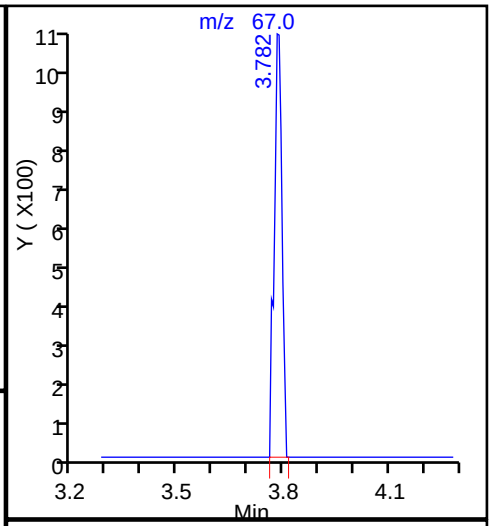
TestAmerica Knoxville

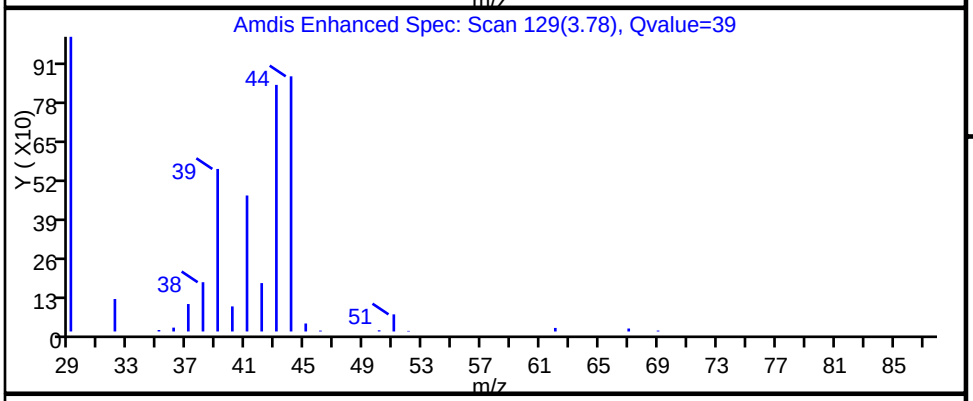
Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D

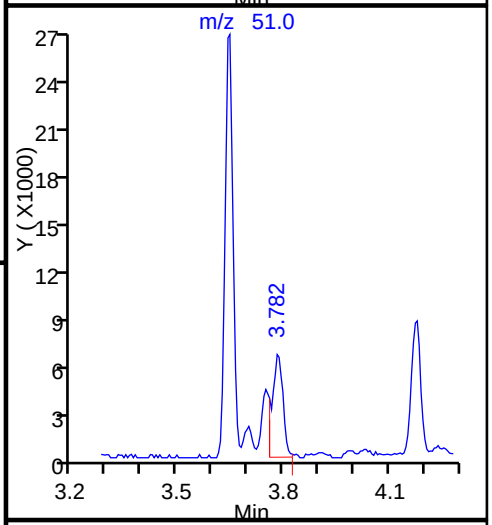
Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR		
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

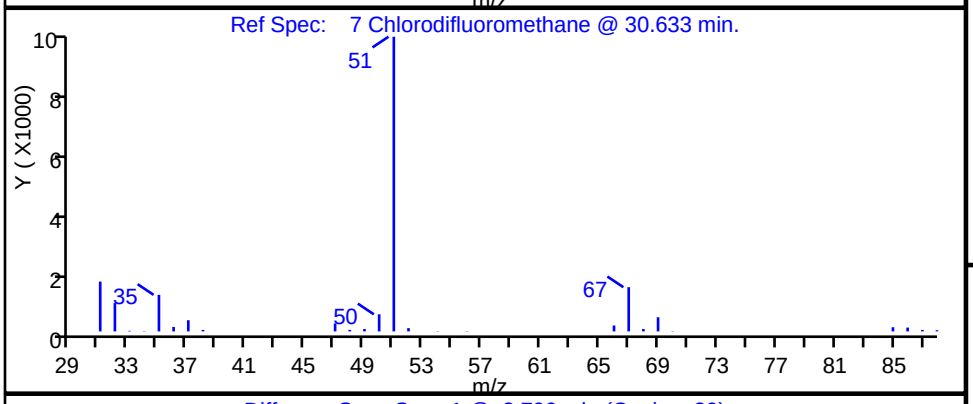
7 Chlorodifluoromethane, CAS: 75-45-6

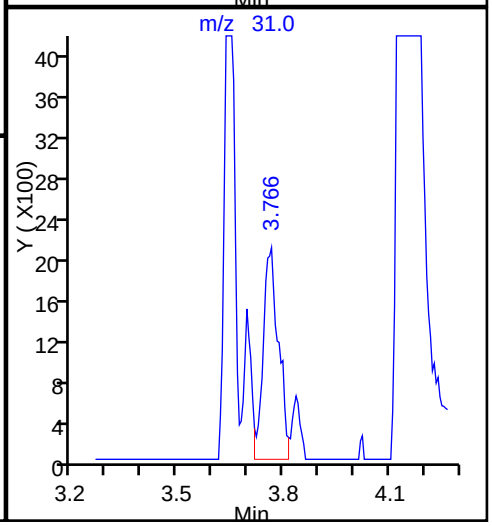


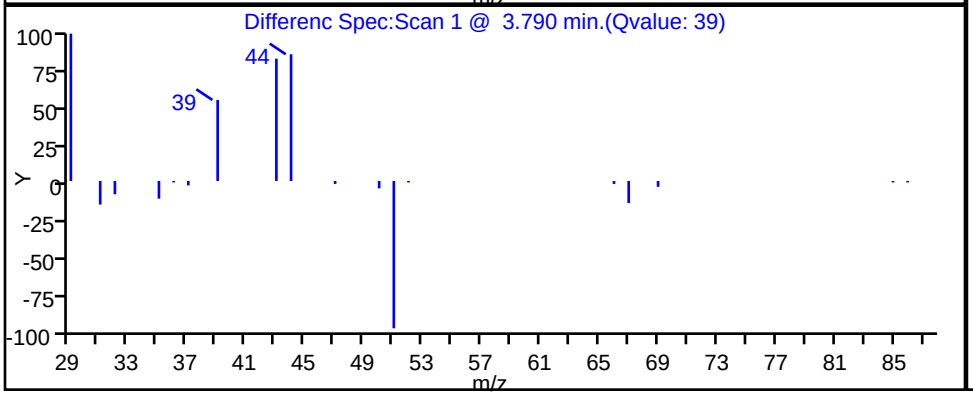








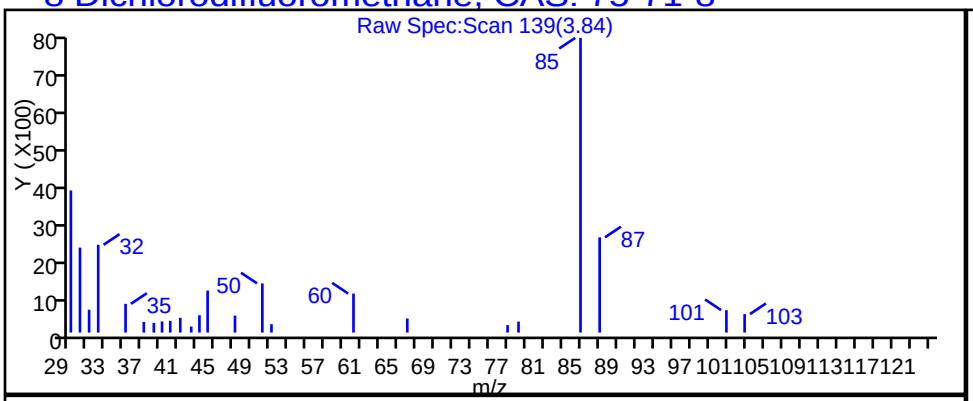


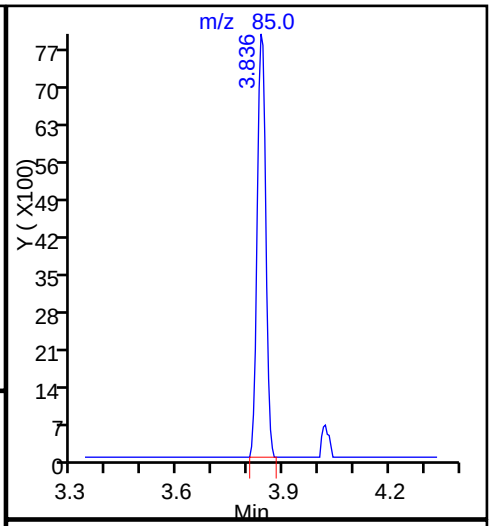


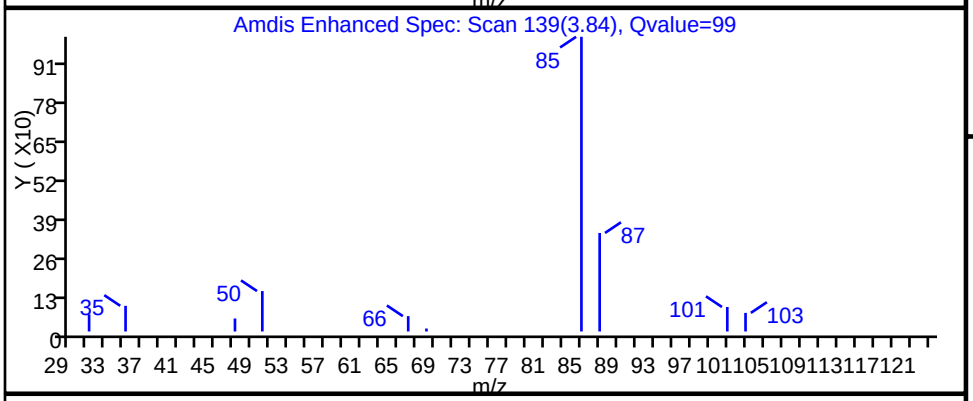
TestAmerica Knoxville

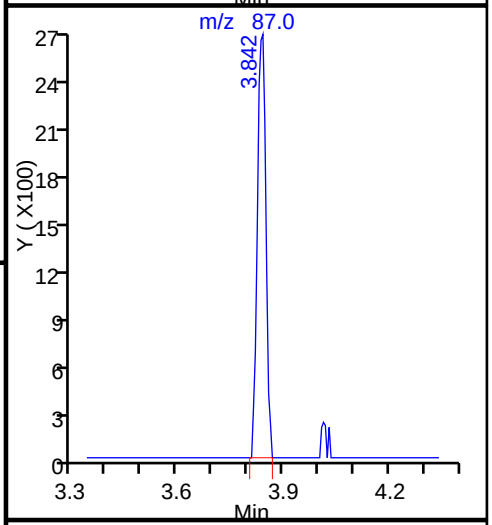
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D		
Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

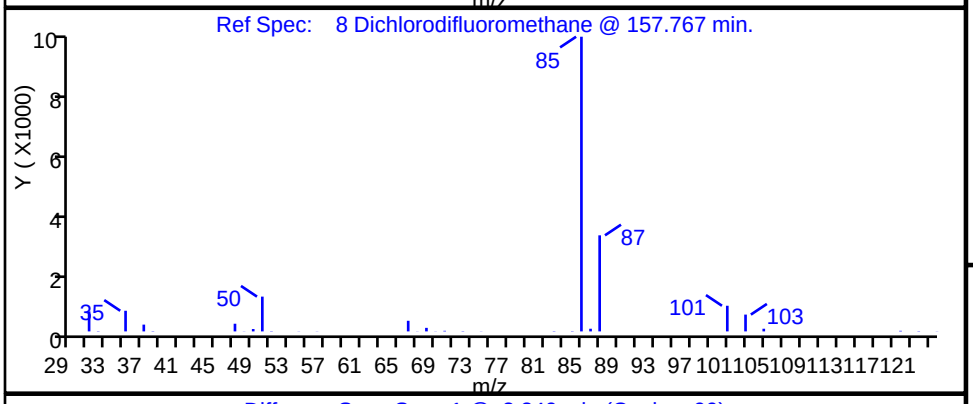
8 Dichlorodifluoromethane, CAS: 75-71-8

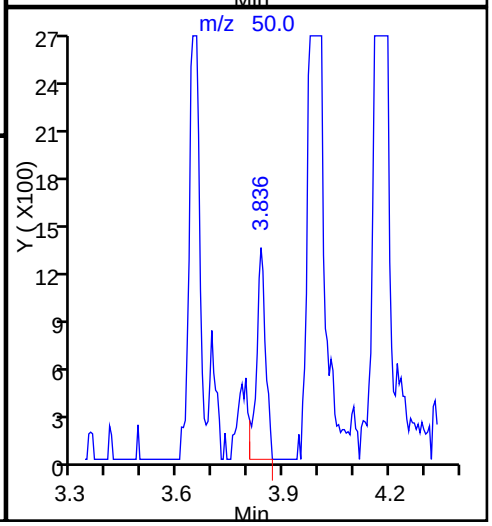


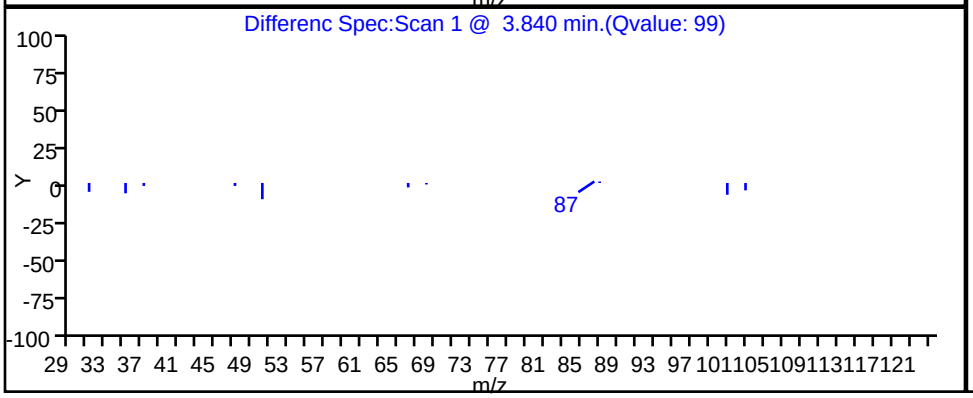








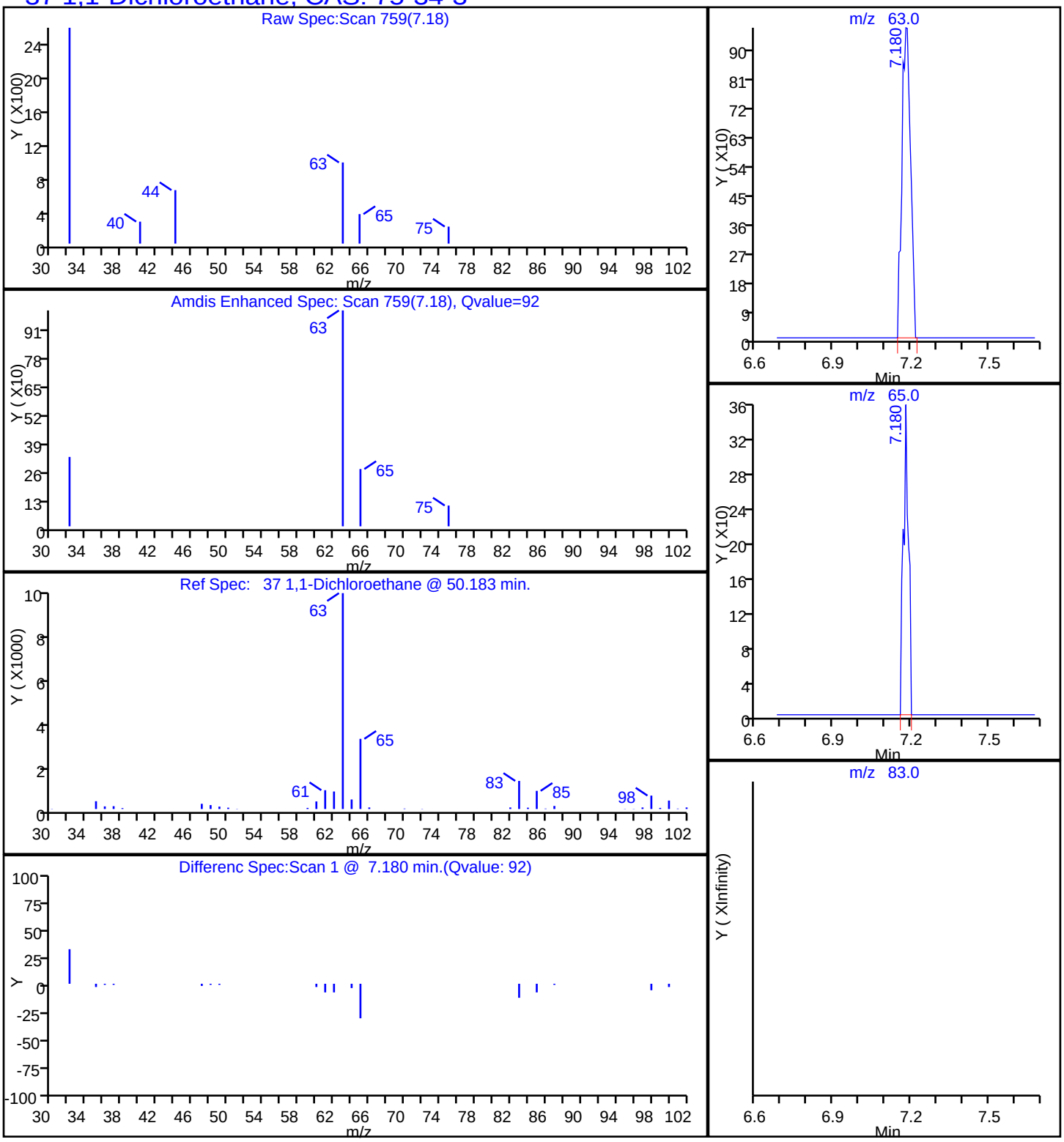




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D				
Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR		
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3		
Client ID:	A-EFFLUENT				
Operator ID:		ALS Bottle#:	3	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

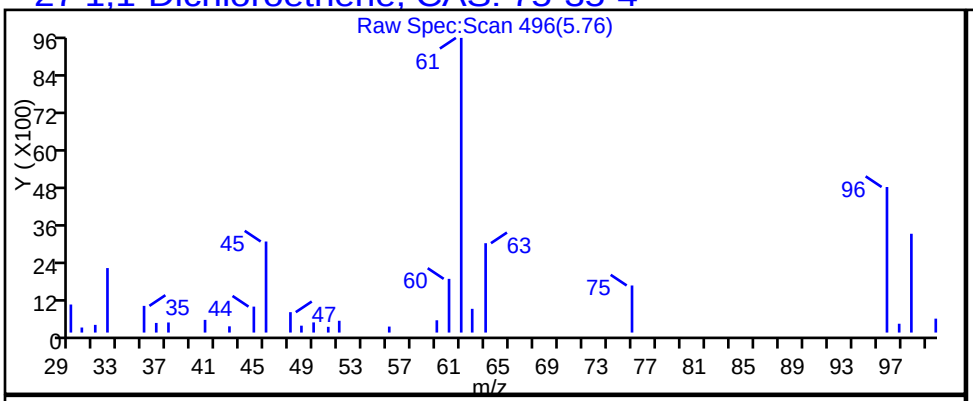
37 1,1-Dichloroethane, CAS: 75-34-3

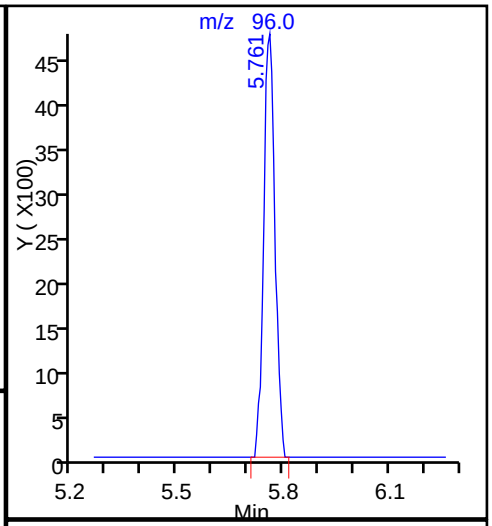


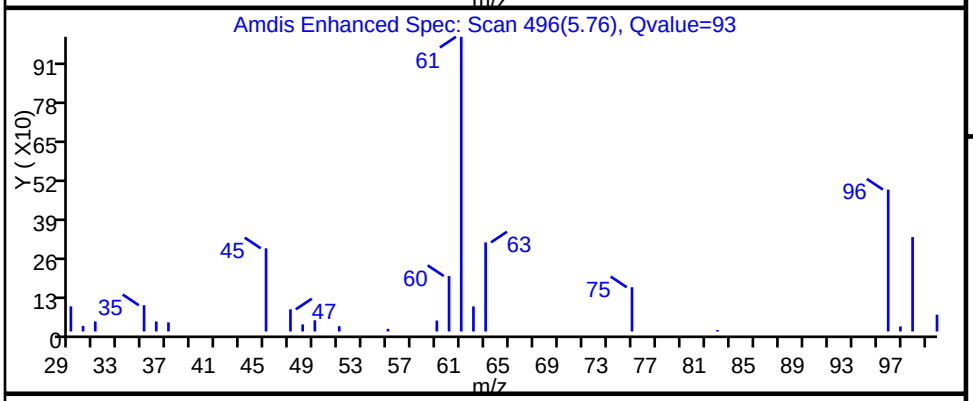
TestAmerica Knoxville

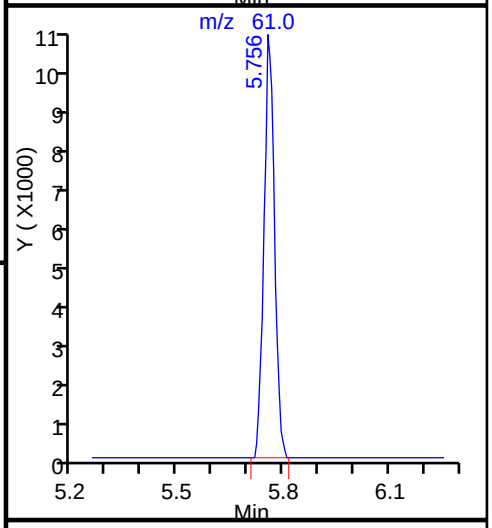
Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D		
Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

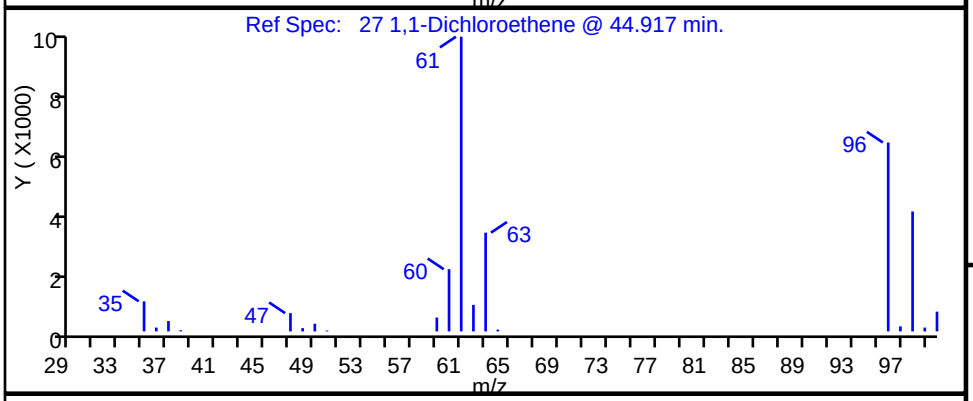
27 1,1-Dichloroethene, CAS: 75-35-4

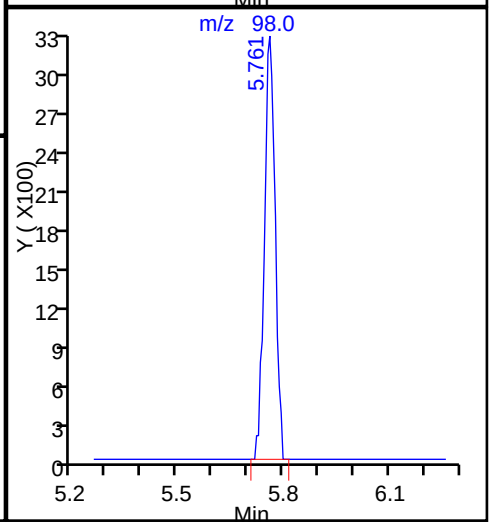


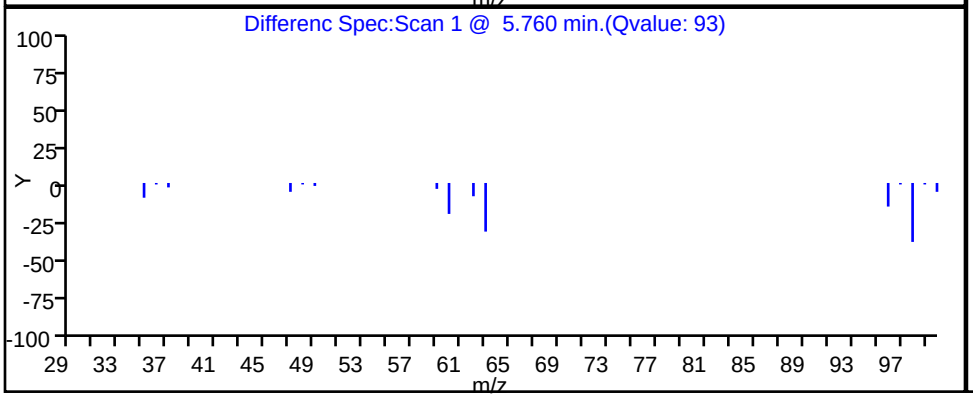






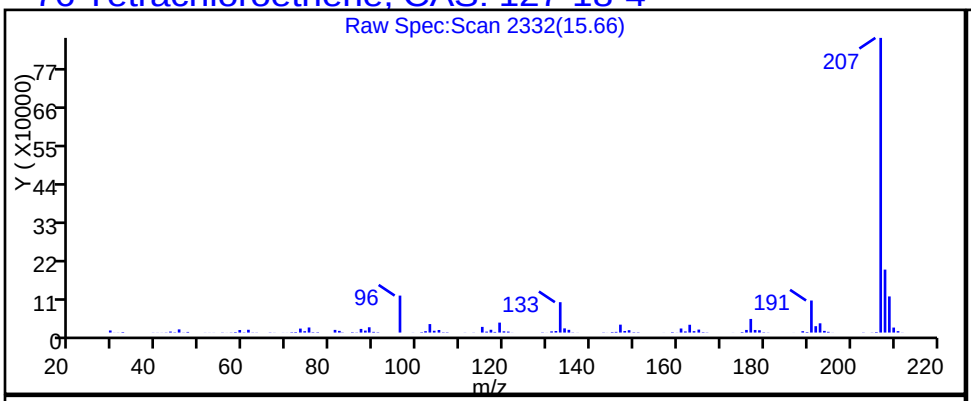


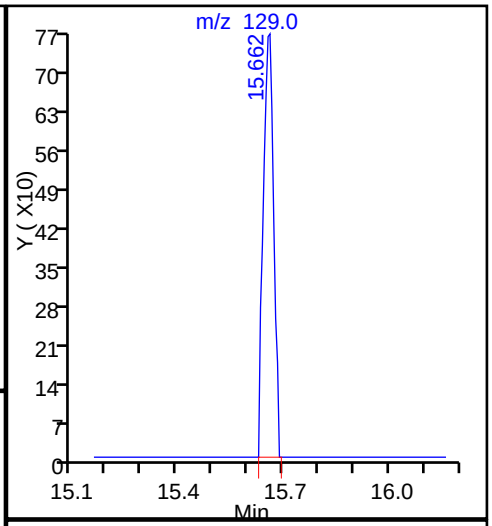


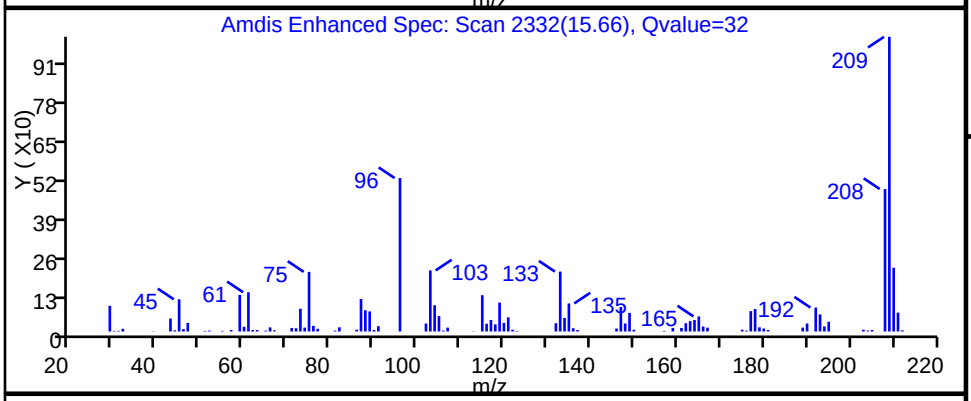


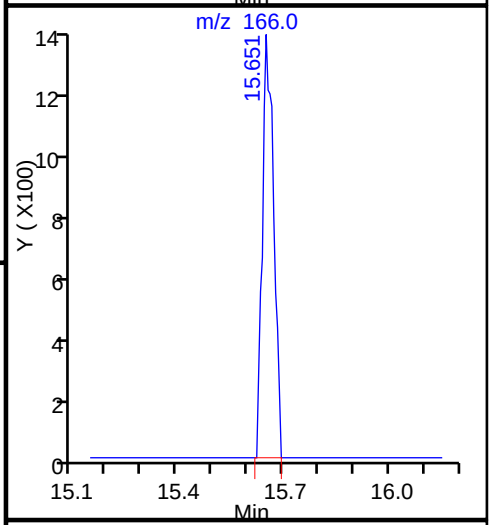
Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D
Injection Date: 28-Apr-2016 18:38:30 Instrument ID: MR
Lims ID: 140-4836-A-3 Lab Sample ID: 140-4836-3
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

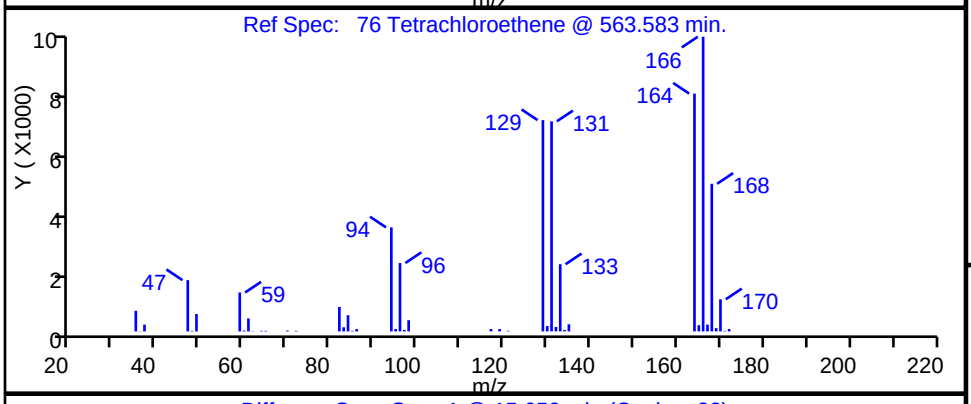
76 Tetrachloroethene, CAS: 127-18-4

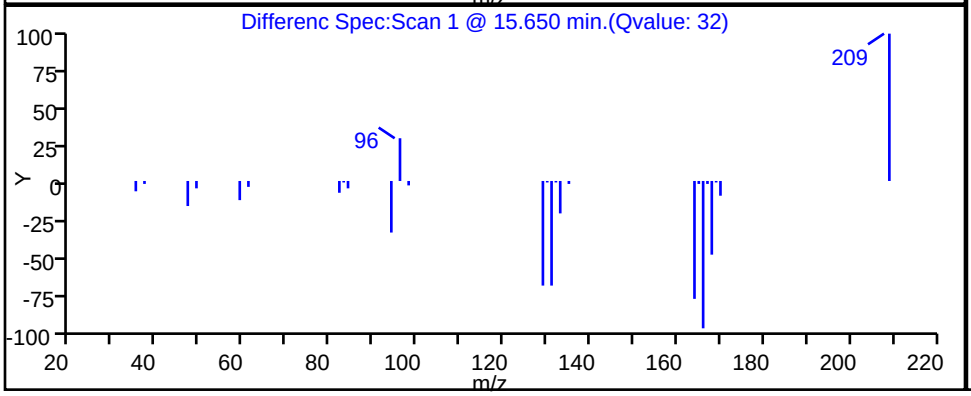


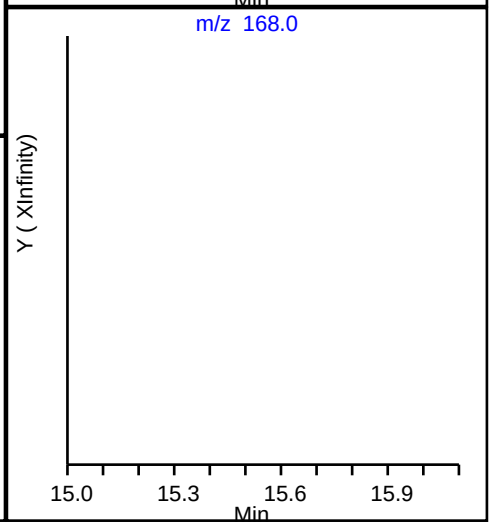












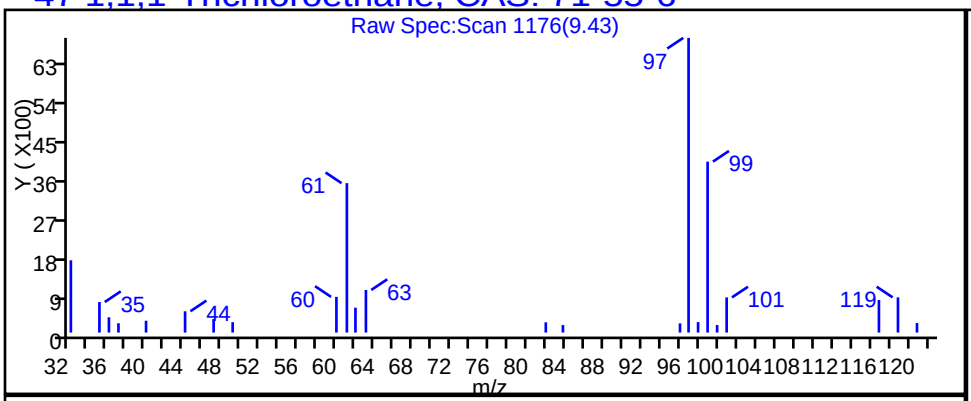
Report Date: 29-Apr-2016 10:00:30 Chrom Revision: 2.2 20-Apr-2016 13:59:46

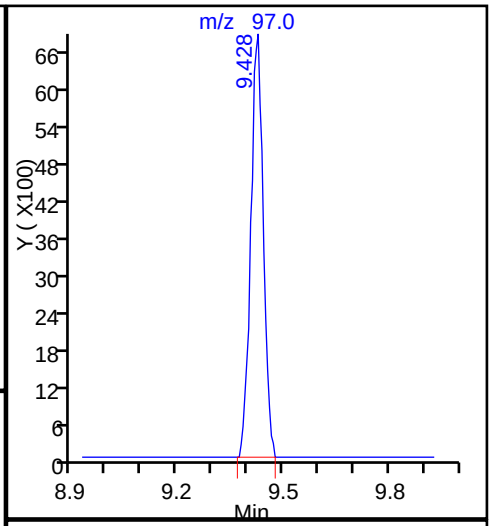
TestAmerica Knoxville

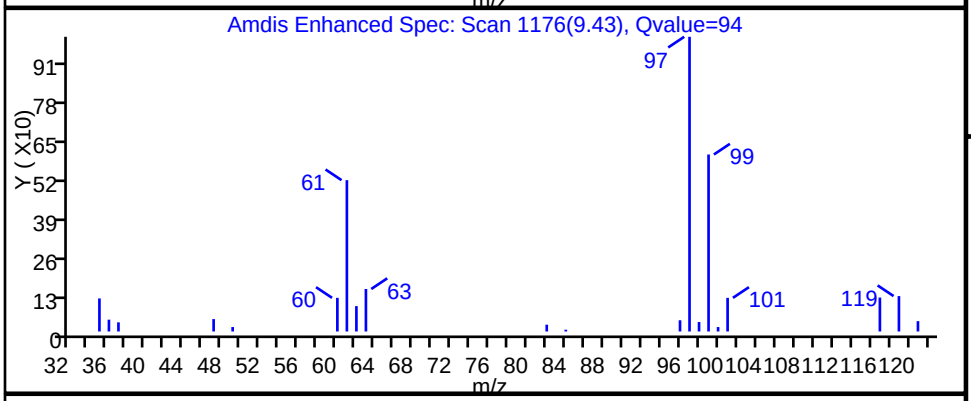
Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D

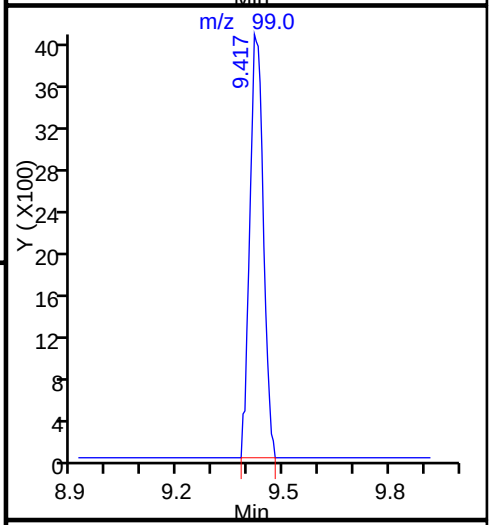
Injection Date:	28-Apr-2016 18:38:30	Instrument ID:	MR
Lims ID:	140-4836-A-3	Lab Sample ID:	140-4836-3
Client ID:	A-EFFLUENT		
Operator ID:		ALS Bottle#:	3 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

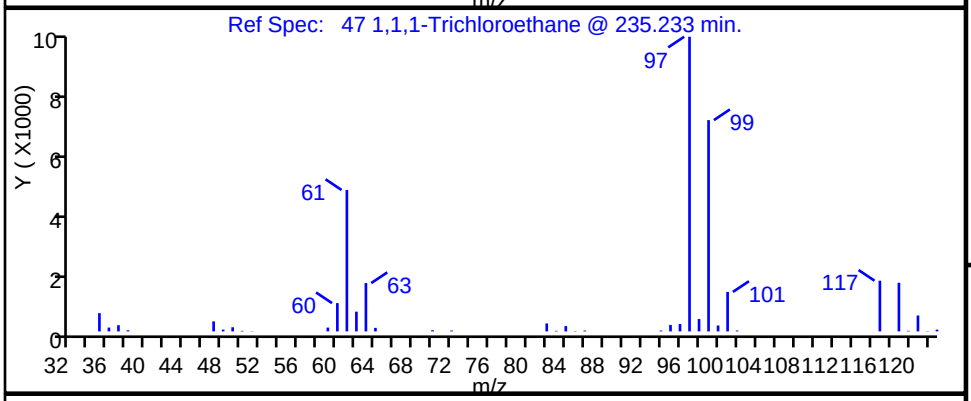
47 1,1,1-Trichloroethane, CAS: 71-55-6

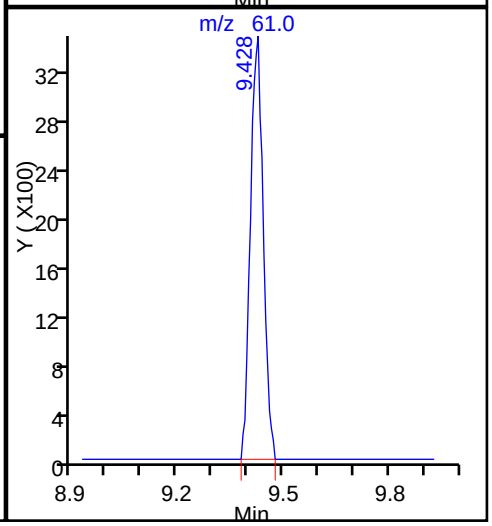


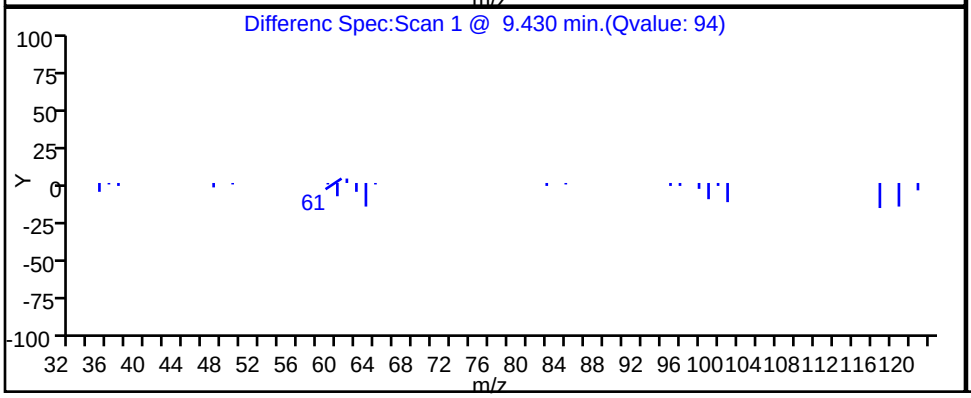








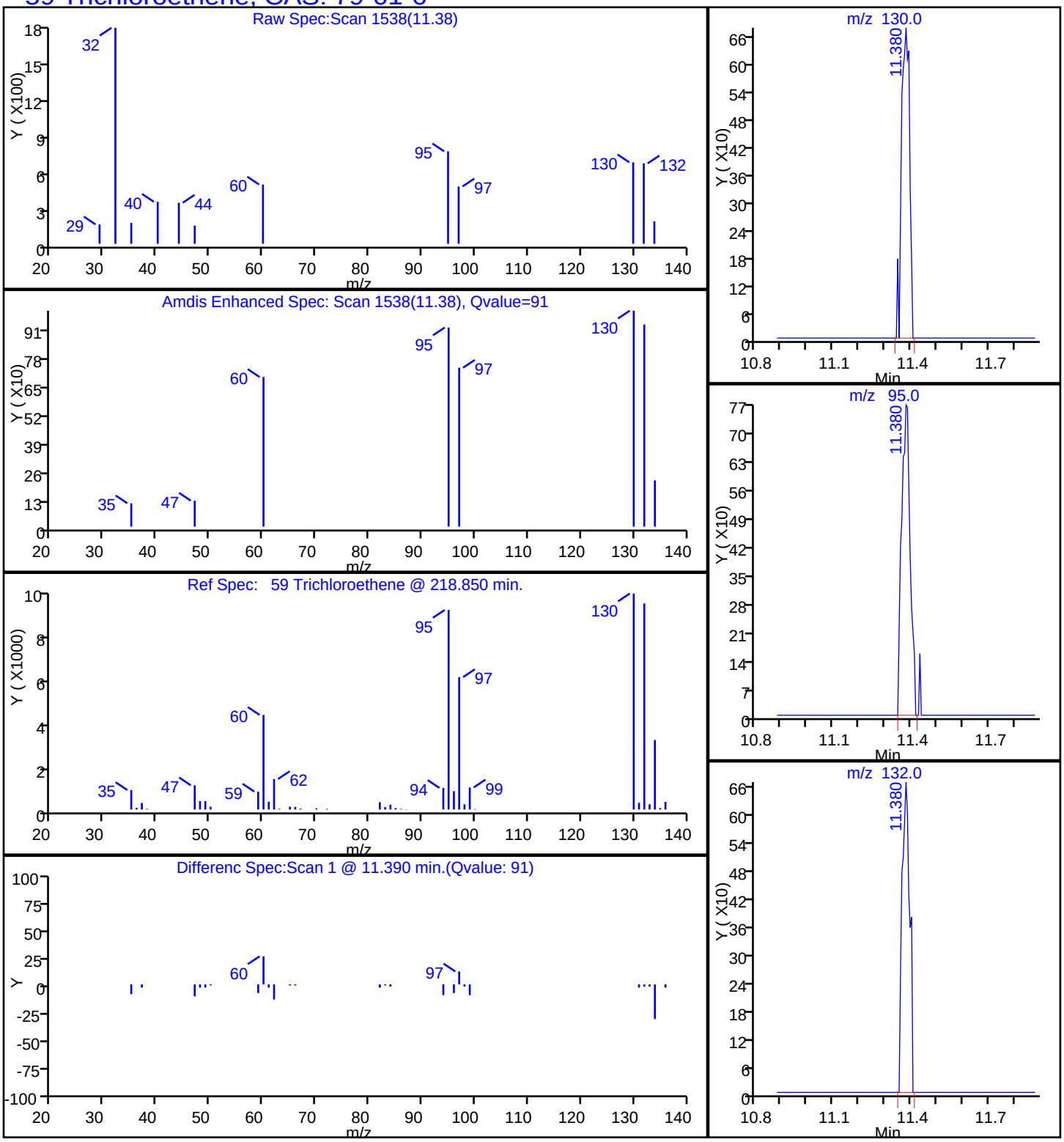




TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RD28P103.D
Injection Date: 28-Apr-2016 18:38:30 Instrument ID: MR
Lims ID: 140-4836-A-3 Lab Sample ID: 140-4836-3
Client ID: A-EFFLUENT
Operator ID: ALS Bottle#: 3 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

59 Trichloroethene, CAS: 79-01-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-3621/2	RJ29IC01.D
Level 2	IC 140-3621/3	RJ29IC02.D
Level 3	IC 140-3621/4	RJ29IC03.D
Level 4	IC 140-3621/5	RJ29IC04.D
Level 5	IC 140-3621/6	RJ29IC05.D
Level 6	ICIS 140-3621/7	RJ29ICIS06.D
Level 7	IC 140-3621/8	RJ29IC07.D
Level 8	IC 140-3621/9	RJ29IC08.D
Level 9	IC 140-3621/10	RJ29IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Propene	+++++ 1.1943	+++++ 1.0932	2.1003 0.9972	1.5543 +++++	1.3495	Ave		1.3815				29.2		30.0			
Chlorodifluoromethane	0.4031 0.3381	0.4052 0.3175	0.3723 0.2996	0.3571 0.2647	0.3637	Ave		0.3468				13.5		30.0			
Dichlorodifluoromethane	+++++ 2.8321	3.3201 2.7901	3.7462 2.6298	3.1733 2.4628	3.5041	Ave		3.0573				14.7		30.0			
Chloromethane	+++++ 0.4515	+++++ 0.4186	0.5504 0.3905	0.4948 0.3403	0.4858	Ave		0.4474				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.9120 2.8287	2.9379 2.6523	2.8208 2.5560	2.7396 2.3179	2.9344	Ave		2.7444				7.5		30.0			
Acetaldehyde	+++++ 0.7362	+++++ 0.5717	+++++ +++++	1.1675 +++++	0.8522	Ave		0.8319				30.2	*	30.0			
Vinyl chloride	1.6810 1.4558	1.6687 1.3449	1.5943 1.2563	1.5350 1.1136	1.6456	Ave		1.4772				13.6		30.0			
1,3-Butadiene	+++++ 1.1740	1.3144 1.0722	1.3072 1.0196	1.2173 0.9152	1.3087	Ave		1.1661				12.9		30.0			
Butane	+++++ 1.9986	+++++ 1.8195	2.3128 1.6842	2.2153 1.4724	2.3130	Ave		1.9737				16.7		30.0			
Bromomethane	+++++ 1.3914	1.7367 1.2804	1.5171 1.2490	1.4727 1.1460	1.5307	Ave		1.4155				13.3		30.0			
Chloroethane	+++++ 0.7194	0.8921 0.6685	0.8013 0.6488	0.7674 0.6015	0.8188	Ave		0.7397				13.2		30.0			
Ethanol	+++++ 0.3851	+++++ 0.3363	0.5233 0.3041	0.4839 0.2590	0.4546	Ave		0.3923				25.1		30.0			
Vinyl bromide	1.4813 1.3753	1.4858 1.2910	1.4030 1.2735	1.3838 1.2166	1.4813	Ave		1.3768				7.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.5804	+++++ 1.4725	1.7301 1.4604	1.6326 1.3280	1.6797	Ave		1.5548				9.1		30.0			
Acrolein	+++++ 0.5517	+++++ 0.5297	0.4552 0.5130	0.4235 0.4730	0.5813	Ave		0.5039				11.1		30.0			
Trichlorofluoromethane	3.8568 3.4728	3.7263 3.3742	3.6422 3.3439	3.5126 3.1098	3.7264	Ave		3.5294				6.6		30.0			
Acetonitrile	+++++ 0.6013	+++++ 0.5648	+++++ 0.5413	0.6859 0.4966	0.6531	Ave		0.5905				12.0		30.0			
Acetone	+++++ 0.9653	+++++ 0.7936	+++++ 0.6814	1.5069 0.6218	1.0294	Ave		0.9331				34.5	*	30.0			
Pentane	+++++ 0.2694	0.2761 0.2618	0.2753 0.2603	0.2737 0.2438	0.2885	Ave		0.2686				5.0		30.0			
Isopropyl alcohol	+++++ 1.9805	2.1183 1.8753	2.0751 1.7948	2.0391 1.5630	2.0918	Ave		1.9422				9.8		30.0			
Ethyl ether	+++++ 1.3598	+++++ 1.2853	1.4470 1.2371	1.4329 1.1011	1.4804	Ave		1.3348				10.2		30.0			
1,1-Dichloroethene	1.5222 1.3640	1.4729 1.3353	1.3978 1.3420	1.3641 1.2885	1.4410	Ave		1.3920				5.3		30.0			
Acrylonitrile	1.1062 1.0584	1.1288 1.0291	1.0867 1.0385	1.0417 0.9873	1.1046	Ave		1.0646				4.3		30.0			
tert-Butyl alcohol	2.7378 2.5788	2.7440 2.5194	2.6057 2.4858	2.5536 2.3195	2.6999	Ave		2.5827				5.3		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	3.1516 2.9590	3.1042 2.9023	3.0721 2.9045	2.9660 2.7288	3.1030	Ave		2.9879				4.5		30.0			
Methylene Chloride	+++++ 1.2754	+++++ 1.2272	1.7623 1.1961	1.4553 1.1290	1.3878	Ave		1.3476				15.9		30.0			
3-Chloropropene	+++++ 1.1393	1.6869 1.0789	1.3121 1.0344	1.2119 0.9046	1.2149	Ave		1.1979				19.5		30.0			
Carbon disulfide	4.2867 3.9057	4.2861 3.8195	4.0695 3.8044	3.9875 3.5966	4.1714	Ave		3.9919				5.9		30.0			
trans-1,2-Dichloroethene	1.5832 1.4297	1.5104 1.3896	1.4643 1.4012	1.4167 1.3399	1.5075	Ave		1.4492				5.2		30.0			
2-Methylpentane	+++++ 2.8429	3.0961 2.7352	3.0068 2.6326	2.9012 2.3970	3.0124	Ave		2.8280				8.2		30.0			
Methyl tert-butyl ether	3.9015 3.6537	3.7790 3.5833	3.6513 3.5632	3.5940 3.3577	3.8420	Ave		3.6584				4.5		30.0			
1,1-Dichloroethane	2.7755 2.5564	2.7282 2.4845	2.6794 2.4620	2.5959 2.3104	2.7366	Ave		2.5921				5.9		30.0			
Vinyl acetate	3.7056 3.7777	3.6479 3.7019	3.5205 3.6757	3.4969 3.4008	3.8463	Ave		3.6415				3.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	0.8084 0.7840	0.8596 0.7212	1.0144 0.6770	1.0123 0.6426	0.8106	Ave		0.8144				16.2		30.0			
Hexane	+++++ 1.1487	1.2590 1.1299	1.1904 1.1238	1.1536 1.0504	1.2014	Ave		1.1572				5.3		30.0			
C6 Range	+++++ 1.8390	+++++ 1.7975	+++++ 1.7835	1.9377 1.6454	1.9967	Ave		1.8333				6.8		30.0			
Isopropyl ether	5.3180 4.9070	5.1843 4.7640	5.0675 4.6421	4.9881 4.1667	5.1783	Ave		4.9129				7.2		30.0			
cis-1,2-Dichloroethene	1.5671 1.4703	1.5680 1.4488	1.5139 1.4569	1.4801 1.3905	1.5569	Ave		1.4947				4.1		30.0			
Ethyl acetate	+++++ 3.1406	3.2296 3.0553	3.2587 3.0012	3.0939 2.7514	3.2866	Ave		3.1022				5.6		30.0			
Chloroform	3.1827 2.9083	3.1492 2.8184	2.9994 2.7531	2.9471 2.5704	3.0641	Ave		2.9325				6.7		30.0			
Tert-butyl ethyl ether	4.2930 4.2782	4.3134 4.2198	4.2038 4.1452	4.1511 3.8468	4.4336	Ave		4.2094				3.9		30.0			
Tetrahydrofuran	+++++ 1.5513	+++++ 1.5015	1.6182 1.4780	1.5622 1.3764	1.6457	Ave		1.5333				5.9		30.0			
1,1,1-Trichloroethane	+++++ 2.8838	2.8868 2.8063	2.8235 2.7974	2.8024 2.6272	2.9563	Ave		2.8230				3.4		30.0			
1,2-Dichloroethane	0.3828 0.3735	0.3891 0.3635	0.3820 0.3581	0.3769 0.3379	0.3987	Ave		0.3736				4.9		30.0			
1-Butanol	+++++ 0.0951	+++++ 0.0948	+++++ 0.0921	0.1030 0.0831	0.0958	Ave		0.0940				6.9		30.0			
Benzene	+++++ 0.8271	0.9614 0.8238	0.8642 0.8185	0.8518 0.7643	0.8795	Ave		0.8488				6.8		30.0			
Cyclohexane	0.1322 0.1284	0.1307 0.1292	0.1247 0.1263	0.1291 0.1176	0.1351	Ave		0.1281				3.9		30.0			
Carbon tetrachloride	0.5759 0.5120	0.5620 0.6130	0.4691 0.5841	0.4790 0.5998	0.5275	Ave		0.5469				9.6		30.0			
2,3-Dimethylpentane	0.1920 0.1892	0.1954 0.1872	0.1854 0.1869	0.1843 0.1802	0.2002	Ave		0.1890				3.2		30.0			
Thiophene	0.4668 0.4678	0.4815 0.4636	0.4629 0.4678	0.4639 0.4516	0.4954	Ave		0.4690				2.7		30.0			
Tert-amyl methyl ether	+++++ 0.7842	0.7372 0.7698	0.7974 0.7695	0.8389 0.7363	0.8304	Ave		0.7829				4.9		30.0			
2,2,4-Trimethylpentane	1.4927 1.4165	1.4490 1.4024	1.4025 1.3971	1.3962 1.2994	1.4856	Ave		1.4157				4.1		30.0			
Heptane	0.3008 0.3010	0.2923 0.3007	0.2843 0.2991	0.2929 0.2825	0.3140	Ave		0.2964				3.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.3498 0.3319	0.3348 0.3297	0.3301 0.3260	0.3302 0.3040	0.3480	Ave		0.3316				4.0		30.0			
Trichloroethene	0.4004 0.3972	0.3966 0.4006	0.3869 0.4085	0.3958 0.4051	0.4101	Ave		0.4001				1.8		30.0			
Dibromomethane	+++++ 0.3394	0.3782 0.3353	0.3388 0.3351	0.3316 0.3207	0.3509	Ave		0.3413				5.0		30.0			
Bromodichloromethane	0.5615 0.5910	0.5566 0.5929	0.5458 0.5900	0.5529 0.5622	0.6074	Ave		0.5734				3.8		30.0			
1,4-Dioxane	0.1414 0.1314	0.1311 0.1310	0.1220 0.1297	0.1239 0.1236	0.1347	Ave		0.1299				4.7		30.0			
Methyl methacrylate	+++++ 0.3658	0.3574 0.3653	0.3366 0.3583	0.3474 0.3315	0.3728	Ave		0.3544				4.1		30.0			
Methylcyclohexane	0.6225 0.6136	0.6064 0.6143	0.5987 0.6153	0.6019 0.5921	0.6390	Ave		0.6115				2.3		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.7326	+++++ 0.6922	1.2268 0.6622	0.9195 0.6091	0.8130	Ave		0.8079				26.1		30.0			
cis-1,3-Dichloropropene	0.4624 0.4902	0.4548 0.4907	0.4447 0.4978	0.4612 0.4750	0.5058	Ave		0.4758				4.5		30.0			
trans-1,3-Dichloropropene	0.4492 0.4808	0.4424 0.4805	0.4242 0.4829	0.4435 0.4659	0.4858	Ave		0.4617				4.9		30.0			
Toluene Range	+++++ 2.4309	+++++ 2.4075	+++++ +++++	+++++ +++++	2.5663	Ave		2.4682				3.5		30.0			
Toluene	+++++ 1.0900	1.1498 1.0851	1.0755 1.0686	1.0620 1.0261	1.1274	Ave		1.0856				3.5		30.0			
1,1,2-Trichloroethane	0.3348 0.3200	0.3334 0.3154	0.3168 0.3108	0.3205 0.2984	0.3293	Ave		0.3200				3.6		30.0			
2-Methylthiophene	0.8829 0.8994	0.8741 0.8944	0.8582 0.8931	0.8599 0.8603	0.9243	Ave		0.8830				2.5		30.0			
3-Methylthiophene	0.8699 0.8867	0.8726 0.8871	0.8331 0.8850	0.8488 0.8528	0.9135	Ave		0.8722				2.8		30.0			
2-Hexanone	+++++ 0.3894	+++++ 0.3953	0.3569 0.3932	0.3792 0.3745	0.3885	Ave		0.3824				3.5		30.0			
Dibromochloromethane	+++++ 0.6753	0.5114 0.7089	0.5261 0.7183	0.5694 0.7037	0.6590	Ave		0.6340				13.4		30.0			
Octane	+++++ 0.3749	0.3601 0.3704	0.3360 0.3658	0.3541 0.3453	0.3763	Ave		0.3604				4.0		30.0			
C8 Range	+++++ 5.0502	+++++ 5.0470	+++++ +++++	+++++ +++++	5.2063	Ave		5.1012				1.8		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.6124	0.5766 0.6156	0.5549 0.6159	0.5714 0.5968	0.6167	Ave		0.5950				4.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Tetrachloroethene	0.3971 0.3995	0.3928 0.4002	0.3851 0.4033	0.3843 0.3920	0.4088	Ave		0.3959				2.1		30.0			
Chlorobenzene	0.9393 0.8677	0.9128 0.8698	0.8677 0.8865	0.8606 0.8618	0.9084	Ave		0.8860				3.1		30.0			
2,3-Dimethylheptane	+++++ 0.9253	0.9785 0.9113	0.9431 0.8829	0.9331 0.7873	0.9644	Ave		0.9157				6.5		30.0			
Ethylbenzene	1.5124 1.4048	1.4482 1.4107	1.3721 1.4202	1.3726 1.3474	1.4661	Ave		1.4172				3.7		30.0			
2-Ethylthiophene	+++++ 1.0542	1.0224 1.0612	0.9779 1.0778	1.0058 1.0424	1.0868	Ave		1.0411				3.6		30.0			
m-Xylene & p-Xylene	1.1245 1.0955	1.1094 1.1095	1.0386 1.1046	1.0655 1.0209	1.1403	Ave		1.0899				3.7		30.0			
Bromoform	+++++ 0.6400	0.3628 0.7240	0.4080 0.7656	0.4505 0.7824	0.6029	Ave		0.5920				28.0		30.0			
Styrene	+++++ 0.8391	0.6948 0.8637	0.6625 0.8905	0.7392 0.8772	0.8414	Ave		0.8010				11.1		30.0			
Nonane	0.7208 0.7483	0.7068 0.7515	0.7075 0.7219	0.7361 0.6316	0.7707	Ave		0.7217				5.5		30.0			
o-Xylene	1.1532 1.1450	1.1382 1.1514	1.0821 1.1365	1.1188 1.0525	1.1900	Ave		1.1297				3.6		30.0			
1,1,2,2-Tetrachloroethane	0.8259 0.8267	0.8297 0.8241	0.7562 0.8296	0.7761 0.7913	0.8492	Ave		0.8121				3.7		30.0			
1,2,3-Trichloropropane	+++++ 0.2474	+++++ 0.2484	0.2362 0.2521	0.2385 0.2456	0.2585	Ave		0.2467				3.1		30.0			
Isopropylbenzene	+++++ 1.6328	+++++ 1.6324	1.5839 1.6190	1.5672 1.5234	1.6766	Ave		1.6050				3.2		30.0			
Propylbenzene	+++++ 0.4672	0.4292 0.4827	0.4170 0.4952	0.4375 0.4783	0.4736	Ave		0.4601				6.2		30.0			
2-Chlorotoluene	0.4100 0.4185	0.4087 0.4296	0.3903 0.4380	0.4018 0.4207	0.4312	Ave		0.4165				3.7		30.0			
4-Ethyltoluene	+++++ 1.6101	1.5474 1.6429	1.4566 1.6620	1.5315 1.5921	1.6526	Ave		1.5869				4.5		30.0			
1,3,5-Trimethylbenzene	0.7187 0.7777	0.7113 0.7970	0.6955 0.8244	0.7275 0.8058	0.7906	Ave		0.7610				6.3		30.0			
Alpha Methyl Styrene	+++++ 0.6579	+++++ 0.7024	0.4692 0.7580	0.5596 0.7584	0.6326	Ave		0.6483				16.3		30.0			
Decane	+++++ 0.9516	+++++ 0.9628	+++++ 0.9433	0.9086 0.8616	0.9639	Ave		0.9320				4.3		30.0			
tert-Butylbenzene	1.4055 1.4834	1.3862 1.5168	1.3321 1.5455	1.3958 1.4825	1.5085	Ave		1.4507				5.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,2,4-Trimethylbenzene	1.2839 1.3828	1.3201 1.4095	1.2415 1.4188	1.3158 1.3450	1.4011	Ave		1.3465				4.6		30.0			
1,3-Dichlorobenzene	0.9595 0.9791	0.9581 0.9978	0.8819 1.0255	0.9184 1.0237	0.9763	Ave		0.9689				4.8		30.0			
sec-Butylbenzene	1.8610 2.0133	1.9102 2.0376	1.8456 2.0400	1.9205 1.9259	2.0431	Ave		1.9552				4.0		30.0			
Benzyl chloride	+++++ 1.2770	+++++ 1.3199	1.0354 1.3225	1.1309 1.2254	1.2503	Ave		1.2231				8.6		30.0			
1,4-Dichlorobenzene	1.0034 1.0108	0.9995 1.0377	0.9021 1.0595	0.9396 1.0367	1.0092	Ave		0.9998				5.0		30.0			
4-Isopropyltoluene	+++++ 1.8150	1.6520 1.8610	1.5813 1.8766	1.6914 1.8013	1.8050	Ave		1.7605				6.0		30.0			
1,2,3-Trimethylbenzene	1.0626 1.1049	1.0737 1.1152	1.0216 1.1178	1.0629 1.0924	1.1205	Ave		1.0857				3.1		30.0			
Butylcyclohexane	+++++ 1.0670	1.0218 1.0697	0.9793 1.0536	1.0397 0.9991	1.0732	Ave		1.0379				3.4		30.0			
1,2-Dichlorobenzene	0.9738 0.9580	0.9459 0.9816	0.8646 0.9993	0.9117 0.9851	0.9554	Ave		0.9528				4.4		30.0			
Indane	1.2739 1.3483	1.2717 1.3850	1.2079 1.4008	1.2806 1.3384	1.3482	Ave		1.3172				4.7		30.0			
Indene	0.8884 0.9624	0.9075 1.0226	0.8242 1.0669	0.9346 1.0700	0.9299	Ave		0.9563				8.7		30.0			
Butylbenzene	1.5687 1.7017	1.6043 1.6927	1.5380 1.6389	1.6477 1.5387	1.7078	Ave		1.6265				4.2		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.3413	1.2020 1.3742	1.1415 1.3660	1.2786 1.3600	1.2858	Ave		1.2937				6.5		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.4642	0.2975 0.5025	0.2979 0.5032	0.3571 0.5178	0.4232	Ave		0.4204				21.9		30.0			
Undecane	+++++ 1.1449	+++++ 1.1531	+++++ 1.0437	1.0819 0.9185	1.0961	Ave		1.0730				8.0		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.5415	1.4441 1.5827	1.3383 1.5453	1.4793 1.5214	1.4444	Ave		1.4871				5.2		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.9309	0.9025 0.9465	0.8151 0.9215	0.9066 0.9347	0.8658	Ave		0.9029				4.8		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 1.2721	1.2768 1.3119	1.1198 1.2621	1.2503 1.2700	1.1457	Ave		1.2386				5.5		30.0			
Dodecane	+++++ 1.0804	+++++ 1.1477	+++++ 0.9888	1.0511 0.9094	0.8525	Ave		1.0050				11.0		30.0			
1,2,4-Trichlorobenzene	0.8403 0.9230	0.9017 0.9750	0.7190 0.9388	0.8283 0.9457	0.7593	Ave		0.8701				10.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Naphthalene	2.3324 2.0463	2.5317 2.1120	1.7261 1.9763	1.9936 1.9355	1.6842	Ave		2.0375				13.2		30.0			
Benzo(b)thiophene	+++++ 1.2397	+++++ 1.2840	1.1013 1.2172	1.3036 1.2405	0.9576	Ave		1.1920				10.2		30.0			
Hexachlorobutadiene	0.5517 0.7334	0.5845 0.7978	0.5529 0.7579	0.6243 0.7629	0.5970	Ave		0.6625				15.0		30.0			
1,2,3-Trichlorobenzene	0.8737 0.8823	0.9509 0.9564	0.6710 0.8969	0.7762 0.8456	0.6454	Ave		0.8332				13.6		30.0			
2-Methylnaphthalene	+++++ 0.3082	+++++ 0.3771	0.2184 0.3543	0.2862 0.2213	0.1492	Ave		0.2735				29.8		50.0			
1-Methylnaphthalene	+++++ 0.2480	+++++ 0.2970	0.1846 0.2786	0.2352 0.1527	0.1149	Ave		0.2158				31.1		50.0			
4-Bromofluorobenzene (Surr)	0.7286 0.7553	0.7264 0.7584	0.7267 0.7475	0.7348 0.7281	0.7429	Ave		0.7387				1.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-3621/2	RJ29IC01.D
Level 2	IC 140-3621/3	RJ29IC02.D
Level 3	IC 140-3621/4	RJ29IC03.D
Level 4	IC 140-3621/5	RJ29IC04.D
Level 5	IC 140-3621/6	RJ29IC05.D
Level 6	ICIS 140-3621/7	RJ29ICIS06.D
Level 7	IC 140-3621/8	RJ29IC07.D
Level 8	IC 140-3621/9	RJ29IC08.D
Level 9	IC 140-3621/10	RJ29IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Propene	CBM	Ave	+++++ 228078	+++++ 454322	26500 907376	50053 +++++	115607	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 +++++	0.999
Chlorodifluoromethane	CBM	Ave	1282 64578	2539 131965	4698 272574	11500 540426	31155	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Dichlorodifluoromethane	CBM	Ave	+++++ 540865	20804 1159472	47268 2392864	102193 5027990	300186	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chloromethane	CBM	Ave	+++++ 86227	+++++ 173952	6945 355318	15934 694820	41615	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	9261 540208	18409 1102238	35592 2325713	88226 4732267	251378	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Acetaldehyde	CBM	Ave	+++++ 703006	+++++ 1187986	+++++ +++++	187996 +++++	365011	+++++ 9.99	+++++ 20.0	+++++ +++++	2.00 +++++	4.99
Vinyl chloride	CBM	Ave	5346 278017	10456 558900	20116 1143088	49431 2273528	140975	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,3-Butadiene	CBM	Ave	+++++ 224206	8236 445565	16494 927708	39201 1868473	112114	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Butane	CBM	Ave	+++++ 381680	+++++ 756149	29182 1532407	71340 3006124	198146	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Bromomethane	CBM	Ave	+++++ 265717	10882 532103	19142 1136498	47427 2339668	131128	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chloroethane	CBM	Ave	+++++ 137380	5590 277829	10111 590343	24713 1227936	70143	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Ethanol	CBM	Ave	+++++ 367698	+++++ 698718	33014 1383312	77917 2644048	194719	+++++ 9.99	+++++ 20.0	0.800 40.0	2.00 80.0	4.99
Vinyl bromide	CBM	Ave	4711 262658	9310 536525	17702 1158727	44562 2483740	126897	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylbutane	CBM	Ave	+++++ 301828	+++++ 611926	21830 1328810	52575 2711263	143893	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	Ave	+++++ 105359	+++++ 220136	5744 466743	13639 965739	49802	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Trichlorofluoromethane	CBM	Ave	12266 663218	23349 1402228	45955 3042568	113117 6348924	319225	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Acetonitrile	CBM	Ave	+++++ 114829	+++++ 234702	+++++ 492512	22087 1013753	55951	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Acetone	CBM	Ave	+++++ 553085	+++++ 989477	+++++ 1860214	145591 3808835	264563	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 51444	1730 108809	3474 236807	8813 497795	24712	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Isopropyl alcohol	CBM	Ave	+++++ 1134762	39822 2338119	78554 4899594	197014 9573808	537637	+++++ 5.99	0.235 12.0	0.480 24.0	1.20 48.0	3.00
Ethyl ether	CBM	Ave	+++++ 259696	+++++ 534142	18257 1125617	46144 2248035	126823	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,1-Dichloroethene	CBM	Ave	4841 260494	9229 554923	17637 1221079	43929 2630603	123447	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Acrylonitrile	CBM	Ave	3518 202126	7073 427655	13712 944908	33547 2015627	94631	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
tert-Butyl alcohol	CBM	Ave	8707 492493	17194 1047012	32878 2261803	82234 4735364	231292	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	10023 565102	19451 1206128	38762 2642823	95517 5571061	265820	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methylene Chloride	CBM	Ave	+++++ 243572	+++++ 509999	22236 1088367	46866 2304869	118891	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
3-Chloropropene	CBM	Ave	+++++ 217571	10570 448349	16556 941169	39027 1846882	104079	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Carbon disulfide	CBM	Ave	13633 745897	26857 1587301	51347 3461632	128411 7342693	357351	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
trans-1,2-Dichloroethene	CBM	Ave	5035 273041	9464 577470	18476 1274909	45624 2735476	129139	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylpentane	CBM	Ave	+++++ 542930	19400 1136674	37939 2395365	93428 4893654	258059	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methyl tert-butyl ether	CBM	Ave	12408 697771	23679 1489106	46070 3242166	115741 6855095	329127	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1-Dichloroethane	CBM	Ave	8827 488209	17095 1032486	33808 2240128	83597 4716818	234434	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Vinyl acetate	CBM	Ave	11785 721457	22858 1538426	44420 3344517	112614 6942989	329497	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Butanone (MEK)	CBM	Ave	2571 149730	5386 299693	12799 615977	32601 1311844	69440	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Hexane	CBM	Ave	+++++ 219369	7889 469565	15020 1022501	37151 2144501	102921	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
C6 Range	DFB	Ave	+++++ 1784009	+++++ 3758827	+++++ 8057924	317170 16395428	859008	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Isopropyl ether	CBM	Ave	16913 937118	32485 1979800	63939 4223787	160636 8506719	443603	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
cis-1,2-Dichloroethene	CBM	Ave	4984 280799	9825 602078	19102 1325594	47664 2838815	133371	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Ethyl acetate	CBM	Ave	+++++ 599775	20237 1269702	41117 2730736	99634 5617273	281552	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chloroform	CBM	Ave	10122 555413	19733 1171239	37845 2505006	94906 5247650	262490	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tert-butyl ethyl ether	CBM	Ave	13653 817040	27028 1753657	53042 3771671	133681 7853517	379812	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tetrahydrofuran	CBM	Ave	+++++ 296262	+++++ 624002	20418 1344781	50309 2810050	140980	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,1,1-Trichloroethane	CBM	Ave	+++++ 550734	18089 1166223	35625 2545336	90247 5363645	253256	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichloroethane	DFB	Ave	6208 362286	12438 760151	24866 1617907	61692 3367163	171547	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1-Butanol	DFB	Ave	+++++ 92235	+++++ 198227	+++++ 415934	16858 828029	41205	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
Benzene	DFB	Ave	+++++ 802365	30730 1722684	56249 3697831	139431 7615521	378365	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Cyclohexane	DFB	Ave	2144 124517	4177 270165	8115 570677	21134 1171679	58112	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Carbon tetrachloride	DFB	Ave	9340 496662	17965 1281986	30532 2638814	78407 5976711	226936	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2,3-Dimethylpentane	DFB	Ave	3114 183567	6246 391395	12067 844188	30174 1795323	86149	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Thiophene	DFB	Ave	7571 453857	15392 969518	30129 2113673	75936 4499652	213138	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tert-amyl methyl ether	DFB	Ave	+++++ 760733	23564 1609788	51899 3476380	137313 7336251	357259	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2,2,4-Trimethylpentane	DFB	Ave	24211 1374170	46317 2932690	91291 6312213	228529 12947237	639131	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Heptane	DFB	Ave	4879 292044	9342 628890	18503 1351309	47947 2814638	135077	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichloropropane	DFB	Ave	5674 321938	10703 689377	21488 1473064	54043 3028775	149722	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Trichloroethene	DFB	Ave	6494 385332	12677 837826	25186 1845788	64777 4036727	176433	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Dibromomethane	DFB	Ave	+++++ 329232	12089 701252	22054 1514037	54275 3195717	150967	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Bromodichloromethane	DFB	Ave	9107 573340	17791 1239764	35529 2665437	90502 5602203	261330	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,4-Dioxane	DFB	Ave	2294 127486	4191 273976	7938 586133	20281 1231880	57942	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methyl methacrylate	DFB	Ave	+++++ 354887	11424 763818	21910 1618663	56861 3303219	160388	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Methylcyclohexane	DFB	Ave	10096 595284	19382 1284697	38968 2779758	98524 5899945	274918	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
4-Methyl-2-pentanone (MIBK)	DFB	Ave	+++++ 710656	+++++ 1447462	79853 2991645	150500 6069313	349766	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
cis-1,3-Dichloropropene	DFB	Ave	7500 475494	14538 1026102	28948 2248978	75486 4732844	217599	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
trans-1,3-Dichloropropene	CBZ	Ave	6675 433670	13034 939379	25591 2065343	67814 4383688	197119	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Toluene Range	DFB	Ave	+++++ 2358213	+++++ 5034457	+++++ +++++	+++++ +++++	1104100	+++++ 2.00	+++++ 4.00	+++++ +++++	+++++ +++++	0.999
Toluene	CBZ	Ave	+++++ 983177	33877 2121413	64875 4570212	162397 9654968	457420	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1,2-Trichloroethane	CBZ	Ave	4976 288635	9824 616596	19112 1329359	49013 2808159	133607	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylthiophene	CBZ	Ave	13121 811250	25754 1748453	51768 3819634	131497 8094755	375013	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
3-Methylthiophene	CBZ	Ave	12928 799773	25709 1734194	50253 3785045	129795 8024092	370606	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Hexanone	CBZ	Ave	+++++ 351277	+++++ 772835	21531 1681654	57979 3524101	157606	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Dibromochloromethane	CBZ	Ave	+++++ 609154	15067 1385964	31734 3071816	87069 6621514	267388	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Octane	CBZ	Ave	+++++ 338144	10609 724178	20268 1564530	54155 3249197	152689	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
C8 Range	DFB	Ave	+++++ 4899211	+++++ 10554153	+++++ +++++	+++++ +++++	2239894	+++++ 2.00	+++++ 4.00	+++++ +++++	+++++ +++++	0.999
1,2-Dibromoethane (EDB)	CBZ	Ave	+++++ 552400	16990 1203466	33474 2633951	87383 5615191	250202	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Tetrachloroethene	CBZ	Ave	5901 360384	11573 782310	23230 1724895	58771 3688597	165846	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Chlorobenzene	CBZ	Ave	13959 782617	26893 1700375	52338 3791193	131595 8108986	368572	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2,3-Dimethylheptane	CBZ	Ave	+++++ 834570	28831 1781528	56891 3775786	142689 7408213	391276	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Ethylbenzene	CBZ	Ave	22476 1267112	42670 2757851	82766 6073848	209893 12678164	594816	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
2-Ethylthiophene	CBZ	Ave	+++++ 950899	30122 2074575	58991 4609501	153800 9807914	440948	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
m-Xylene & p-Xylene	CBZ	Ave	33423 1976245	65372 4338191	125298 9448325	325857 19211149	925273	0.0784 3.99	0.157 8.00	0.320 16.0	0.800 32.0	2.00
Bromoform	CBZ	Ave	+++++ 577227	10689 1415345	24614 3274328	68888 7361637	244609	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Styrene	CBZ	Ave	+++++ 756830	20472 1688445	39965 3808385	113039 8253951	341358	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Nonane	CBZ	Ave	10711 674919	20824 1469256	42675 3087316	112566 5942521	312693	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
o-Xylene	CBZ	Ave	17137 1032792	33536 2250949	65272 4860434	171088 9903343	482802	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,1,2,2-Tetrachloroethane	CBZ	Ave	12274 745634	24445 1611027	45618 3547918	118678 7445066	344528	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3-Trichloropropane	CBZ	Ave	+++++ 223126	+++++ 485577	14247 1078212	36471 2311190	104894	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Isopropylbenzene	CBZ	Ave	+++++ 1472720	+++++ 3191338	95540 6924078	239652 14334362	680222	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Propylbenzene	CBZ	Ave	+++++ 421420	12646 943679	25153 2117797	66901 4500545	192151	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Chlorotoluene	CBZ	Ave	6093 377459	12042 839846	23541 1873215	61434 3958594	174955	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
4-Ethyltoluene	CBZ	Ave	+++++ 1452257	45593 3211936	87866 7108118	234195 14980816	670475	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,3,5-Trimethylbenzene	CBZ	Ave	10681 701459	20957 1558212	41951 3525676	111250 7582349	320773	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Alpha Methyl Styrene	CBZ	Ave	+++++ 593385	+++++ 1373255	28301 3241964	85565 7136341	256646	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Decane	CBZ	Ave	+++++ 858341	+++++ 1882295	+++++ 4034285	138933 8106520	391086	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
tert-Butylbenzene	CBZ	Ave	20887 1337992	40843 2965326	80357 6609661	213437 13949432	612021	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,4-Trimethylbenzene	CBZ	Ave	19080 1247281	38895 2755463	74888 6067725	201199 12655271	568468	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,3-Dichlorobenzene	CBZ	Ave	14259 883117	28229 1950664	53198 4385579	140434 9631974	396116	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
sec-Butylbenzene	CBZ	Ave	27656 1815931	56281 3983536	111330 8724571	293675 18121323	828918	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Benzyl chloride	CBZ	Ave	+++++ 1151872	+++++ 2580331	62456 5656118	172934 11530116	507273	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
1,4-Dichlorobenzene	CBZ	Ave	14912 911694	29450 2028767	54414 4531126	143679 9754192	409445	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Isopropyltoluene	CBZ	Ave	+++++ 1637122	48674 3638174	95385 8025529	258646 16948735	732338	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3-Trimethylbenzene	CBZ	Ave	15791 996580	31634 2180123	61626 4780460	162536 10278175	454623	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Butylcyclohexane	CBZ	Ave	+++++ 962444	30105 2091186	59075 4506164	158981 9400588	435406	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dichlorobenzene	CBZ	Ave	14472 864059	27869 1918912	52152 4273803	139420 9269460	387634	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Indane	CBZ	Ave	18931 1216111	37470 2707647	72864 5991009	195828 12593037	546977	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Indene	CBZ	Ave	13202 868075	26737 1999122	49715 4563045	142914 10067376	377268	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Butylbenzene	CBZ	Ave	23312 1534953	47268 3309124	92774 7009088	251957 14478085	692899	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dimethyl-4-Ethylbenzene	CBZ	Ave	+++++ 1209859	35416 2686511	68855 5841893	195517 12796605	521679	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2-Dibromo-3-Chloropropane	CBZ	Ave	+++++ 418662	8766 982347	17972 2152032	54604 4871923	171681	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Undecane	CBZ	Ave	+++++ 1032668	+++++ 2254200	+++++ 4463670	165440 8642784	444720	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
1,2,4,5-Tetramethylbenzene	CBZ	Ave	+++++ 1390405	42547 3094196	80726 6608938	226206 14315531	586026	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3,5-Tetramethylbenzene	CBZ	Ave	+++++ 839658	26590 1850400	49169 3940832	138635 8794750	351280	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3,4-Tetramethylbenzene	CBZ	Ave	+++++ 1147426	37618 2564680	67546 5397558	191192 11949321	464848	+++++ 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Dodecane	CBZ	Ave	+++++ 974504	+++++ 2243771	+++++ 4228844	160737 8556466	345871	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	0.999
1,2,4-Trichlorobenzene	CBZ	Ave	12487 832514	26566 1906085	43373 4015190	126661 8897824	308083	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Naphthalene	CBZ	Ave	34661 1845704	74592 4128915	104119 8451930	304848 18211095	683319	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
Benzo(b)thiophene	CBZ	Ave	+++++ 1118151	+++++ 2510290	66434 5205487	199335 11672515	388506	+++++ 2.00	+++++ 4.00	0.160 8.00	0.400 16.0	0.999
Hexachlorobutadiene	CBZ	Ave	8199 661538	17221 1559597	33353 3241421	95459 7178125	242214	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
1,2,3-Trichlorobenzene	CBZ	Ave	12984 795841	28016 1869754	40473 3835748	118695 7956596	261864	0.0392 2.00	0.0784 4.00	0.160 8.00	0.400 16.0	0.999
2-Methylnaphthalene	CBZ	Ave	+++++ 868802	+++++ 2303688	41161 4734820	136777 6507661	189201	+++++ 6.24	+++++ 12.5	0.500 25.0	1.25 50.0	3.12
1-Methylnaphthalene	CBZ	Ave	+++++ 699077	+++++ 1814582	34797 3723019	112376 4488346	145609	+++++ 6.24	+++++ 12.5	0.500 25.0	1.25 50.0	3.12

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1 Analy Batch No.: 3621

SDG No.:

Instrument ID: MR GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 10/29/2015 14:14 Calibration End Date: 10/29/2015 21:11 Calibration ID: 393

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
4-Bromofluorobenzene (Surr)	CBZ	Ave	1104870 1364359	1091970 1482255	1095591 1598369	1123330 1712632	1207289	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 29-Oct-2015 14:14:30 ALS Bottle#: 9 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-002
Misc. Info.: 031531
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:20 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 29-Oct-2015 15:00:56

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.420	8.431	-0.011	93	324522	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.609	10.619	-0.010	95	1655031	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1516417	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.587	19.590	-0.003	89	1104870	4.00	3.95	
6 Chlorodifluoromethane	67	3.782	3.777	0.005	69	1282	0.0392	0.0456	
7 Propene	41	3.782	3.780	0.002	85	14030	0.0392	0.1252	
8 Dichlorodifluoromethane	85	3.831	3.831	0.000	99	12761	0.0392	0.0514	
9 Chloromethane	52	3.982	3.984	-0.002	98	2300	0.0392	0.0634	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.014	4.011	0.003	93	9261	0.0392	0.0416	
11 Acetaldehyde	44	4.127	4.134	-0.007	81	25415	0.1960	0.3766	
12 Vinyl chloride	62	4.144	4.143	0.001	32	5346	0.0392	0.0446	
14 Butadiene	54	4.225	4.224	0.000	66	4533	0.0392	0.0479	
13 Butane	43	4.230	4.228	0.002	84	8550	0.0392	0.0534	
15 Bromomethane	94	4.500	4.498	0.002	98	6075	0.0392	0.0529	
16 Chloroethane	64	4.624	4.627	-0.003	94	3018	0.0392	0.0503	
17 Ethanol	31	4.753	4.758	-0.005	91	11819	0.1960	0.3713	
18 Vinyl bromide	106	4.882	4.895	-0.013	95	4711	0.0392	0.0422	
19 2-Methylbutane	43	4.952	4.957	-0.005	88	6192	0.0392	0.0491	
21 Acrolein	56	5.141	5.139	0.002	44	4504	0.0392	0.1102	
20 Trichlorofluoromethane	101	5.141	5.144	-0.003	98	12266	0.0392	0.0428	
22 Acetonitrile	40	5.195	5.199	-0.004	98	2482	0.0392	0.0518	
23 Acetone	58	5.249	5.246	0.003	97	13070	0.1176	0.1727	
24 Pentane	72	5.346	5.349	-0.003	94	898	0.0392	0.0412	
25 Isopropyl alcohol	45	5.362	5.358	0.004	93	20912	0.1176	0.1327	
26 Ethyl ether	31	5.508	5.493	0.015	95	4918	0.0392	0.0454	
27 1,1-Dichloroethene	96	5.767	5.767	0.000	56	4841	0.0392	0.0429	
28 Acrylonitrile	53	5.842	5.847	-0.005	92	3518	0.0392	0.0407	
29 2-Methyl-2-propanol	59	5.891	5.885	0.006	96	8707	0.0392	0.0416	
30 1,1,2-Trichloro-1,2,2-trif	101	5.945	5.950	-0.005	96	10023	0.0392	0.0413	
31 Methylene Chloride	84	6.063	6.069	-0.006	94	10512	0.0392	0.0961	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	95	6169	0.0392	0.0635	
33 Carbon disulfide	76	6.209	6.212	-0.003	98	13633	0.0392	0.0421	
34 trans-1,2-Dichloroethene	96	6.807	6.822	-0.015	96	5035	0.0392	0.0428	
35 2-Methylpentane	43	6.867	6.870	-0.003	94	10348	0.0392	0.0451	
36 Methyl tert-butyl ether	73	6.964	6.954	0.010	97	12408	0.0392	0.0418	
37 1,1-Dichloroethane	63	7.190	7.200	-0.010	99	8827	0.0392	0.0420	
38 Vinyl acetate	43	7.304	7.310	-0.006	99	11785	0.0392	0.0399	
39 2-Butanone (MEK)	72	7.719	7.715	0.004	99	2571	0.0392	0.0389	
40 Hexane	56	7.783	7.791	-0.008	87	4241	0.0392	0.0452	
141 Isopropyl ether	45	7.940	7.935	0.005	97	16913	0.0392	0.0424	
41 cis-1,2-Dichloroethene	96	8.112	8.125	-0.013	94	4984	0.0392	0.0411	
42 Ethyl acetate	43	8.317	8.316	0.001	99	11006	0.0392	0.0437	
43 Chloroform	83	8.447	8.461	-0.014	91	10122	0.0392	0.0425	
144 Tert-butyl ethyl ether	59	8.587	8.579	0.008	95	13653	0.0392	0.0400	
44 Tetrahydrofuran	42	8.846	8.833	0.013	92	6018	0.0392	0.0484	
45 1,1,1-Trichloroethane	97	9.439	9.451	-0.012	95	9772	0.0392	0.0427	
46 1,2-Dichloroethane	62	9.520	9.530	-0.010	95	6208	0.0392	0.0402	
49 n-Butanol	31	10.043	10.023	0.020	67	1968	0.0392	0.0506	
47 Benzene	78	10.032	10.041	-0.009	97	16262	0.0392	0.0463	
48 Cyclohexane	69	10.059	10.062	-0.003	89	2144	0.0392	0.0404	
50 Carbon tetrachloride	117	10.064	10.077	-0.013	93	9340	0.0392	0.0413	
51 2,3-Dimethylpentane	71	10.210	10.217	-0.007	90	3114	0.0392	0.0398	
52 Thiophene	84	10.307	10.313	-0.006	95	7571	0.0392	0.0390	
53 Isooctane	57	10.906	10.911	-0.005	97	24211	0.0392	0.0413	
54 n-Heptane	71	11.337	11.340	-0.003	80	4879	0.0392	0.0398	
55 1,2-Dichloropropane	63	11.342	11.346	-0.004	69	5674	0.0392	0.0414	
56 Trichloroethene	130	11.402	11.410	-0.008	95	6494	0.0392	0.0392	
57 Dibromomethane	93	11.461	11.467	-0.006	92	6602	0.0392	0.0468	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	98	9107	0.0392	0.0384	
59 1,4-Dioxane	88	11.677	11.668	0.009	87	2294	0.0392	0.0427	
60 Methyl methacrylate	41	11.801	11.801	0.000	91	6261	0.0392	0.0427	
61 Methylcyclohexane	83	12.340	12.347	-0.007	94	10096	0.0392	0.0399	
62 4-Methyl-2-pentanone (MIBK	43	12.836	12.831	0.005	96	47436	0.0392	0.1419	
63 cis-1,3-Dichloropropene	75	12.879	12.891	-0.012	87	7500	0.0392	0.0381	
64 trans-1,3-Dichloropropene	75	13.796	13.804	-0.008	97	6675	0.0392	0.0381	
65 Toluene	91	13.979	13.983	-0.004	94	17891	0.0392	0.0435	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	98	4976	0.0392	0.0410	
67 2-Methylthiophene	97	14.173	14.179	-0.006	97	13121	0.0392	0.0392	
68 3-Methylthiophene	97	14.454	14.457	-0.003	98	12928	0.0392	0.0391	
69 2-Hexanone	58	14.643	14.637	0.006	93	4946	0.0392	0.0341	
71 Chlorodibromomethane	129	15.015	15.023	-0.008	95	7408	0.0392	0.0308	
70 n-Octane	85	15.047	15.053	-0.006	92	5072	0.0392	0.0371	
72 Ethylene Dibromide	107	15.424	15.432	-0.008	98	8592	0.0392	0.0381	
73 Tetrachloroethene	129	15.597	15.602	-0.005	94	5901	0.0392	0.0393	
74 Chlorobenzene	112	16.913	16.918	-0.005	94	13959	0.0392	0.0416	
75 2,3-Dimethylheptane	43	17.101	17.100	0.001	94	15511	0.0392	0.0447	
76 Ethylbenzene	91	17.420	17.426	-0.006	99	22476	0.0392	0.0418	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	15230	0.0392	0.0386	
78 m-Xylene & p-Xylene	91	17.705	17.703	0.002	98	33423	0.0784	0.0809	
79 Bromoform	173	18.326	18.330	-0.004	92	5596	0.0392	0.0249	
80 Styrene	104	18.450	18.457	-0.007	97	10029	0.0392	0.0330	
81 n-Nonane	57	18.547	18.547	0.000	91	10711	0.0392	0.0391	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
82 o-Xylene	91	18.557	18.559	-0.002	98	17137	0.0392	0.0400	
83 1,1,2,2-Tetrachloroethane	83	19.091	19.088	0.003	98	12274	0.0392	0.0399	
84 1,2,3-Trichloropropane	110	19.345	19.352	-0.007	95	3919	0.0392	0.0419	
85 Isopropylbenzene	105	19.587	19.589	-0.002	47	26270	0.0392	0.0432	
86 N-Propylbenzene	120	20.553	20.554	-0.001	96	6399	0.0392	0.0367	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	89	6093	0.0392	0.0386	
88 4-Ethyltoluene	105	20.838	20.844	-0.006	98	22318	0.0392	0.0371	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	93	10681	0.0392	0.0370	
90 Alpha Methyl Styrene	118	21.421	21.426	-0.005	89	6947	0.0392	0.0283	
91 n-Decane	57	21.723	21.726	-0.003	91	12753	0.0392	0.0361	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	20887	0.0392	0.0380	
93 1,2,4-Trimethylbenzene	105	21.825	21.832	-0.007	95	19080	0.0392	0.0374	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	14259	0.0392	0.0388	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	98	27656	0.0392	0.0373	
96 Benzyl chloride	91	22.462	22.469	-0.007	86	15092	0.0392	0.0325	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	93	14912	0.0392	0.0393	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	96	24298	0.0392	0.0364	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	96	15791	0.0392	0.0384	
100 Butylcyclohexane	83	22.974	22.980	-0.006	94	14749	0.0392	0.0375	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	94	14472	0.0392	0.0401	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	18931	0.0392	0.0379	
103 Indene	116	23.524	23.527	-0.003	97	13202	0.0392	0.0364	
104 n-Butylbenzene	91	23.669	23.674	-0.005	99	23312	0.0392	0.0378	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.521	24.528	-0.007	97	17341	0.0392	0.0354	
143 1,2-Dibromo-3-Chloropropan	157	24.575	24.582	-0.007	90	4134	0.0392	0.0259	
106 Undecane	57	24.602	24.605	-0.003	95	13974	0.0392	0.0344	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	97	20409	0.0392	0.0362	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	12699	0.0392	0.0371	
109 1,2,3,4-Tetramethylbenzene	119	26.484	26.489	-0.005	98	17799	0.0392	0.0379	
110 Dodecane	57	27.142	27.145	-0.003	96	13280	0.0392	0.0349	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	95	12487	0.0392	0.0379	
112 Naphthalene	128	27.422	27.426	-0.004	99	34661	0.0392	0.0449	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	24021	0.0392	0.0532	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	90	8199	0.0392	0.0326	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	93	12984	0.0392	0.0411	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	22932	0.1225	0.2211	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	22962	0.1225	0.2806	
A 118 C6 Range	1	7.789	(7.740-7.837)		0	34835	0.0392	0.0459	
A 119 Toluene Range	1	13.954	(13.920-13.988)		0	39946	0.0392	0.0391	
A 120 C8 Range	1	15.052	(15.015-15.090)		0	70730	0.0392	0.0335	
S 124 Xylenes, Total	100				0		0.1176	0.1209	
S 145 1,2-Dichloroethene, Total	1				0		0.0784	0.0839	

Reagents:

CDN2C20X0.2_00001	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

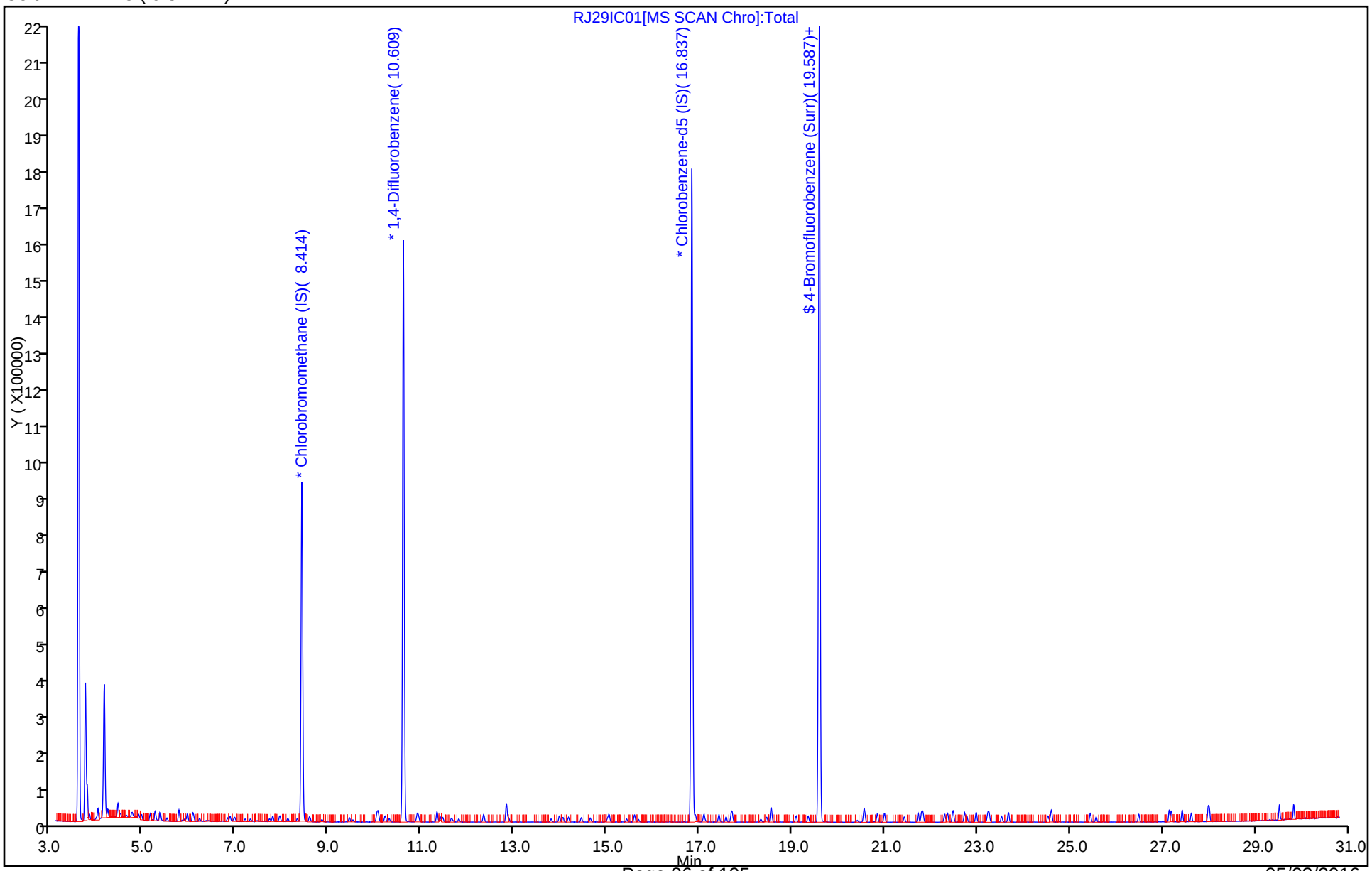
Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D

Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

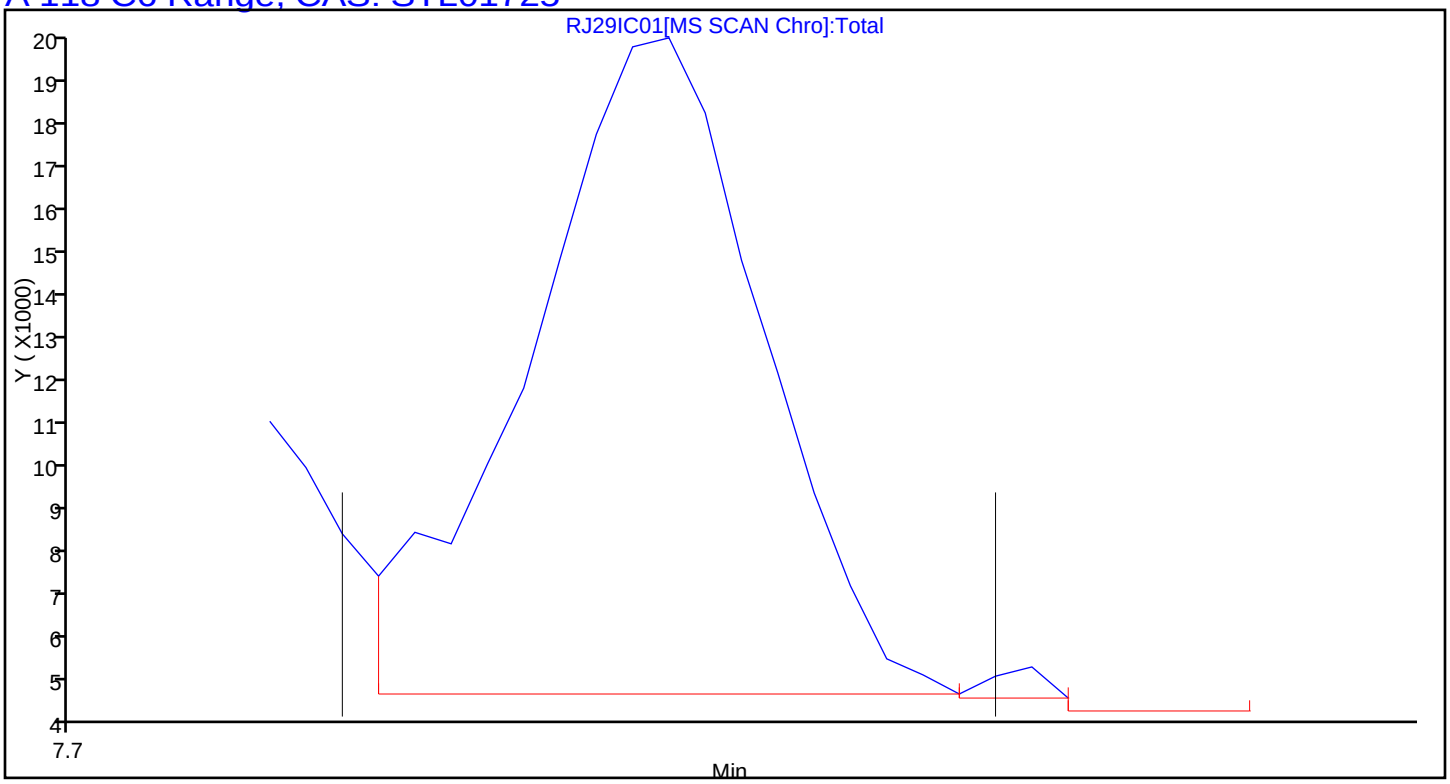


Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D				
Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

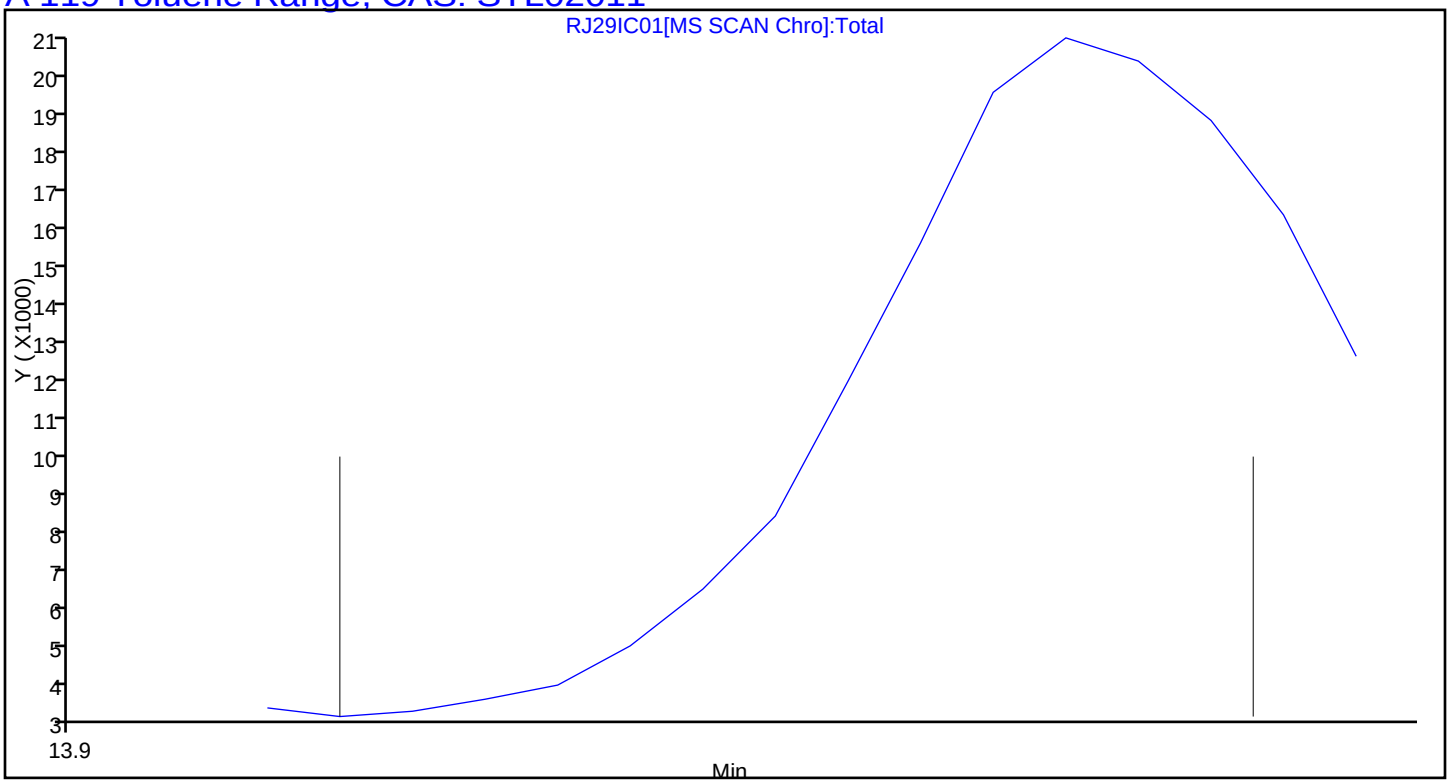


Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D				
Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

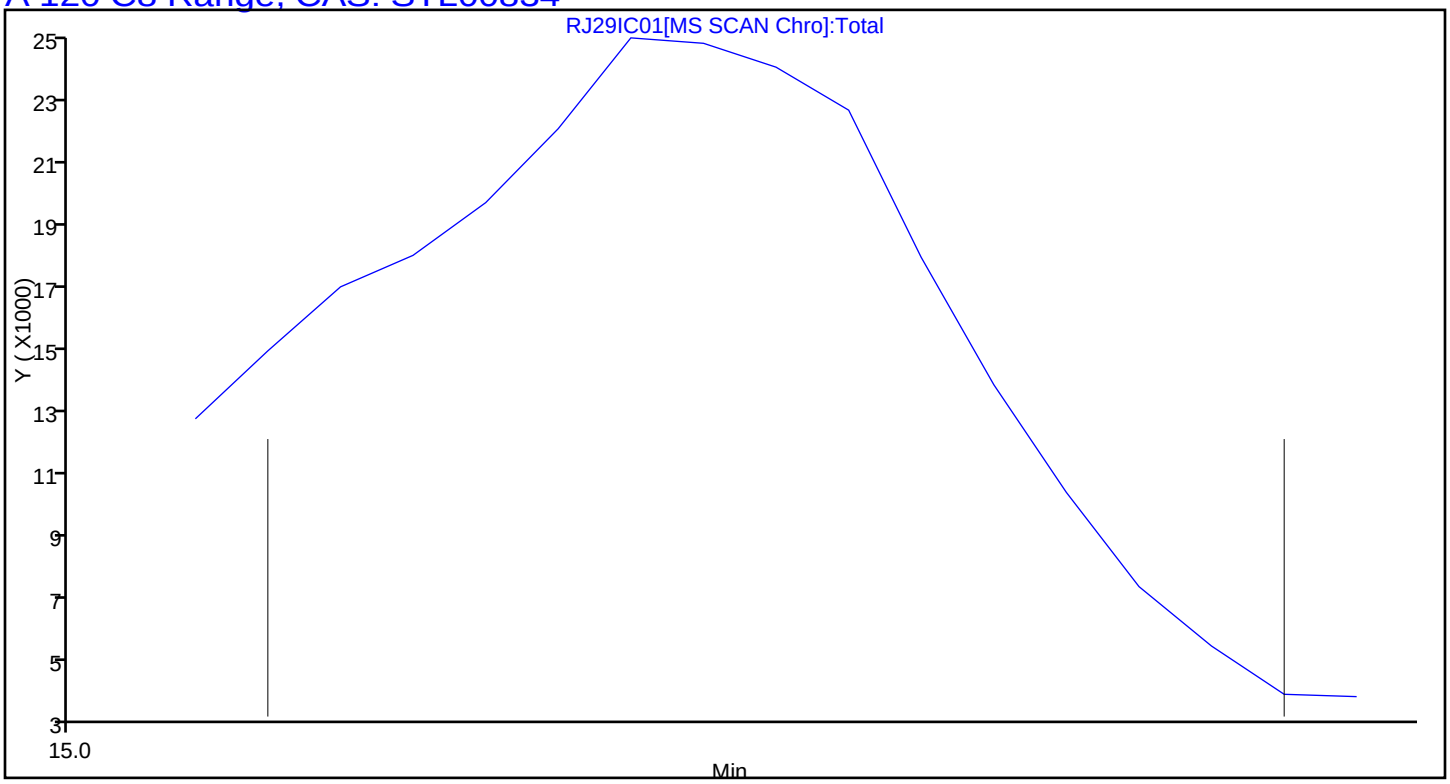


Report Date: 04-Nov-2015 15:47:21 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC01.D				
Injection Date:	29-Oct-2015 14:14:30	Instrument ID:	MR		
Lims ID:	IC L1				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 29-Oct-2015 15:07:30 ALS Bottle#: 9 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-003
Misc. Info.: 031531
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:28 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 10:52:39

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.431	-0.006	94	319695	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.615	10.619	-0.004	94	1630818	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1503238	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.587	19.590	-0.003	89	1091970	4.00	3.93	
6 Chlorodifluoromethane	67	3.799	3.777	0.022	94	2539	0.0784	0.0916	
7 Propene	41	3.799	3.780	0.019	92	18478	0.0784	0.1674	
8 Dichlorodifluoromethane	85	3.847	3.831	0.016	99	20804	0.0784	0.0851	
9 Chloromethane	52	3.998	3.984	0.014	99	3857	0.0784	0.1079	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.025	4.011	0.014	92	18409	0.0784	0.0839	
11 Acetaldehyde	44	4.138	4.134	0.004	93	45735	0.3920	0.6878	
12 Vinyl chloride	62	4.160	4.143	0.017	38	10456	0.0784	0.0886	
14 Butadiene	54	4.235	4.224	0.011	90	8236	0.0784	0.0884	
13 Butane	43	4.241	4.228	0.013	92	15481	0.0784	0.0981	
15 Bromomethane	94	4.510	4.498	0.012	98	10882	0.0784	0.0962	
16 Chloroethane	64	4.634	4.627	0.007	92	5590	0.0784	0.0946	
17 Ethanol	31	4.753	4.758	-0.005	91	21603	0.3920	0.6890	
18 Vinyl bromide	106	4.904	4.895	0.009	98	9310	0.0784	0.0846	
19 2-Methylbutane	43	4.969	4.957	0.012	90	11563	0.0784	0.0930	
21 Acrolein	56	5.147	5.139	0.008	45	8622	0.0784	0.2141	
20 Trichlorofluoromethane	101	5.152	5.144	0.008	99	23349	0.0784	0.0828	
22 Acetonitrile	40	5.206	5.199	0.007	97	3597	0.0784	0.0762	
23 Acetone	58	5.255	5.246	0.008	97	23626	0.2352	0.3168	
24 Pentane	72	5.352	5.349	0.003	78	1730	0.0784	0.0806	
25 Isopropyl alcohol	45	5.362	5.358	0.004	92	39822	0.2352	0.2565	
26 Ethyl ether	31	5.508	5.493	0.015	95	9392	0.0784	0.0880	
27 1,1-Dichloroethene	96	5.772	5.767	0.005	78	9229	0.0784	0.0830	
28 Acrylonitrile	53	5.842	5.847	-0.005	97	7073	0.0784	0.0831	
29 2-Methyl-2-propanol	59	5.896	5.885	0.011	94	17194	0.0784	0.0833	
30 1,1,2-Trichloro-1,2,2-trif	101	5.956	5.950	0.006	95	19451	0.0784	0.0815	
31 Methylene Chloride	84	6.069	6.069	0.000	96	14506	0.0784	0.1347	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.096	6.090	0.006	96	10570	0.0784	0.1104	
33 Carbon disulfide	76	6.220	6.212	0.008	98	26857	0.0784	0.0842	
34 trans-1,2-Dichloroethene	96	6.824	6.822	0.002	98	9464	0.0784	0.0817	
35 2-Methylpentane	43	6.872	6.870	0.002	93	19400	0.0784	0.0858	
36 Methyl tert-butyl ether	73	6.964	6.954	0.010	97	23679	0.0784	0.0810	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	17095	0.0784	0.0825	
38 Vinyl acetate	43	7.309	7.310	-0.001	100	22858	0.0784	0.0785	
39 2-Butanone (MEK)	72	7.724	7.715	0.009	99	5386	0.0784	0.0827	
40 Hexane	56	7.789	7.791	-0.002	89	7889	0.0784	0.0853	
141 Isopropyl ether	45	7.940	7.935	0.005	97	32485	0.0784	0.0827	
41 cis-1,2-Dichloroethene	96	8.118	8.125	-0.007	94	9825	0.0784	0.0822	
42 Ethyl acetate	43	8.317	8.316	0.001	100	20237	0.0784	0.0816	
43 Chloroform	83	8.452	8.461	-0.009	95	19733	0.0784	0.0842	
144 Tert-butyl ethyl ether	59	8.582	8.579	0.003	96	27028	0.0784	0.0803	
44 Tetrahydrofuran	42	8.840	8.833	0.007	89	10588	0.0784	0.0864	
45 1,1,1-Trichloroethane	97	9.444	9.451	-0.007	98	18089	0.0784	0.0802	
46 1,2-Dichloroethane	62	9.525	9.530	-0.005	95	12438	0.0784	0.0817	
49 n-Butanol	31	10.032	10.023	0.009	66	4238	0.0784	0.1106	
47 Benzene	78	10.038	10.041	-0.003	97	30730	0.0784	0.0888	
48 Cyclohexane	69	10.054	10.062	-0.008	95	4177	0.0784	0.0800	
50 Carbon tetrachloride	117	10.070	10.077	-0.007	97	17965	0.0784	0.0806	
51 2,3-Dimethylpentane	71	10.215	10.217	-0.002	89	6246	0.0784	0.0811	
52 Thiophene	84	10.302	10.313	-0.011	96	15392	0.0784	0.0805	
142 Tert-amyl methyl ether	73	10.571	10.568	0.003	96	23564	0.0784	0.0738	
53 Isooctane	57	10.911	10.911	0.000	99	46317	0.0784	0.0802	
54 n-Heptane	71	11.332	11.340	-0.008	92	9342	0.0784	0.0773	
55 1,2-Dichloropropane	63	11.343	11.346	-0.004	82	10703	0.0784	0.0792	
56 Trichloroethene	130	11.402	11.410	-0.008	97	12677	0.0784	0.0777	
57 Dibromomethane	93	11.461	11.467	-0.006	91	12089	0.0784	0.0869	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	99	17791	0.0784	0.0761	
59 1,4-Dioxane	88	11.677	11.668	0.009	91	4191	0.0784	0.0791	
60 Methyl methacrylate	41	11.801	11.801	0.000	90	11424	0.0784	0.0791	
61 Methylcyclohexane	83	12.345	12.347	-0.002	95	19382	0.0784	0.0777	
62 4-Methyl-2-pentanone (MIBK	43	12.831	12.831	0.000	97	59290	0.0784	0.1800	
63 cis-1,3-Dichloropropene	75	12.885	12.891	-0.006	95	14538	0.0784	0.0749	
64 trans-1,3-Dichloropropene	75	13.801	13.804	-0.003	97	13034	0.0784	0.0751	
65 Toluene	91	13.979	13.983	-0.004	94	33877	0.0784	0.0830	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	97	9824	0.0784	0.0817	
67 2-Methylthiophene	97	14.173	14.179	-0.006	97	25754	0.0784	0.0776	
68 3-Methylthiophene	97	14.454	14.457	-0.003	98	25709	0.0784	0.0784	
69 2-Hexanone	58	14.637	14.637	0.000	94	10612	0.0784	0.0738	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	97	15067	0.0784	0.0632	
70 n-Octane	85	15.052	15.053	-0.001	92	10609	0.0784	0.0783	
72 Ethylene Dibromide	107	15.425	15.432	-0.007	97	16990	0.0784	0.0760	
73 Tetrachloroethene	129	15.602	15.602	0.000	96	11573	0.0784	0.0778	
74 Chlorobenzene	112	16.913	16.918	-0.005	95	26893	0.0784	0.0808	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	94	28831	0.0784	0.0838	
76 Ethylbenzene	91	17.420	17.426	-0.006	98	42670	0.0784	0.0801	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	30122	0.0784	0.0770	
78 m-Xylene & p-Xylene	91	17.695	17.703	-0.008	99	65372	0.1568	0.1596	
79 Bromoform	173	18.326	18.330	-0.004	93	10689	0.0784	0.0480	
80 Styrene	104	18.455	18.457	-0.002	96	20472	0.0784	0.0680	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	93	20824	0.0784	0.0768	
82 o-Xylene	91	18.557	18.559	-0.002	98	33536	0.0784	0.0790	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	24445	0.0784	0.0801	
84 1,2,3-Trichloropropane	110	19.345	19.352	-0.007	96	7542	0.0784	0.0814	
85 Isopropylbenzene	105	19.587	19.589	-0.002	48	49877	0.0784	0.0827	
86 N-Propylbenzene	120	20.547	20.554	-0.007	97	12646	0.0784	0.0731	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	91	12042	0.0784	0.0769	
88 4-Ethyltoluene	105	20.838	20.844	-0.006	98	45593	0.0784	0.0764	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	93	20957	0.0784	0.0733	
90 Alpha Methyl Styrene	118	21.421	21.426	-0.005	89	13981	0.0784	0.0574	
91 n-Decane	57	21.723	21.726	-0.003	91	26126	0.0784	0.0746	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	40843	0.0784	0.0749	
93 1,2,4-Trimethylbenzene	105	21.825	21.832	-0.007	95	38895	0.0784	0.0769	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	28229	0.0784	0.0775	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	56281	0.0784	0.0766	
96 Benzyl chloride	91	22.467	22.469	-0.002	98	30280	0.0784	0.0659	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	94	29450	0.0784	0.0784	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	96	48674	0.0784	0.0736	
99 1,2,3-Trimethylbenzene	105	22.769	22.776	-0.007	97	31634	0.0784	0.0775	
100 Butylcyclohexane	83	22.974	22.980	-0.006	94	30105	0.0784	0.0772	
101 1,2-Dichlorobenzene	146	23.222	23.227	-0.005	95	27869	0.0784	0.0778	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	37470	0.0784	0.0757	
103 Indene	116	23.529	23.527	0.002	93	26737	0.0784	0.0744	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	47268	0.0784	0.0773	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	35416	0.0784	0.0728	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	93	8766	0.0784	0.0555	
106 Undecane	57	24.602	24.605	-0.003	95	29982	0.0784	0.0743	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	97	42547	0.0784	0.0761	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	26590	0.0784	0.0784	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	97	37618	0.0784	0.0808	
110 Dodecane	57	27.142	27.145	-0.003	96	28952	0.0784	0.0767	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	26566	0.0784	0.0812	
112 Naphthalene	128	27.428	27.426	0.002	99	74592	0.0784	0.0974	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	54188	0.0784	0.1210	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	91	17221	0.0784	0.0692	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	94	28016	0.0784	0.0895	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	99	58902	0.2450	0.5730	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	56925	0.2450	0.7018	
A 118 C6 Range	1	7.802	(7.740-7.837)		0	66595	0.0784	0.0891	
A 119 Toluene Range	1	13.964	(13.920-13.999)		0	79027	0.0784	0.0785	
A 120 C8 Range	1	15.052	(15.004-15.101)		0	144129	0.0784	0.0693	
S 124 Xylenes, Total	100				0		0.2352	0.2386	
S 145 1,2-Dichloroethene, Total	1				0		0.1568	0.1640	

Reagents:

CDN2C20X0.2_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

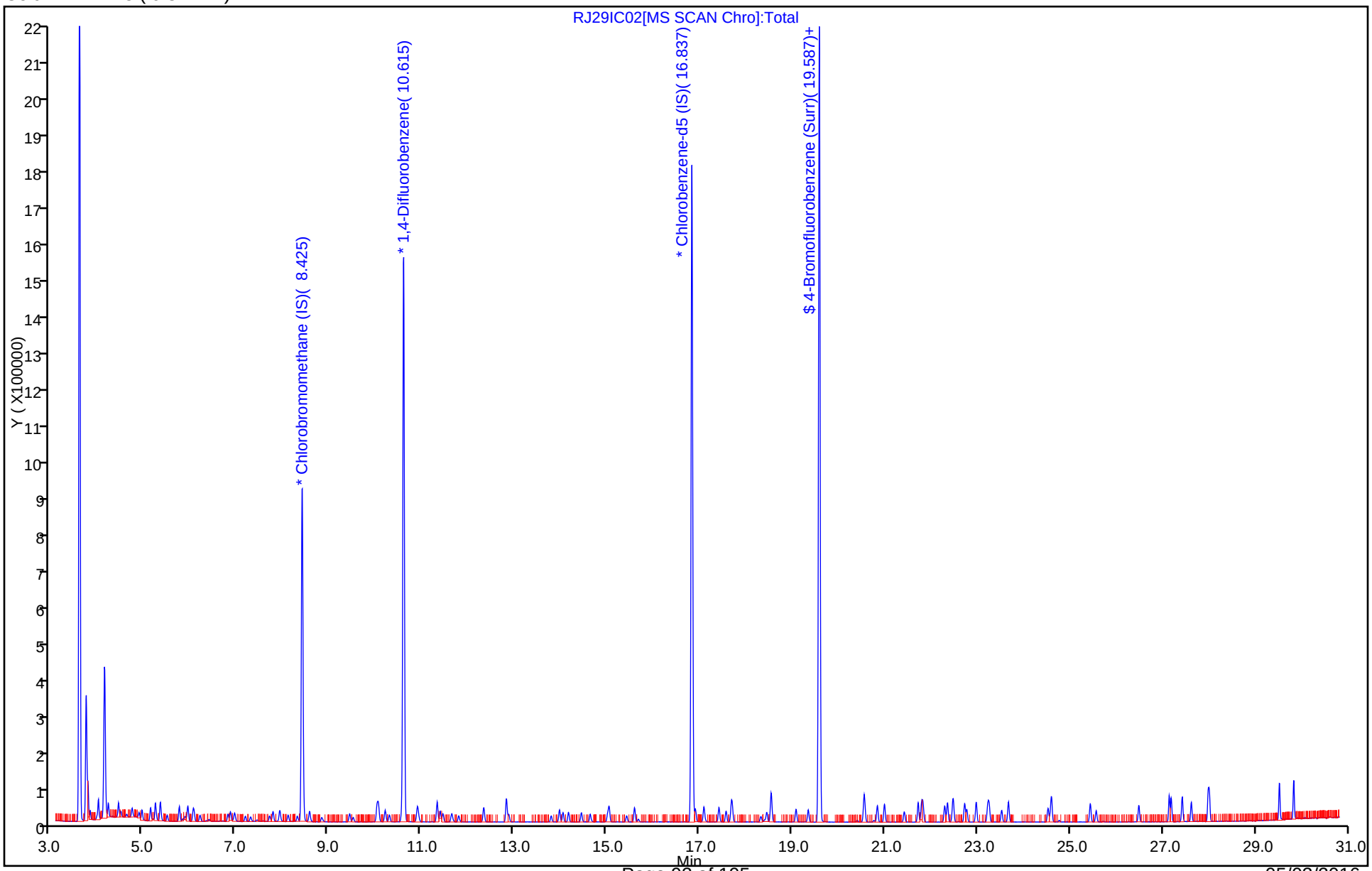
Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D

Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

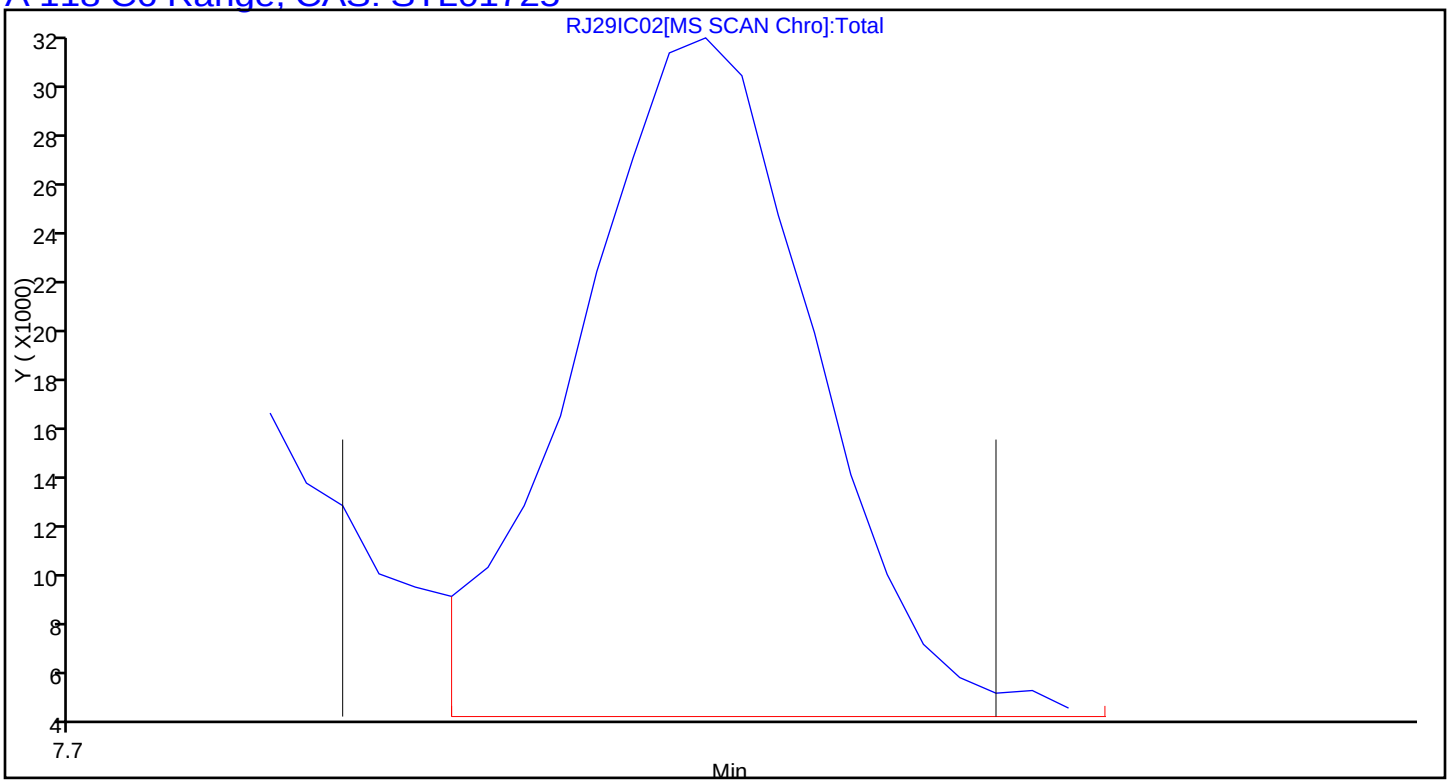


Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D				
Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

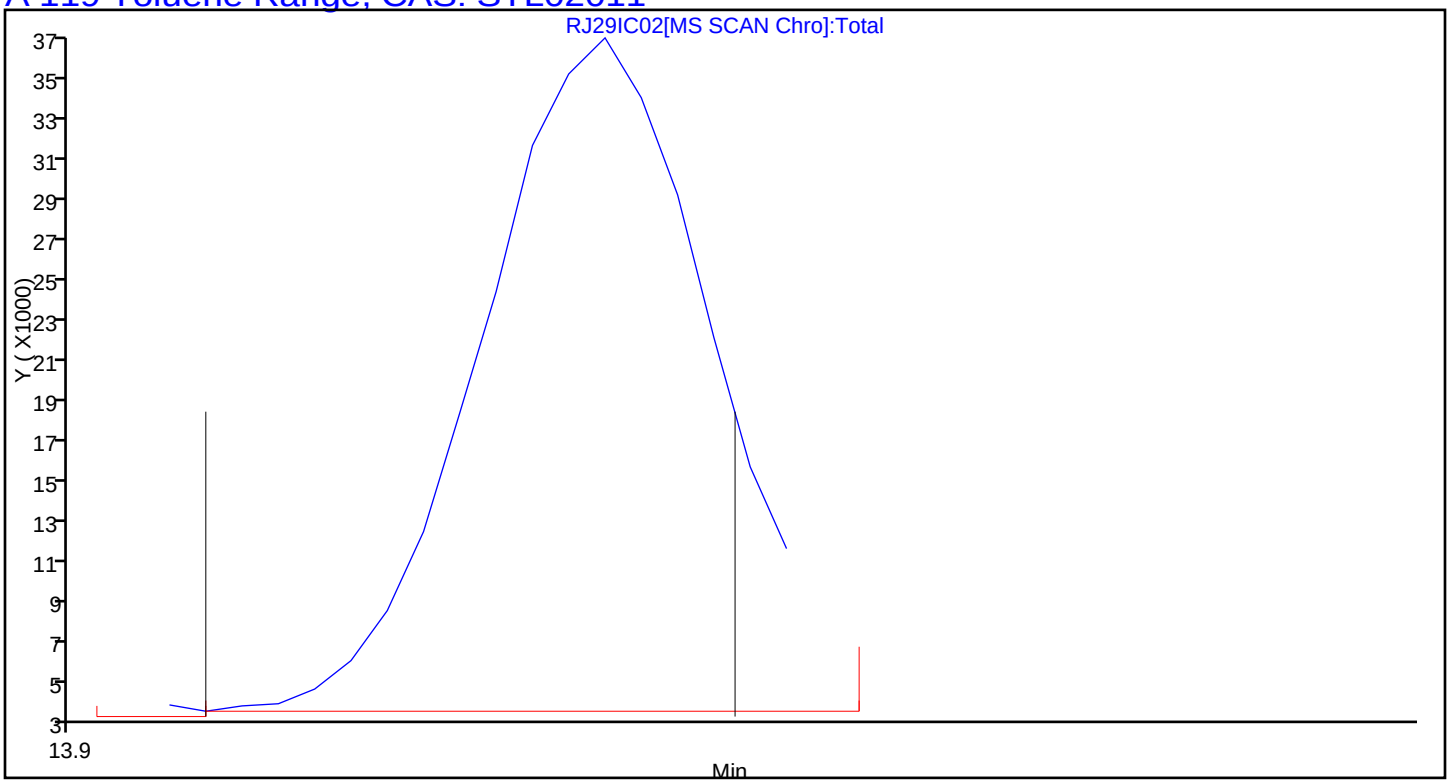


Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D				
Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

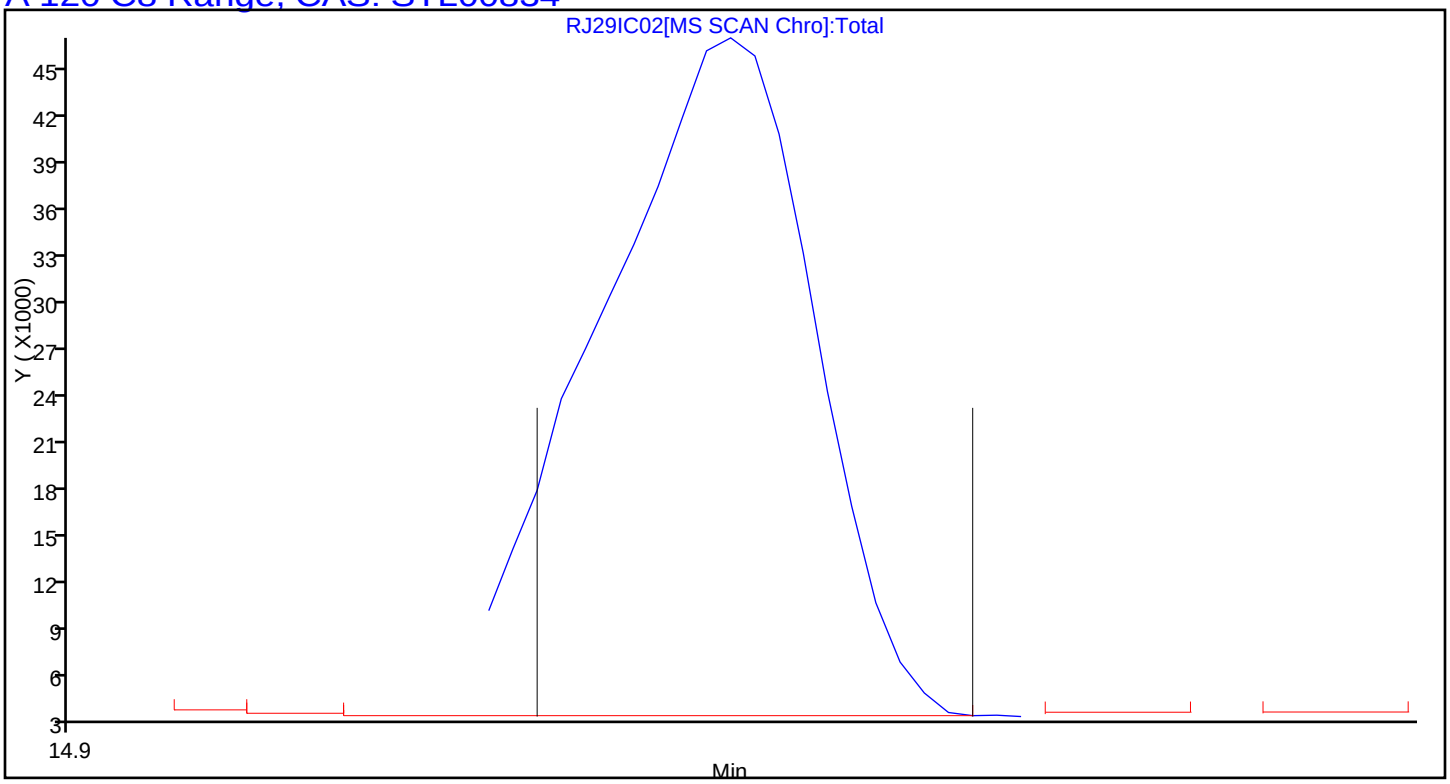


Report Date: 04-Nov-2015 15:47:29 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC02.D				
Injection Date:	29-Oct-2015 15:07:30	Instrument ID:	MR		
Lims ID:	IC L2				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 29-Oct-2015 15:58:30 ALS Bottle#: 9 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-004
Misc. Info.: 031530
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:42 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:37:47

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.431	-0.006	93	315354	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.615	10.619	-0.004	94	1626800	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1507632	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.588	19.590	-0.002	90	1095591	4.00	3.93	
6 Chlorodifluoromethane	67	3.793	3.777	0.016	96	4698	0.1600	0.1718	
7 Propene	41	3.793	3.780	0.013	86	26500	0.1600	0.2433	
8 Dichlorodifluoromethane	85	3.842	3.831	0.011	99	47268	0.1600	0.1961	
9 Chloromethane	52	3.993	3.984	0.009	99	6945	0.1600	0.1969	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.020	4.011	0.009	93	35592	0.1600	0.1645	
11 Acetaldehyde	44	4.138	4.134	0.004	90	81685	0.8002	1.25	M
12 Vinyl chloride	62	4.155	4.143	0.012	58	20116	0.1600	0.1727	
14 Butadiene	54	4.230	4.224	0.006	89	16494	0.1600	0.1794	
13 Butane	43	4.235	4.228	0.007	92	29182	0.1600	0.1875	
15 Bromomethane	94	4.505	4.498	0.007	99	19142	0.1600	0.1715	
16 Chloroethane	64	4.629	4.627	0.002	97	10111	0.1600	0.1734	
17 Ethanol	31	4.748	4.758	-0.010	91	33014	0.8002	1.07	
18 Vinyl bromide	106	4.899	4.895	0.004	99	17702	0.1600	0.1631	
19 2-Methylbutane	43	4.963	4.957	0.006	92	21830	0.1600	0.1781	
21 Acrolein	56	5.141	5.139	0.002	32	5744	0.1600	0.1446	
20 Trichlorofluoromethane	101	5.147	5.144	0.003	99	45955	0.1600	0.1652	
22 Acetonitrile	40	5.201	5.199	0.002	99	6411	0.1600	0.1377	
23 Acetone	58	5.249	5.246	0.003	97	59524	0.4802	0.8092	
24 Pentane	72	5.357	5.349	0.008	78	3474	0.1600	0.1641	
25 Isopropyl alcohol	45	5.352	5.358	-0.006	82	78554	0.4802	0.5130	
26 Ethyl ether	31	5.497	5.493	0.004	96	18257	0.1600	0.1735	
27 1,1-Dichloroethene	96	5.772	5.767	0.005	98	17637	0.1600	0.1607	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	13712	0.1600	0.1634	
29 2-Methyl-2-propanol	59	5.886	5.885	0.001	94	32878	0.1600	0.1615	
30 1,1,2-Trichloro-1,2,2-trif	101	5.956	5.950	0.006	95	38762	0.1600	0.1645	
31 Methylene Chloride	84	6.063	6.069	-0.006	97	22236	0.1600	0.2093	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	96	16556	0.1600	0.1753	
33 Carbon disulfide	76	6.214	6.212	0.002	98	51347	0.1600	0.1632	
34 trans-1,2-Dichloroethene	96	6.818	6.822	-0.004	99	18476	0.1600	0.1617	
35 2-Methylpentane	43	6.872	6.870	0.002	95	37939	0.1600	0.1702	
36 Methyl tert-butyl ether	73	6.959	6.954	0.005	97	46070	0.1600	0.1597	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	33808	0.1600	0.1654	
38 Vinyl acetate	43	7.309	7.310	-0.001	100	44420	0.1600	0.1547	
39 2-Butanone (MEK)	72	7.714	7.715	-0.001	99	12799	0.1600	0.1993	
40 Hexane	56	7.794	7.791	0.003	87	15020	0.1600	0.1646	
141 Isopropyl ether	45	7.935	7.935	0.000	98	63939	0.1600	0.1651	
41 cis-1,2-Dichloroethene	96	8.123	8.125	-0.002	93	19102	0.1600	0.1621	
42 Ethyl acetate	43	8.317	8.316	0.001	99	41117	0.1600	0.1681	
43 Chloroform	83	8.452	8.461	-0.009	94	37845	0.1600	0.1637	
144 Tert-butyl ethyl ether	59	8.576	8.579	-0.003	95	53042	0.1600	0.1598	
44 Tetrahydrofuran	42	8.841	8.833	0.008	94	20418	0.1600	0.1689	
45 1,1,1-Trichloroethane	97	9.445	9.451	-0.007	96	35625	0.1600	0.1601	
46 1,2-Dichloroethane	62	9.520	9.530	-0.010	96	24866	0.1600	0.1636	
49 n-Butanol	31	10.027	10.023	0.004	63	6187	0.1600	0.1619	
47 Benzene	78	10.038	10.041	-0.003	97	56249	0.1600	0.1629	
48 Cyclohexane	69	10.059	10.062	-0.003	97	8115	0.1600	0.1557	
50 Carbon tetrachloride	117	10.070	10.077	-0.007	96	30532	0.1600	0.1373	
51 2,3-Dimethylpentane	71	10.216	10.217	-0.001	91	12067	0.1600	0.1570	
52 Thiophene	84	10.307	10.313	-0.006	95	30129	0.1600	0.1579	
142 Tert-amyl methyl ether	73	10.572	10.568	0.004	97	51899	0.1600	0.1630	
53 Isooctane	57	10.911	10.911	0.000	98	91291	0.1600	0.1586	
54 n-Heptane	71	11.337	11.340	-0.003	89	18503	0.1600	0.1535	
55 1,2-Dichloropropane	63	11.343	11.346	-0.003	91	21488	0.1600	0.1593	
56 Trichloroethene	130	11.402	11.410	-0.008	95	25186	0.1600	0.1548	
57 Dibromomethane	93	11.461	11.467	-0.006	93	22054	0.1600	0.1589	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	99	35529	0.1600	0.1524	
59 1,4-Dioxane	88	11.672	11.668	0.004	90	7938	0.1600	0.1503	
60 Methyl methacrylate	41	11.801	11.801	0.000	94	21910	0.1600	0.1520	
61 Methylcyclohexane	83	12.346	12.347	-0.001	95	38968	0.1600	0.1567	
62 4-Methyl-2-pentanone (MIBK	43	12.831	12.831	0.000	97	79853	0.1600	0.2430	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	93	28948	0.1600	0.1496	
64 trans-1,3-Dichloropropene	75	13.802	13.804	-0.002	99	25591	0.1600	0.1471	
65 Toluene	91	13.979	13.983	-0.004	94	64875	0.1600	0.1586	
66 1,1,2-Trichloroethane	83	14.060	14.060	0.000	98	19112	0.1600	0.1585	
67 2-Methylthiophene	97	14.174	14.179	-0.005	97	51768	0.1600	0.1556	
68 3-Methylthiophene	97	14.454	14.457	-0.003	99	50253	0.1600	0.1529	
69 2-Hexanone	58	14.637	14.637	0.000	94	21531	0.1600	0.1494	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	31734	0.1600	0.1328	
70 n-Octane	85	15.047	15.053	-0.006	93	20268	0.1600	0.1492	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	97	33474	0.1600	0.1493	
73 Tetrachloroethene	129	15.597	15.602	-0.005	96	23230	0.1600	0.1557	
74 Chlorobenzene	112	16.913	16.918	-0.005	94	52338	0.1600	0.1567	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	96	56891	0.1600	0.1648	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	82766	0.1600	0.1550	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	98	58991	0.1600	0.1503	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	98	125298	0.3201	0.3050	
79 Bromoform	173	18.326	18.330	-0.004	94	24614	0.1600	0.1103	
80 Styrene	104	18.455	18.457	-0.002	99	39965	0.1600	0.1324	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	91	42675	0.1600	0.1569	
82 o-Xylene	91	18.558	18.559	-0.001	100	65272	0.1600	0.1533	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	45618	0.1600	0.1490	
84 1,2,3-Trichloropropane	110	19.356	19.352	0.004	97	14247	0.1600	0.1532	
85 Isopropylbenzene	105	19.588	19.589	-0.001	51	95540	0.1600	0.1579	
86 N-Propylbenzene	120	20.553	20.554	-0.001	99	25153	0.1600	0.1450	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	92	23541	0.1600	0.1500	
88 4-Ethyltoluene	105	20.839	20.844	-0.005	98	87866	0.1600	0.1469	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	94	41951	0.1600	0.1463	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	88	28301	0.1600	0.1158	
91 n-Decane	57	21.723	21.726	-0.003	90	51676	0.1600	0.1471	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	94	80357	0.1600	0.1470	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	97	74888	0.1600	0.1476	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	53198	0.1600	0.1457	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	111330	0.1600	0.1511	
96 Benzyl chloride	91	22.467	22.469	-0.002	99	62456	0.1600	0.1355	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	94	54414	0.1600	0.1444	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	96	95385	0.1600	0.1438	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	97	61626	0.1600	0.1506	
100 Butylcyclohexane	83	22.979	22.980	-0.001	93	59075	0.1600	0.1510	
101 1,2-Dichlorobenzene	146	23.222	23.227	-0.005	96	52152	0.1600	0.1452	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	72864	0.1600	0.1468	
103 Indene	116	23.524	23.527	-0.003	92	49715	0.1600	0.1379	
104 n-Butylbenzene	91	23.670	23.674	-0.004	99	92774	0.1600	0.1513	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	98	68855	0.1600	0.1412	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	94	17972	0.1600	0.1134	
106 Undecane	57	24.602	24.605	-0.003	96	60160	0.1600	0.1488	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	98	80726	0.1600	0.1440	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	95	49169	0.1600	0.1445	
109 1,2,3,4-Tetramethylbenzene	119	26.484	26.489	-0.005	97	67546	0.1600	0.1447	
110 Dodecane	57	27.148	27.145	0.003	96	55502	0.1600	0.1465	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	43373	0.1600	0.1323	
112 Naphthalene	128	27.423	27.426	-0.003	99	104119	0.1600	0.1356	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	66434	0.1600	0.1479	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	92	33353	0.1600	0.1336	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	95	40473	0.1600	0.1289	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	41161	0.5001	0.3992	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	34797	0.5001	0.4277	
A 118 C6 Range	1	7.805	(7.741-7.848)		0	128569	0.1600	0.1724	
A 119 Toluene Range	1	13.964	(13.920-14.020)		0	156449	0.1600	0.1559	
A 120 C8 Range	1	15.053	(15.004-15.101)		0	311043	0.1600	0.1499	
S 124 Xylenes, Total	100				0		0.4801	0.4583	
S 145 1,2-Dichloroethene, Total	1				0		0.3201	0.3238	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

CDN2C20X1.0_00001	Amount Added:	80.00	Units: mL	
MAissur1_00002	Amount Added:	40.00	Units: mL	Run Reagent

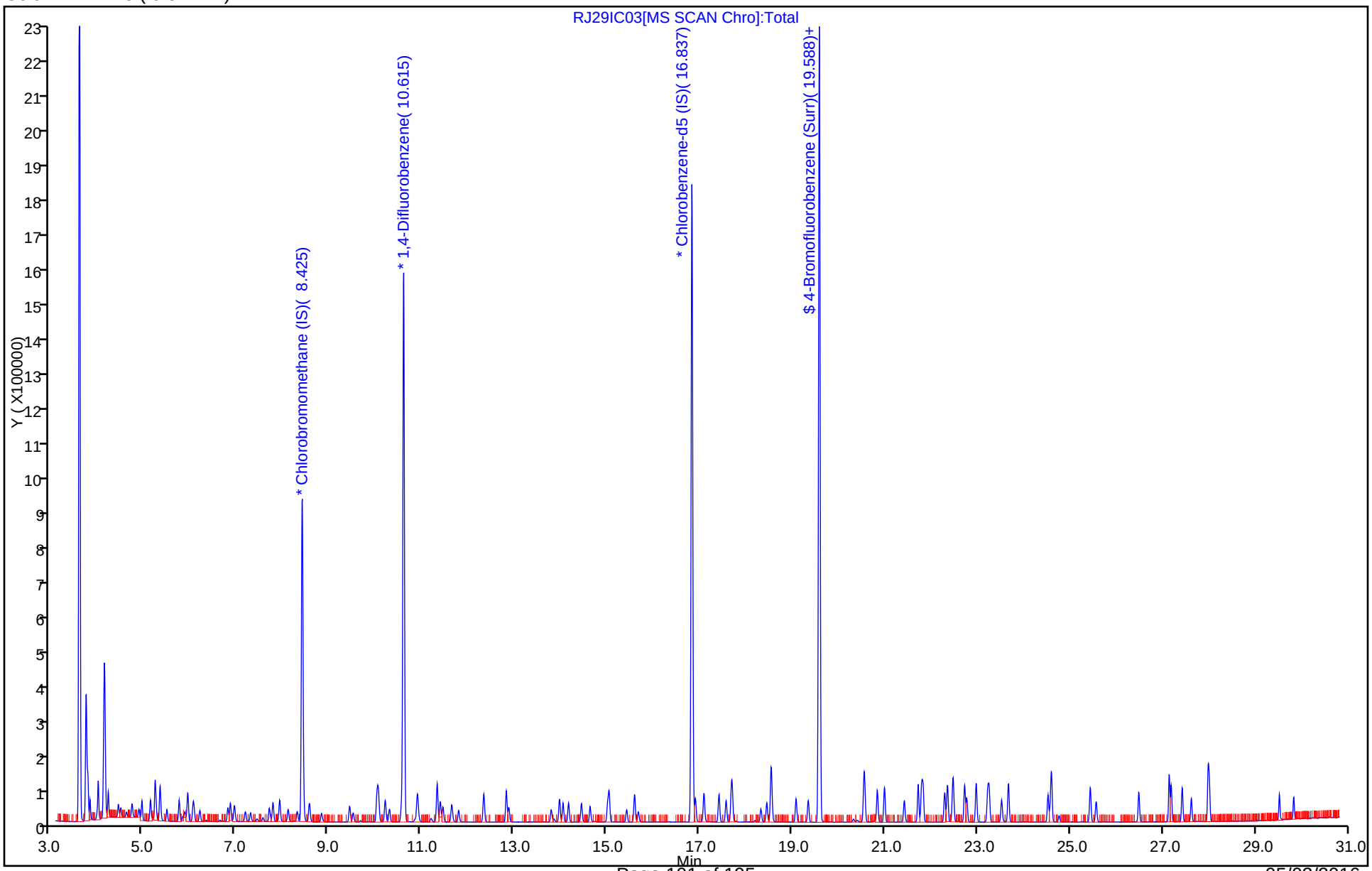
Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D

Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

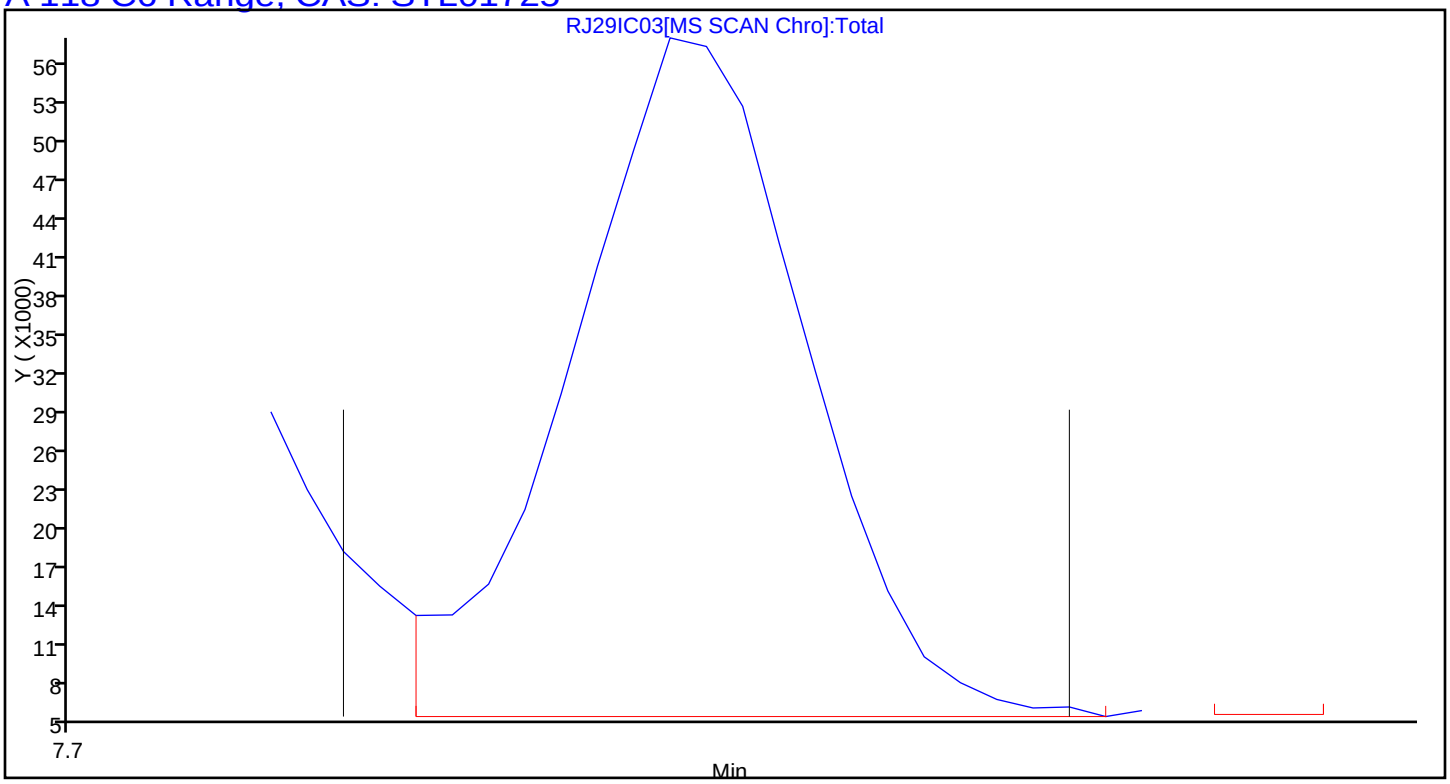


Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

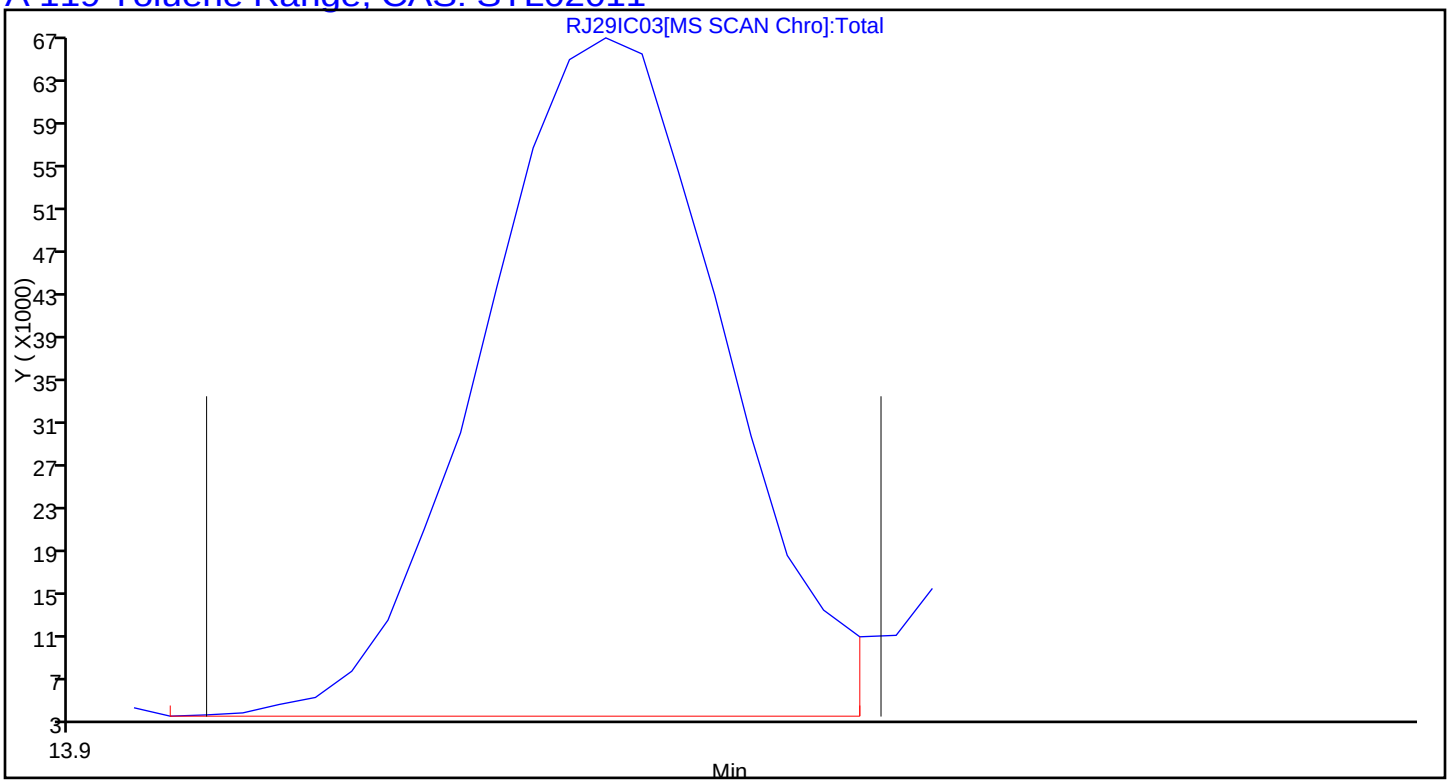


Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

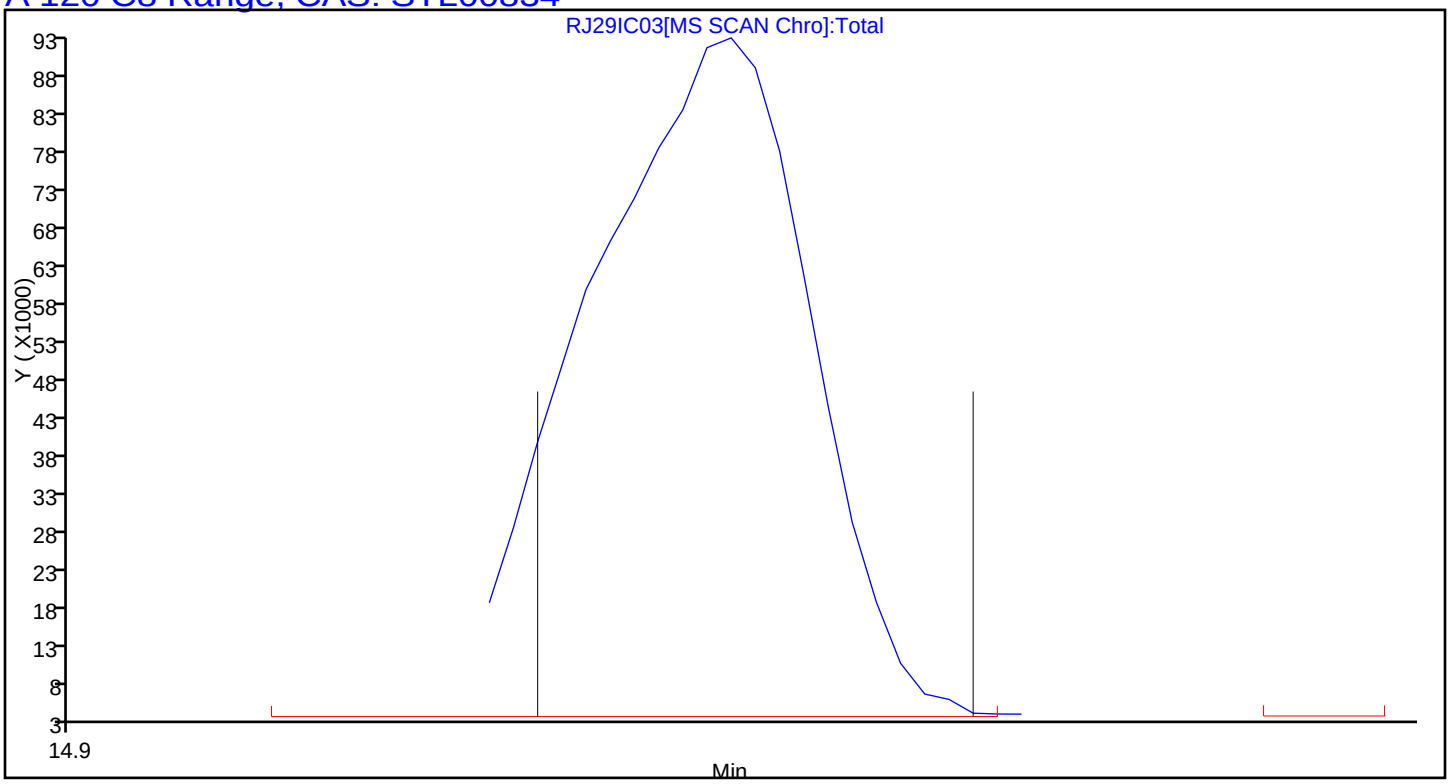


Report Date: 04-Nov-2015 15:47:43 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

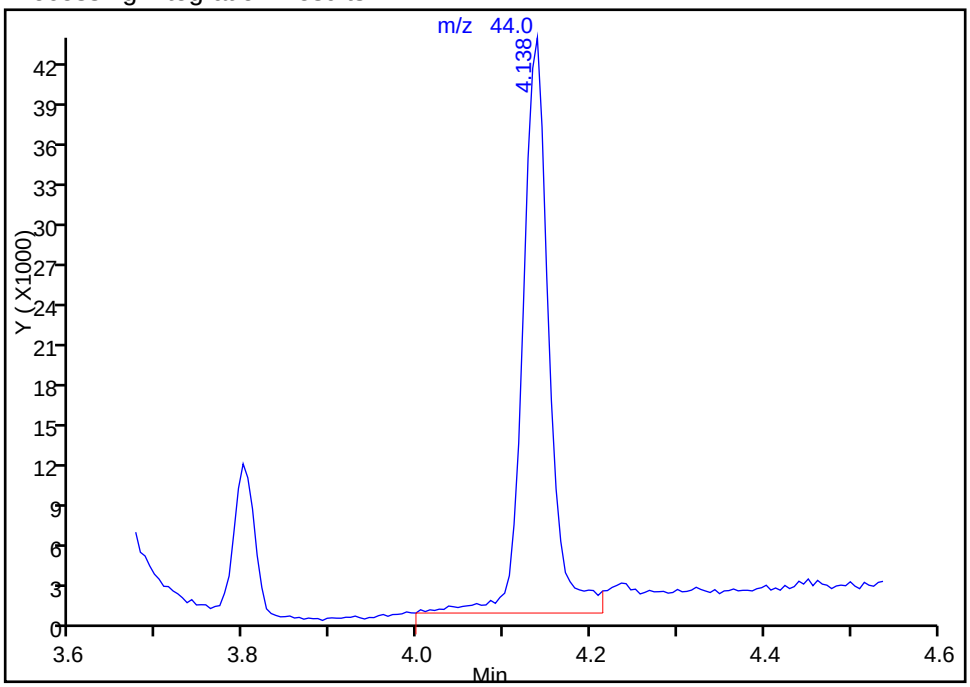
TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC03.D				
Injection Date:	29-Oct-2015 15:58:30	Instrument ID:	MR		
Lims ID:	IC L3				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

11 Acetaldehyde, CAS: 75-07-0

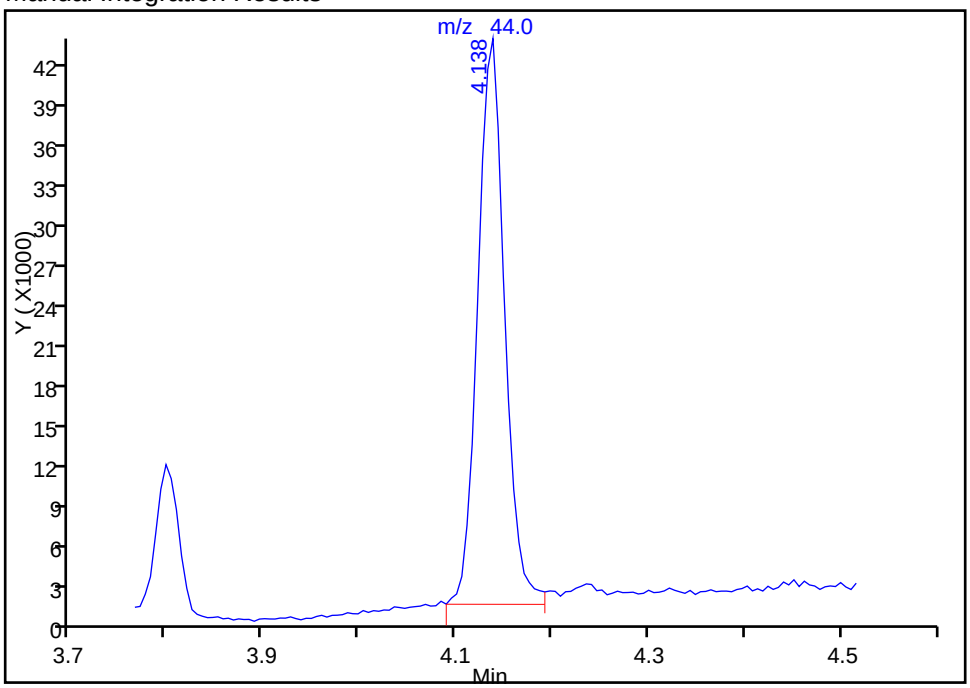
Processing Integration Results

RT: 4.14
Area: 90627
Amount: 1.206423
Amount Units: ppb v/v



Manual Integration Results

RT: 4.14
Area: 81685
Amount: 1.245442
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 04-Nov-2015 12:51:45
Audit Action: Manually Integrated
Audit Reason: Baseline

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 29-Oct-2015 16:50:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-005
Misc. Info.: 031530
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:54 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:37:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.414	8.431	-0.017	96	321950	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.609	10.619	-0.010	95	1636367	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1528749	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.587	19.590	-0.003	95	1123330	4.00	3.98	
6 Chlorodifluoromethane	67	3.766	3.777	-0.011	97	11500	0.4001	0.4120	
7 Propene	41	3.772	3.780	-0.008	79	50053	0.4001	0.4502	
8 Dichlorodifluoromethane	85	3.820	3.831	-0.011	99	102193	0.4001	0.4153	
9 Chloromethane	52	3.971	3.984	-0.013	99	15934	0.4001	0.4425	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.998	4.011	-0.013	93	88226	0.4001	0.3994	
11 Acetaldehyde	44	4.122	4.134	-0.012	96	187996	2.00	2.81	
12 Vinyl chloride	62	4.128	4.143	-0.015	99	49431	0.4001	0.4157	
14 Butadiene	54	4.214	4.224	-0.010	98	39201	0.4001	0.4177	
13 Butane	43	4.214	4.228	-0.014	92	71340	0.4001	0.4491	
15 Bromomethane	94	4.483	4.498	-0.015	99	47427	0.4001	0.4163	
16 Chloroethane	64	4.613	4.627	-0.014	95	24713	0.4001	0.4151	
17 Ethanol	31	4.742	4.758	-0.016	91	77917	2.00	2.47	
18 Vinyl bromide	106	4.877	4.895	-0.018	98	44562	0.4001	0.4021	
19 2-Methylbutane	43	4.947	4.957	-0.010	91	52575	0.4001	0.4201	
21 Acrolein	56	5.120	5.139	-0.019	92	13639	0.4001	0.3363	
20 Trichlorofluoromethane	101	5.131	5.144	-0.013	99	113117	0.4001	0.3982	
22 Acetonitrile	40	5.179	5.199	-0.020	99	22087	0.4001	0.4647	
23 Acetone	58	5.233	5.246	-0.013	97	145591	1.20	1.94	
24 Pentane	72	5.335	5.349	-0.014	95	8813	0.4001	0.4076	
25 Isopropyl alcohol	45	5.341	5.358	-0.017	93	197014	1.20	1.26	
26 Ethyl ether	31	5.481	5.493	-0.012	96	46144	0.4001	0.4295	
27 1,1-Dichloroethene	96	5.751	5.767	-0.016	99	43929	0.4001	0.3921	
28 Acrylonitrile	53	5.832	5.847	-0.015	96	33547	0.4001	0.3915	
29 2-Methyl-2-propanol	59	5.869	5.885	-0.016	96	82234	0.4001	0.3956	
30 1,1,2-Trichloro-1,2,2-trif	101	5.939	5.950	-0.011	96	95517	0.4001	0.3972	
31 Methylene Chloride	84	6.053	6.069	-0.016	96	46866	0.4001	0.4321	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.069	6.090	-0.021	96	39027	0.4001	0.4048	
33 Carbon disulfide	76	6.193	6.212	-0.019	98	128411	0.4001	0.3997	
34 trans-1,2-Dichloroethene	96	6.808	6.822	-0.014	99	45624	0.4001	0.3912	
35 2-Methylpentane	43	6.861	6.870	-0.009	95	93428	0.4001	0.4105	
36 Methyl tert-butyl ether	73	6.948	6.954	-0.006	97	115741	0.4001	0.3931	
37 1,1-Dichloroethane	63	7.185	7.200	-0.015	100	83597	0.4001	0.4007	
38 Vinyl acetate	43	7.298	7.310	-0.012	100	112614	0.4001	0.3842	
39 2-Butanone (MEK)	72	7.703	7.715	-0.012	99	32601	0.4001	0.4973	
40 Hexane	56	7.784	7.791	-0.007	88	37151	0.4001	0.3989	
141 Isopropyl ether	45	7.924	7.935	-0.011	98	160636	0.4001	0.4062	
41 cis-1,2-Dichloroethene	96	8.113	8.125	-0.012	94	47664	0.4001	0.3962	
42 Ethyl acetate	43	8.307	8.316	-0.009	99	99634	0.4001	0.3990	
43 Chloroform	83	8.447	8.461	-0.014	96	94906	0.4001	0.4021	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	95	133681	0.4001	0.3946	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	94	50309	0.4001	0.4076	
45 1,1,1-Trichloroethane	97	9.444	9.451	-0.007	96	90247	0.4001	0.3972	
46 1,2-Dichloroethane	62	9.520	9.530	-0.010	97	61692	0.4001	0.4036	
49 n-Butanol	31	10.021	10.023	-0.002	60	16858	0.4001	0.4385	
47 Benzene	78	10.027	10.041	-0.014	97	139431	0.4001	0.4015	
48 Cyclohexane	69	10.054	10.062	-0.008	96	21134	0.4001	0.4032	
50 Carbon tetrachloride	117	10.070	10.077	-0.007	98	78407	0.4001	0.3504	
51 2,3-Dimethylpentane	71	10.210	10.217	-0.007	90	30174	0.4001	0.3903	
52 Thiophene	84	10.302	10.313	-0.011	96	75936	0.4001	0.3957	
142 Tert-amyl methyl ether	73	10.561	10.568	-0.007	97	137313	0.4001	0.4287	
53 Isooctane	57	10.906	10.911	-0.005	99	228529	0.4001	0.3946	
54 n-Heptane	71	11.332	11.340	-0.008	91	47947	0.4001	0.3954	
55 1,2-Dichloropropane	63	11.337	11.346	-0.009	91	54043	0.4001	0.3984	
56 Trichloroethene	130	11.402	11.410	-0.008	98	64777	0.4001	0.3957	
57 Dibromomethane	93	11.461	11.467	-0.006	95	54275	0.4001	0.3888	
58 Dichlorobromomethane	83	11.645	11.655	-0.011	100	90502	0.4001	0.3858	
59 1,4-Dioxane	88	11.661	11.668	-0.007	89	20281	0.4001	0.3817	
60 Methyl methacrylate	41	11.796	11.801	-0.005	92	56861	0.4001	0.3922	
61 Methylcyclohexane	83	12.340	12.347	-0.007	95	98524	0.4001	0.3938	
62 4-Methyl-2-pentanone (MIBK	43	12.825	12.831	-0.006	97	150500	0.4001	0.4554	
63 cis-1,3-Dichloropropene	75	12.885	12.891	-0.006	93	75486	0.4001	0.3878	
64 trans-1,3-Dichloropropene	75	13.796	13.804	-0.008	98	67814	0.4001	0.3843	
65 Toluene	91	13.979	13.983	-0.004	94	162397	0.4001	0.3914	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	98	49013	0.4001	0.4008	
67 2-Methylthiophene	97	14.174	14.179	-0.005	98	131497	0.4001	0.3897	
68 3-Methylthiophene	97	14.449	14.457	-0.008	99	129795	0.4001	0.3894	
69 2-Hexanone	58	14.632	14.637	-0.005	93	57979	0.4001	0.3967	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	87069	0.4001	0.3593	
70 n-Octane	85	15.052	15.053	-0.001	92	54155	0.4001	0.3932	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	98	87383	0.4001	0.3842	
73 Tetrachloroethene	129	15.597	15.602	-0.005	97	58771	0.4001	0.3884	
74 Chlorobenzene	112	16.913	16.918	-0.005	95	131595	0.4001	0.3886	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	95	142689	0.4001	0.4077	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	209893	0.4001	0.3875	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	98	153800	0.4001	0.3865	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	325857	0.8002	0.7823	
79 Bromoform	173	18.326	18.330	-0.004	95	68888	0.4001	0.3045	
80 Styrene	104	18.455	18.457	-0.002	98	113039	0.4001	0.3692	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.541	18.547	-0.006	91	112566	0.4001	0.4081	
82 o-Xylene	91	18.558	18.559	-0.001	99	171088	0.4001	0.3962	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	118678	0.4001	0.3824	
84 1,2,3-Trichloropropane	110	19.350	19.352	-0.002	98	36471	0.4001	0.3869	
85 Isopropylbenzene	105	19.587	19.589	-0.002	67	239652	0.4001	0.3907	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	66901	0.4001	0.3805	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	92	61434	0.4001	0.3859	
88 4-Ethyltoluene	105	20.844	20.844	0.000	98	234195	0.4001	0.3861	
89 1,3,5-Trimethylbenzene	120	21.000	21.000	0.000	93	111250	0.4001	0.3825	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	89	85565	0.4001	0.3453	
91 n-Decane	57	21.723	21.726	-0.003	90	138933	0.4001	0.3901	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	213437	0.4001	0.3850	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	96	201199	0.4001	0.3910	
94 1,3-Dichlorobenzene	146	22.294	22.300	-0.006	98	140434	0.4001	0.3792	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	293675	0.4001	0.3930	
96 Benzyl chloride	91	22.467	22.469	-0.002	98	172934	0.4001	0.3700	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	95	143679	0.4001	0.3760	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	97	258646	0.4001	0.3844	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	162536	0.4001	0.3917	
100 Butylcyclohexane	83	22.979	22.980	-0.001	94	158981	0.4001	0.4008	
101 1,2-Dichlorobenzene	146	23.222	23.227	-0.005	96	139420	0.4001	0.3829	
102 2,3-Dihydroindene	117	23.254	23.259	-0.005	94	195828	0.4001	0.3890	
103 Indene	116	23.524	23.527	-0.003	91	142914	0.4001	0.3910	
104 n-Butylbenzene	91	23.670	23.674	-0.004	98	251957	0.4001	0.4053	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	98	195517	0.4001	0.3954	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	95	54604	0.4001	0.3398	
106 Undecane	57	24.602	24.605	-0.003	96	165440	0.4001	0.4034	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	97	226206	0.4001	0.3980	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	138635	0.4001	0.4017	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	97	191192	0.4001	0.4039	
110 Dodecane	57	27.142	27.145	-0.003	97	160737	0.4001	0.4185	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	126661	0.4001	0.3809	
112 Naphthalene	128	27.423	27.426	-0.003	99	304848	0.4001	0.3915	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	99	199335	0.4001	0.4376	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	94	95459	0.4001	0.3770	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	95	118695	0.4001	0.3728	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	136777	1.25	1.31	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	100	112376	1.25	1.36	
A 118 C6 Range	1	7.797	(7.724-7.843)		0	317170	0.4001	0.4229	
A 119 Toluene Range	1	13.970	(13.920-14.010)		0	393660	0.4001	0.3899	
A 120 C8 Range	1	15.052	(14.993-15.112)		0	820463	0.4001	0.3932	
S 124 Xylenes, Total	100				0		1.20	1.18	
S 145 1,2-Dichloroethene, Total	1				0		0.8002	0.7873	

Reagents:

CDN2C20X1.0_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

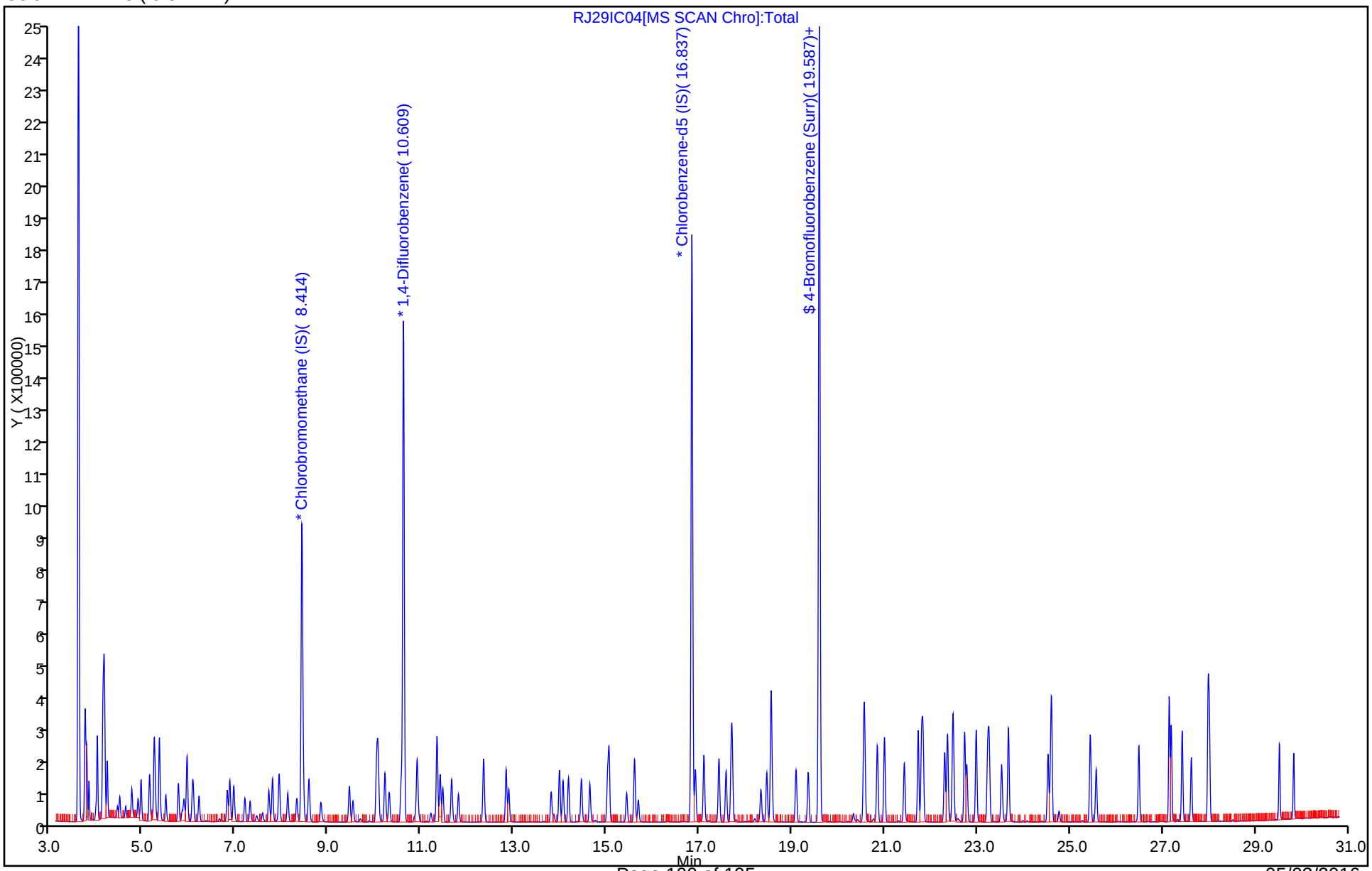
Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D

Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

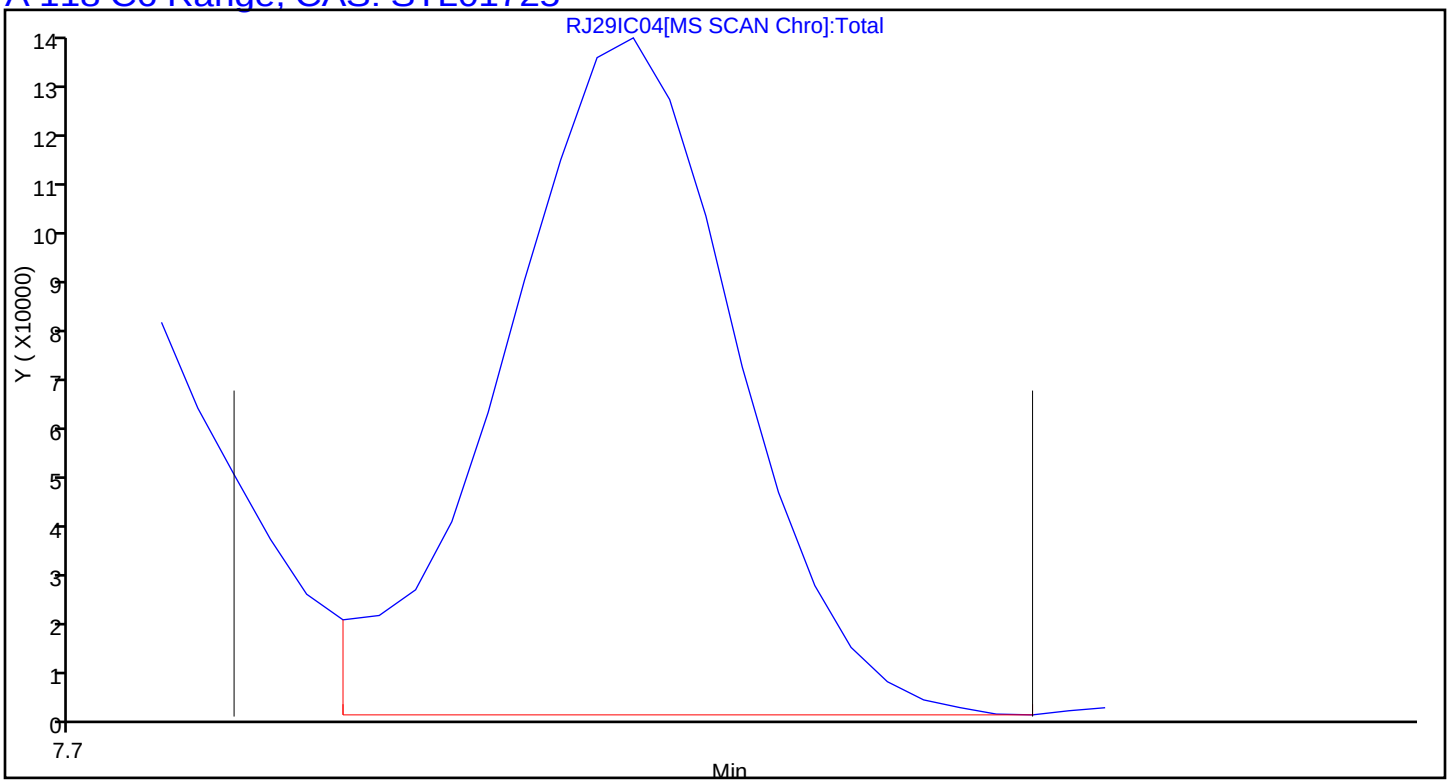


Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D				
Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

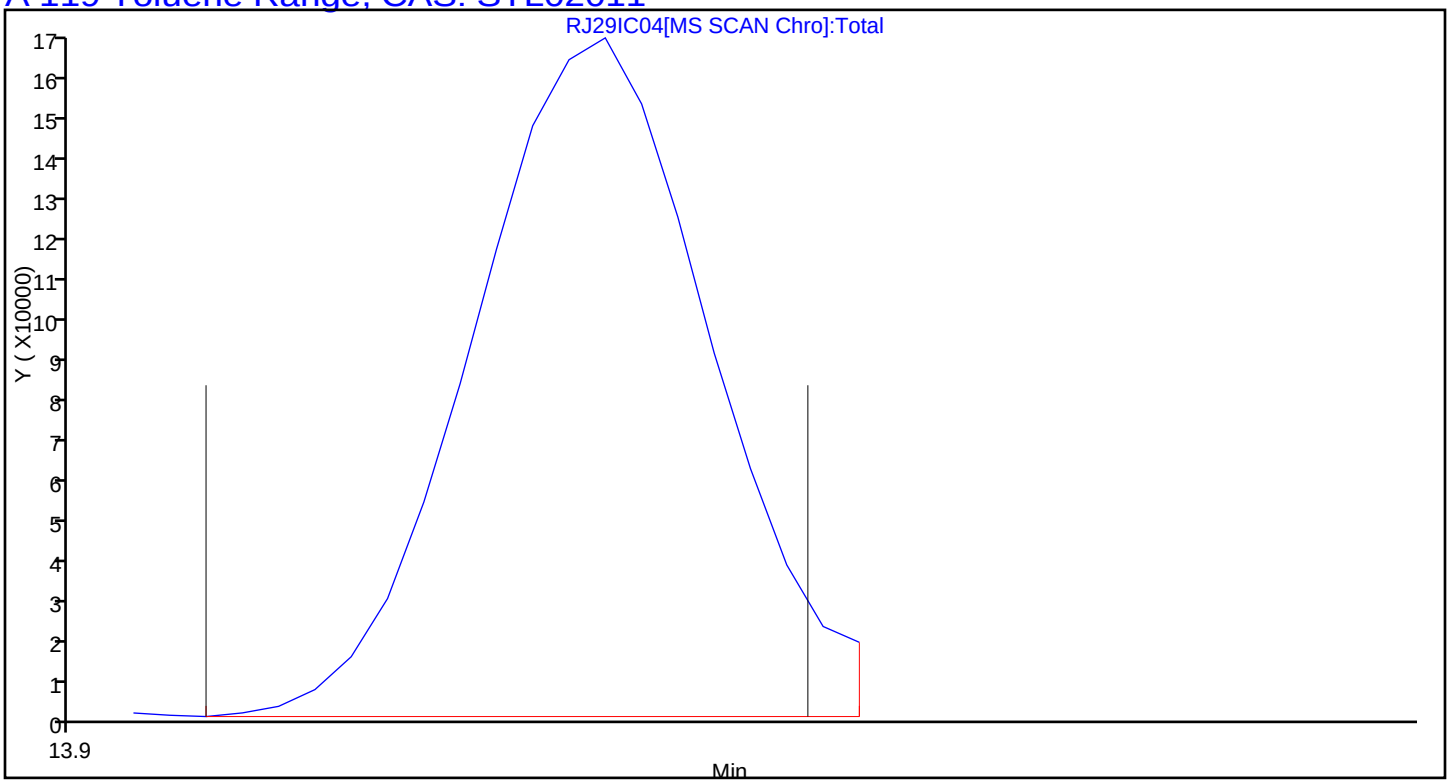


Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D				
Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

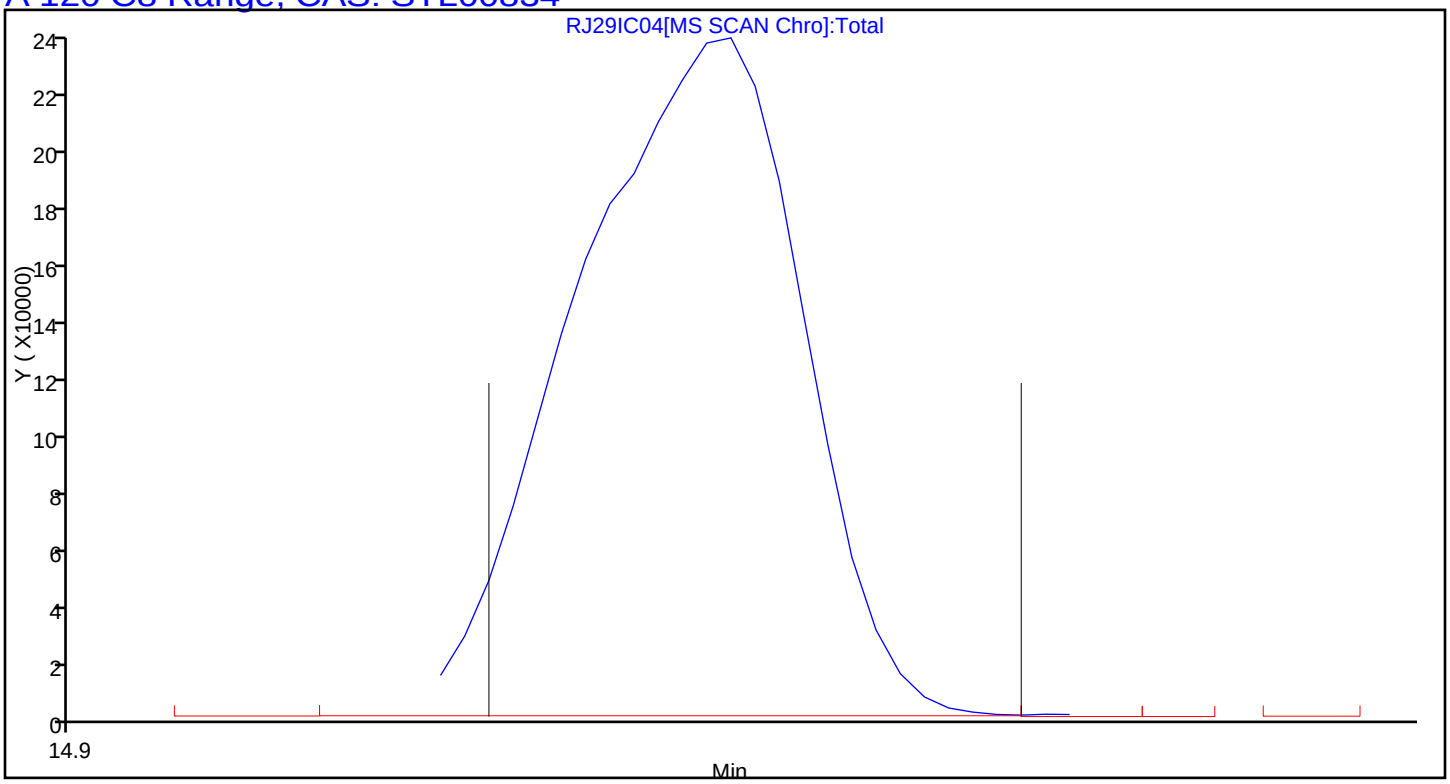


Report Date: 04-Nov-2015 15:47:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC04.D				
Injection Date:	29-Oct-2015 16:50:30	Instrument ID:	MR		
Lims ID:	IC L4				
Client ID:					
Operator ID:		ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 29-Oct-2015 17:41:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-006
Misc. Info.: 031528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:07 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:37:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.425	8.431	-0.006	93	343123	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.615	10.619	-0.004	94	1723192	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.843	16.842	0.001	86	1625049	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.588	19.590	-0.002	91	1207289	4.00	4.02	
6 Chlorodifluoromethane	67	3.772	3.777	-0.005	96	31155	1.00	1.05	
7 Propene	41	3.772	3.780	-0.008	76	115607	1.00	0.9756	
8 Dichlorodifluoromethane	85	3.826	3.831	-0.005	100	300186	1.00	1.14	
9 Chloromethane	52	3.977	3.984	-0.007	99	41615	1.00	1.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.004	4.011	-0.007	93	251378	1.00	1.07	
11 Acetaldehyde	44	4.128	4.134	-0.006	93	365011	4.99	5.11	
12 Vinyl chloride	62	4.133	4.143	-0.010	98	140975	1.00	1.11	
14 Butadiene	54	4.219	4.224	-0.005	95	112114	1.00	1.12	
13 Butane	43	4.219	4.228	-0.009	93	198146	1.00	1.17	
15 Bromomethane	94	4.489	4.498	-0.009	99	131128	1.00	1.08	
16 Chloroethane	64	4.618	4.627	-0.009	94	70143	1.00	1.11	
17 Ethanol	31	4.753	4.758	-0.005	90	194719	4.99	5.79	
18 Vinyl bromide	106	4.888	4.895	-0.007	99	126897	1.00	1.07	
19 2-Methylbutane	43	4.953	4.957	-0.004	91	143893	1.00	1.08	
21 Acrolein	56	5.136	5.139	-0.003	92	49802	1.00	1.15	
20 Trichlorofluoromethane	101	5.136	5.144	-0.008	99	319225	1.00	1.05	
22 Acetonitrile	40	5.190	5.199	-0.009	100	55951	1.00	1.10	
23 Acetone	58	5.238	5.246	-0.008	97	264563	3.00	3.31	
24 Pentane	72	5.346	5.349	-0.003	94	24712	1.00	1.07	
25 Isopropyl alcohol	45	5.346	5.358	-0.012	92	537637	3.00	3.23	
26 Ethyl ether	31	5.481	5.493	-0.012	97	126823	1.00	1.11	
27 1,1-Dichloroethene	96	5.756	5.767	-0.011	98	123447	1.00	1.03	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	94631	1.00	1.04	
29 2-Methyl-2-propanol	59	5.875	5.885	-0.010	94	231292	1.00	1.04	
30 1,1,2-Trichloro-1,2,2-trif	101	5.945	5.950	-0.005	97	265820	1.00	1.04	
31 Methylene Chloride	84	6.064	6.069	-0.005	96	118891	1.00	1.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	96	104079	1.00	1.01	
33 Carbon disulfide	76	6.204	6.212	-0.008	98	357351	1.00	1.04	
34 trans-1,2-Dichloroethene	96	6.818	6.822	-0.004	99	129139	1.00	1.04	
35 2-Methylpentane	43	6.867	6.870	-0.003	95	258059	1.00	1.06	
36 Methyl tert-butyl ether	73	6.948	6.954	-0.006	97	329127	1.00	1.05	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	234434	1.00	1.05	
38 Vinyl acetate	43	7.304	7.310	-0.006	100	329497	1.00	1.05	
39 2-Butanone (MEK)	72	7.708	7.715	-0.007	100	69440	1.00	0.99	
40 Hexane	56	7.789	7.791	-0.002	88	102921	1.00	1.04	
141 Isopropyl ether	45	7.929	7.935	-0.006	98	443603	1.00	1.05	
41 cis-1,2-Dichloroethene	96	8.118	8.125	-0.007	94	133371	1.00	1.04	
42 Ethyl acetate	43	8.312	8.316	-0.004	99	281552	1.00	1.06	
43 Chloroform	83	8.458	8.461	-0.003	97	262490	1.00	1.04	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	95	379812	1.00	1.05	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	94	140980	1.00	1.07	
45 1,1,1-Trichloroethane	97	9.450	9.451	-0.001	97	253256	1.00	1.05	
46 1,2-Dichloroethane	62	9.525	9.530	-0.005	97	171547	1.00	1.07	
49 n-Butanol	31	10.016	10.023	-0.007	59	41205	1.00	1.02	
47 Benzene	78	10.038	10.041	-0.003	97	378365	1.00	1.03	
48 Cyclohexane	69	10.059	10.062	-0.003	97	58112	1.00	1.05	
50 Carbon tetrachloride	117	10.075	10.077	-0.002	98	226936	1.00	0.9632	
51 2,3-Dimethylpentane	71	10.216	10.217	-0.001	90	86149	1.00	1.06	
52 Thiophene	84	10.307	10.313	-0.006	96	213138	1.00	1.05	
142 Tert-amyl methyl ether	73	10.566	10.568	-0.002	98	357259	1.00	1.06	
53 Isooctane	57	10.906	10.911	-0.005	99	639131	1.00	1.05	
54 n-Heptane	71	11.337	11.340	-0.003	91	135077	1.00	1.06	
55 1,2-Dichloropropane	63	11.343	11.346	-0.003	91	149722	1.00	1.05	
56 Trichloroethene	130	11.407	11.410	-0.003	97	176433	1.00	1.02	
57 Dibromomethane	93	11.467	11.467	0.000	93	150967	1.00	1.03	
58 Dichlorobromomethane	83	11.650	11.655	-0.005	100	261330	1.00	1.06	
59 1,4-Dioxane	88	11.661	11.668	-0.007	87	57942	1.00	1.04	
60 Methyl methacrylate	41	11.796	11.801	-0.005	91	160388	1.00	1.05	
61 Methylcyclohexane	83	12.346	12.347	-0.001	95	274918	1.00	1.04	
62 4-Methyl-2-pentanone (MIBK	43	12.826	12.831	-0.005	97	349766	1.00	1.00	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	93	217599	1.00	1.06	
64 trans-1,3-Dichloropropene	75	13.802	13.804	-0.002	98	197119	1.00	1.05	
65 Toluene	91	13.980	13.983	-0.003	94	457420	1.00	1.04	
66 1,1,2-Trichloroethane	83	14.055	14.060	-0.005	98	133607	1.00	1.03	
67 2-Methylthiophene	97	14.179	14.179	0.000	97	375013	1.00	1.05	
68 3-Methylthiophene	97	14.454	14.457	-0.003	99	370606	1.00	1.05	
69 2-Hexanone	58	14.632	14.637	-0.005	94	157606	1.00	1.01	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	267388	1.00	1.04	
70 n-Octane	85	15.053	15.053	0.000	93	152689	1.00	1.04	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	99	250202	1.00	1.03	
73 Tetrachloroethene	129	15.603	15.602	0.001	97	165846	1.00	1.03	
74 Chlorobenzene	112	16.918	16.918	0.000	95	368572	1.00	1.02	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	96	391276	1.00	1.05	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	594816	1.00	1.03	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	440948	1.00	1.04	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	925273	2.00	2.09	
79 Bromoform	173	18.331	18.330	0.001	96	244609	1.00	1.02	
80 Styrene	104	18.455	18.457	-0.002	99	341358	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	92	312693	1.00	1.07	
82 o-Xylene	91	18.558	18.559	-0.001	99	482802	1.00	1.05	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	344528	1.00	1.04	
84 1,2,3-Trichloropropane	110	19.350	19.352	-0.002	97	104894	1.00	1.05	
85 Isopropylbenzene	105	19.588	19.589	-0.001	75	680222	1.00	1.04	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	192151	1.00	1.03	
87 2-Chlorotoluene	126	20.569	20.572	-0.003	92	174955	1.00	1.03	
88 4-Ethyltoluene	105	20.844	20.844	0.000	99	670475	1.00	1.04	
89 1,3,5-Trimethylbenzene	120	20.995	21.000	-0.005	94	320773	1.00	1.04	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	90	256646	1.00	0.9744	
91 n-Decane	57	21.723	21.726	-0.003	90	391086	1.00	1.03	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	93	612021	1.00	1.04	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	95	568468	1.00	1.04	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	396116	1.00	1.01	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	828918	1.00	1.04	
96 Benzyl chloride	91	22.467	22.469	-0.002	99	507273	1.00	1.02	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	94	409445	1.00	1.01	
98 4-Isopropyltoluene	119	22.726	22.729	-0.003	97	732338	1.00	1.02	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	454623	1.00	1.03	
100 Butylcyclohexane	83	22.979	22.980	-0.001	94	435406	1.00	1.03	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	96	387634	1.00	1.00	
102 2,3-Dihydroindene	117	23.260	23.259	0.001	94	546977	1.00	1.02	
103 Indene	116	23.524	23.527	-0.003	92	377268	1.00	0.9711	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	692899	1.00	1.05	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	521679	1.00	0.99	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	95	171681	1.00	1.01	
106 Undecane	57	24.602	24.605	-0.003	96	444720	1.00	1.02	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	98	586026	1.00	0.9700	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	351280	1.00	0.9576	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	464848	1.00	0.9238	
110 Dodecane	57	27.142	27.145	-0.003	98	345871	1.00	0.8471	
111 1,2,4-Trichlorobenzene	180	27.185	27.189	-0.004	94	308083	1.00	0.8715	
112 Naphthalene	128	27.423	27.426	-0.003	99	683319	1.00	0.8255	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	388506	1.00	0.8023	
114 Hexachlorobutadiene	225	27.984	27.986	-0.002	95	242214	1.00	0.8999	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	96	261864	1.00	0.7736	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	189201	3.12	1.70	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	145609	3.12	1.66	
A 118 C6 Range	1	7.802	(7.730-7.848)		0	859008	1.00	1.09	
A 119 Toluene Range	1	13.969	(13.909-14.031)		0	1104100	1.00	1.04	
A 120 C8 Range	1	15.053	(14.993-15.112)		0	2239894	1.00	1.02	
S 124 Xylenes, Total	100				0		3.00	3.14	
S 145 1,2-Dichloroethene, Total	1				0		2.00	2.08	

Reagents:

CDN2C00X05_00001	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

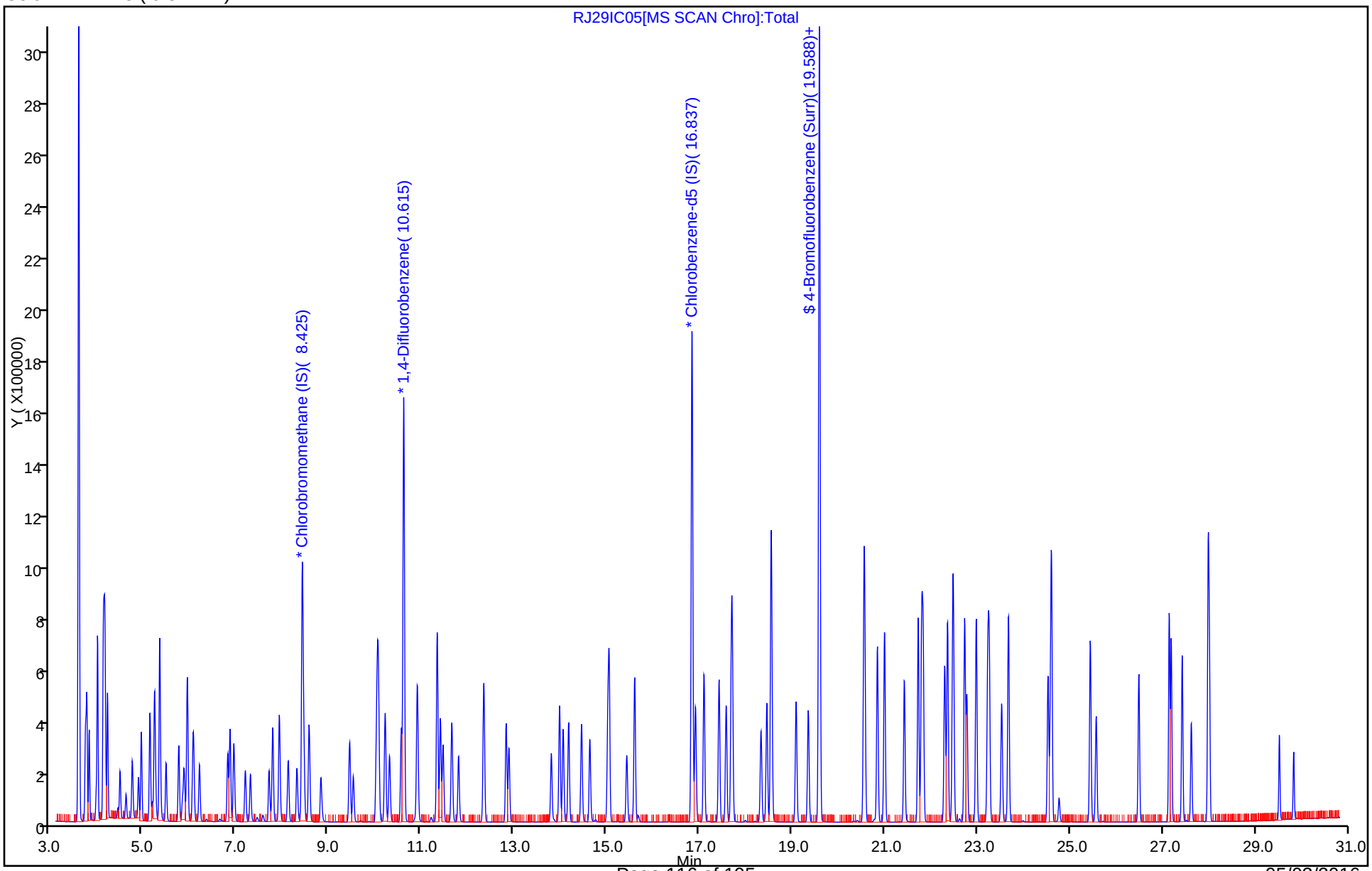
Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D

Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

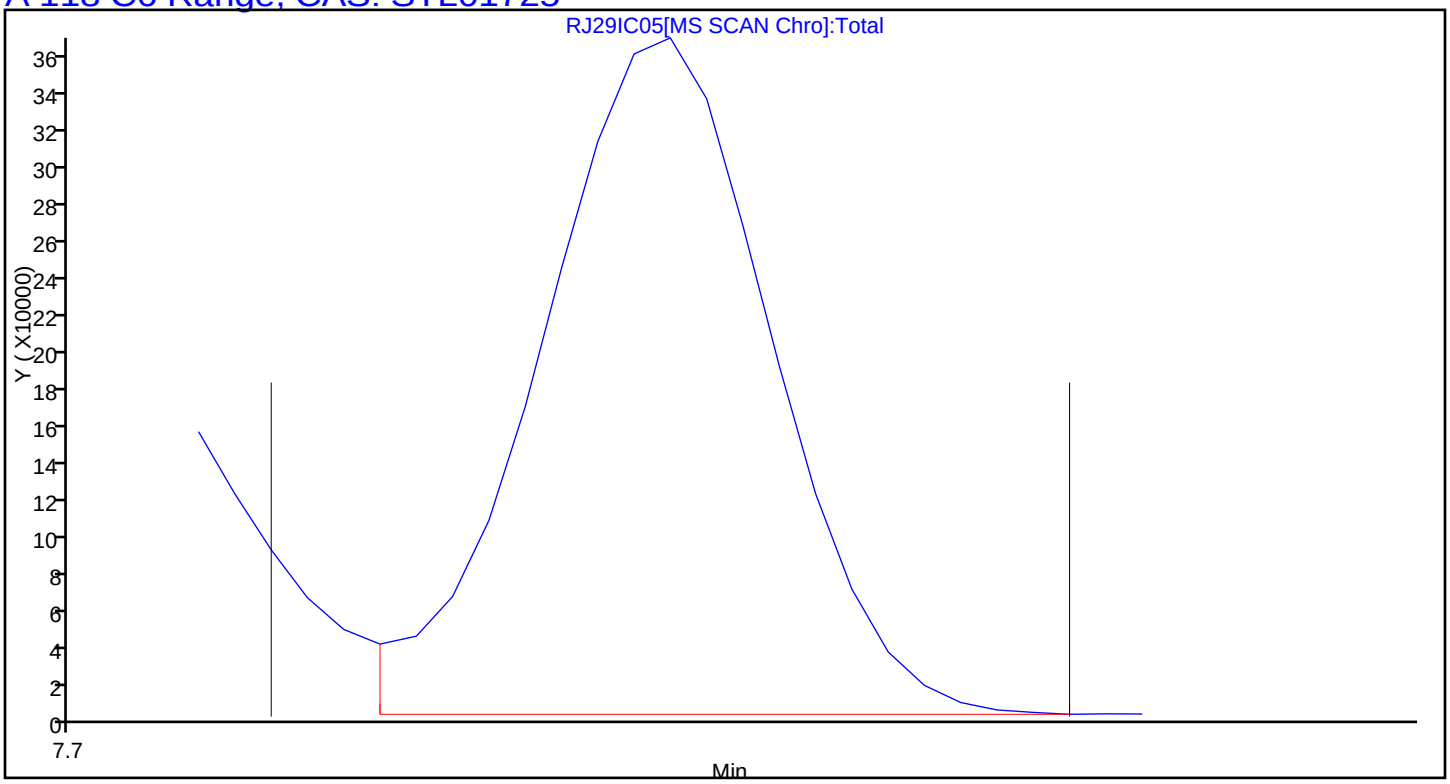


Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D				
Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

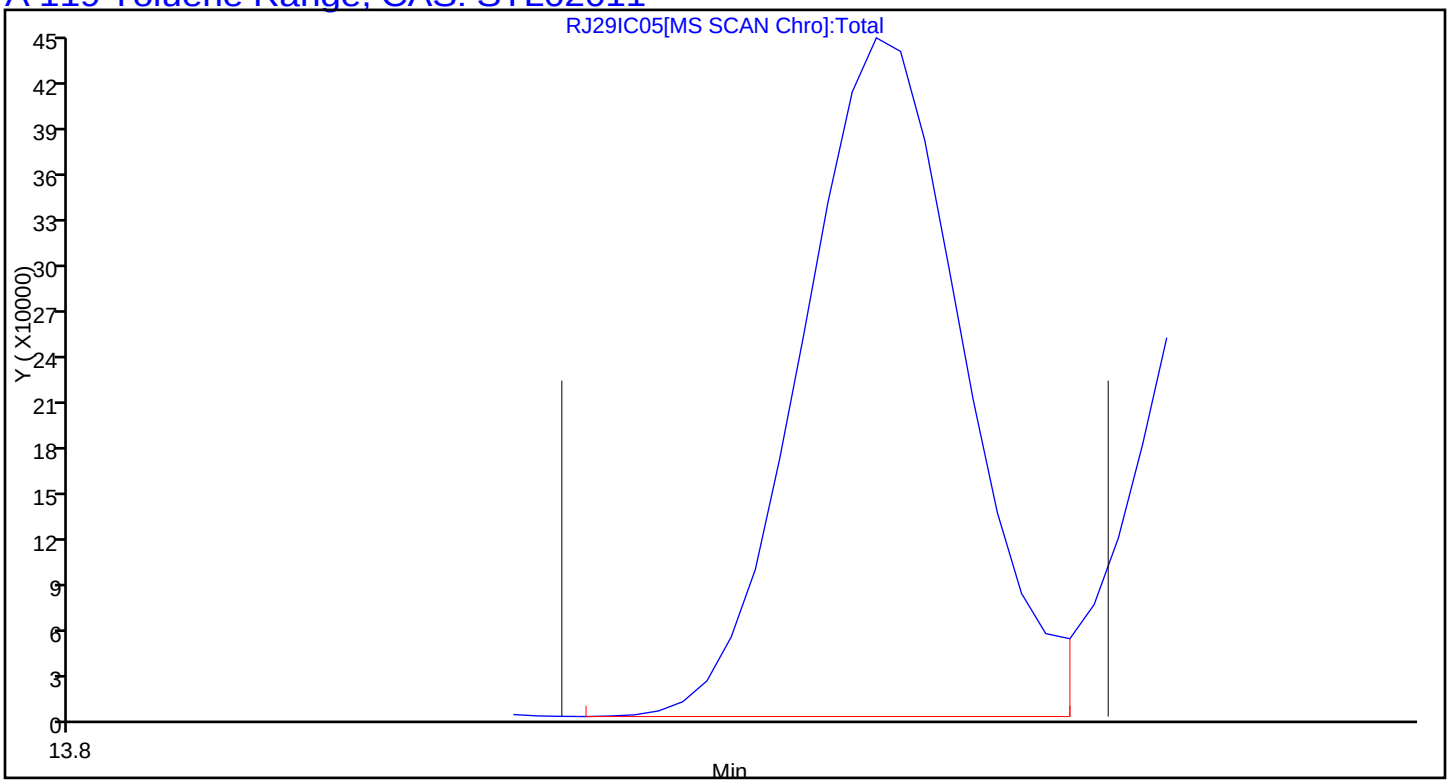


Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D				
Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

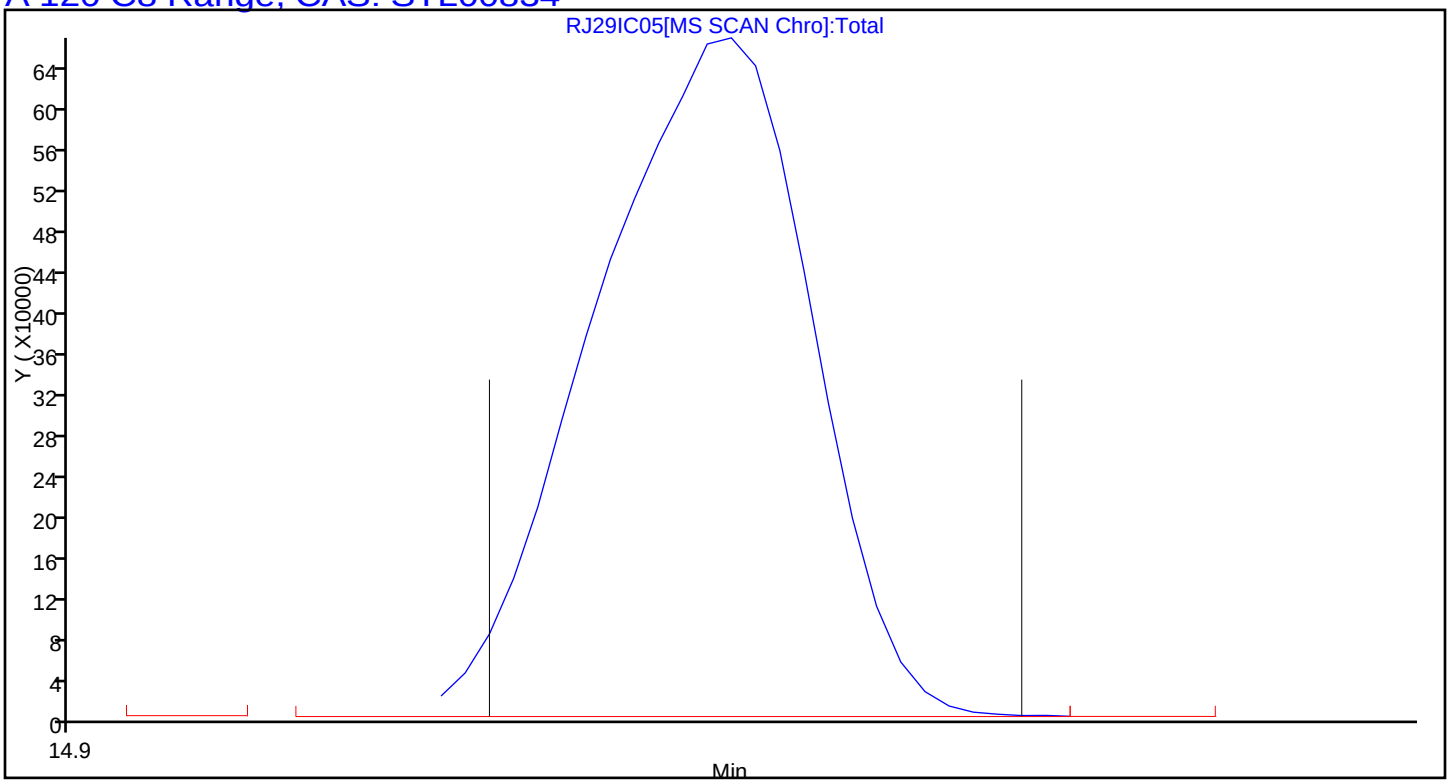


Report Date: 04-Nov-2015 15:48:09 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC05.D				
Injection Date:	29-Oct-2015 17:41:30	Instrument ID:	MR		
Lims ID:	IC L5				
Client ID:					
Operator ID:		ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 29-Oct-2015 18:33:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-007
Misc. Info.: 031528
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:15 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: tajh Date: 30-Oct-2015 10:04:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.431	8.431	0.000	93	382463	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.620	10.619	0.001	94	1942786	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.837	16.842	-0.005	86	1806380	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.593	19.590	0.003	92	1364359	4.00	4.09	
6 Chlorodifluoromethane	67	3.766	3.777	-0.011	96	64578	2.00	1.95	
7 Propene	41	3.772	3.780	-0.008	98	228078	2.00	1.73	
8 Dichlorodifluoromethane	85	3.825	3.831	-0.006	100	540865	2.00	1.85	
9 Chloromethane	52	3.976	3.984	-0.008	99	86227	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.003	4.011	-0.008	92	540208	2.00	2.06	
11 Acetaldehyde	44	4.127	4.134	-0.007	94	703006	9.99	8.84	
12 Vinyl chloride	62	4.133	4.143	-0.010	98	278017	2.00	1.97	
14 Butadiene	54	4.214	4.224	-0.010	95	224206	2.00	2.01	
13 Butane	43	4.219	4.228	-0.009	92	381680	2.00	2.02	
15 Bromomethane	94	4.489	4.498	-0.009	99	265717	2.00	1.96	
16 Chloroethane	64	4.618	4.627	-0.009	94	137380	2.00	1.94	
17 Ethanol	31	4.753	4.758	-0.005	88	367698	9.99	9.80	
18 Vinyl bromide	106	4.888	4.895	-0.007	99	262658	2.00	2.00	
19 2-Methylbutane	43	4.947	4.957	-0.010	90	301828	2.00	2.03	
21 Acrolein	56	5.130	5.139	-0.009	92	105359	2.00	2.19	
20 Trichlorofluoromethane	101	5.136	5.144	-0.008	99	663218	2.00	1.97	
22 Acetonitrile	40	5.190	5.199	-0.009	99	114829	2.00	2.03	
23 Acetone	58	5.233	5.246	-0.013	97	553085	5.99	6.20	
24 Pentane	72	5.341	5.349	-0.008	96	51444	2.00	2.00	
25 Isopropyl alcohol	45	5.352	5.358	-0.006	96	1134762	5.99	6.11	
26 Ethyl ether	31	5.481	5.493	-0.012	95	259696	2.00	2.03	
27 1,1-Dichloroethene	96	5.761	5.767	-0.006	97	260494	2.00	1.96	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	202126	2.00	1.99	
29 2-Methyl-2-propanol	59	5.875	5.885	-0.010	94	492493	2.00	1.99	
30 1,1,2-Trichloro-1,2,2-trif	101	5.939	5.950	-0.011	98	565102	2.00	1.98	
31 Methylene Chloride	84	6.063	6.069	-0.006	96	243572	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.085	6.090	-0.005	96	217571	2.00	1.90	
33 Carbon disulfide	76	6.204	6.212	-0.008	98	745897	2.00	1.95	
34 trans-1,2-Dichloroethene	96	6.818	6.822	-0.004	99	273041	2.00	1.97	
35 2-Methylpentane	43	6.861	6.870	-0.009	95	542930	2.00	2.01	
36 Methyl tert-butyl ether	73	6.942	6.954	-0.012	97	697771	2.00	1.99	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	488209	2.00	1.97	
38 Vinyl acetate	43	7.304	7.310	-0.006	100	721457	2.00	2.07	
39 2-Butanone (MEK)	72	7.708	7.715	-0.007	99	149730	2.00	1.92	
40 Hexane	56	7.789	7.791	-0.002	87	219369	2.00	1.98	
141 Isopropyl ether	45	7.929	7.935	-0.006	98	937118	2.00	1.99	
41 cis-1,2-Dichloroethene	96	8.123	8.125	-0.002	94	280799	2.00	1.96	
42 Ethyl acetate	43	8.307	8.316	-0.009	100	599775	2.00	2.02	
43 Chloroform	83	8.463	8.461	0.002	97	555413	2.00	1.98	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	94	817040	2.00	2.03	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	95	296262	2.00	2.02	
45 1,1,1-Trichloroethane	97	9.450	9.451	-0.001	96	550734	2.00	2.04	
46 1,2-Dichloroethane	62	9.531	9.530	0.001	97	362286	2.00	2.00	
49 n-Butanol	31	10.011	10.023	-0.012	57	92235	2.00	2.02	
47 Benzene	78	10.037	10.041	-0.004	97	802365	2.00	1.95	
48 Cyclohexane	69	10.059	10.062	-0.003	97	124517	2.00	2.00	
50 Carbon tetrachloride	117	10.075	10.077	-0.002	95	496662	2.00	1.87	
51 2,3-Dimethylpentane	71	10.215	10.217	-0.002	91	183567	2.00	2.00	
52 Thiophene	84	10.312	10.313	-0.001	96	453857	2.00	1.99	
142 Tert-amyl methyl ether	73	10.561	10.568	-0.007	98	760733	2.00	2.00	
53 Isooctane	57	10.906	10.911	-0.005	99	1374170	2.00	2.00	
54 n-Heptane	71	11.337	11.340	-0.003	91	292044	2.00	2.03	
55 1,2-Dichloropropane	63	11.342	11.346	-0.004	92	321938	2.00	2.00	
56 Trichloroethene	130	11.407	11.410	-0.003	97	385332	2.00	1.98	
57 Dibromomethane	93	11.466	11.467	-0.001	92	329232	2.00	1.99	
58 Dichlorobromomethane	83	11.655	11.655	0.000	100	573340	2.00	2.06	
59 1,4-Dioxane	88	11.661	11.668	-0.007	85	127486	2.00	2.02	
60 Methyl methacrylate	41	11.795	11.801	-0.006	91	354887	2.00	2.06	
61 Methylcyclohexane	83	12.345	12.347	-0.002	95	595284	2.00	2.00	
62 4-Methyl-2-pentanone (MIBK	43	12.825	12.831	-0.006	96	710656	2.00	1.81	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	93	475494	2.00	2.06	
64 trans-1,3-Dichloropropene	75	13.801	13.804	-0.003	98	433670	2.00	2.08	
65 Toluene	91	13.979	13.983	-0.004	94	983177	2.00	2.01	
66 1,1,2-Trichloroethane	83	14.060	14.060	0.000	98	288635	2.00	2.00	
67 2-Methylthiophene	97	14.179	14.179	0.000	97	811250	2.00	2.03	
68 3-Methylthiophene	97	14.454	14.457	-0.003	99	799773	2.00	2.03	
69 2-Hexanone	58	14.632	14.637	-0.005	94	351277	2.00	2.03	
71 Chlorodibromomethane	129	15.020	15.023	-0.003	98	609154	2.00	2.13	
70 n-Octane	85	15.052	15.053	-0.001	92	338144	2.00	2.08	
72 Ethylene Dibromide	107	15.430	15.432	-0.002	98	552400	2.00	2.06	
73 Tetrachloroethene	129	15.602	15.602	0.000	97	360384	2.00	2.02	
74 Chlorobenzene	112	16.918	16.918	0.000	95	782617	2.00	1.96	
75 2,3-Dimethylheptane	43	17.096	17.100	-0.004	95	834570	2.00	2.02	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	1267112	2.00	1.98	
77 2-Ethylthiophene	97	17.576	17.579	-0.003	97	950899	2.00	2.02	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	1976245	3.99	4.02	
79 Bromoform	173	18.331	18.330	0.001	96	577227	2.00	2.16	
80 Styrene	104	18.455	18.457	-0.002	98	756830	2.00	2.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	93	674919	2.00	2.07	
82 o-Xylene	91	18.557	18.559	-0.002	99	1032792	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	745634	2.00	2.03	
84 1,2,3-Trichloropropane	110	19.350	19.352	-0.002	98	223126	2.00	2.00	
85 Isopropylbenzene	105	19.587	19.589	-0.002	95	1472720	2.00	2.03	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	421420	2.00	2.03	
87 2-Chlorotoluene	126	20.574	20.572	0.002	92	377459	2.00	2.01	
88 4-Ethyltoluene	105	20.844	20.844	0.000	98	1452257	2.00	2.03	
89 1,3,5-Trimethylbenzene	120	21.000	21.000	0.000	94	701459	2.00	2.04	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	90	593385	2.00	2.03	
91 n-Decane	57	21.723	21.726	-0.003	90	858341	2.00	2.04	
92 tert-Butylbenzene	119	21.798	21.802	-0.004	95	1337992	2.00	2.04	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	96	1247281	2.00	2.05	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	98	883117	2.00	2.02	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	1815931	2.00	2.06	
96 Benzyl chloride	91	22.467	22.469	-0.002	98	1151872	2.00	2.09	
97 1,4-Dichlorobenzene	146	22.483	22.487	-0.004	96	911694	2.00	2.02	
98 4-Isopropyltoluene	119	22.731	22.729	0.002	97	1637122	2.00	2.06	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	996580	2.00	2.03	
100 Butylcyclohexane	83	22.979	22.980	-0.001	95	962444	2.00	2.05	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	96	864059	2.00	2.01	
102 2,3-Dihydroindene	117	23.260	23.259	0.001	95	1216111	2.00	2.04	
103 Indene	116	23.529	23.527	0.002	93	868075	2.00	2.01	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	1534953	2.00	2.09	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	1209859	2.00	2.07	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	95	418662	2.00	2.21	
106 Undecane	57	24.602	24.605	-0.003	96	1032668	2.00	2.13	
107 1,2,4,5-Tetramethylbenzene	119	25.443	25.441	0.002	98	1390405	2.00	2.07	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	839658	2.00	2.06	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	1147426	2.00	2.05	
110 Dodecane	57	27.142	27.145	-0.003	98	974504	2.00	2.15	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	94	832514	2.00	2.12	
112 Naphthalene	128	27.428	27.426	0.002	99	1845704	2.00	2.01	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	1118151	2.00	2.08	
114 Hexachlorobutadiene	225	27.989	27.986	0.003	96	661538	2.00	2.21	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	96	795841	2.00	2.12	
116 2-Methylnaphthalene	142	29.520	29.523	-0.003	99	868802	6.24	7.03	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	699077	6.24	7.17	
A 118 C6 Range	1	7.797	(7.724-7.864)		0	1784009	2.00	2.00	
A 119 Toluene Range	1	13.971	(13.915-14.047)		0	2358213	2.00	1.97	
A 120 C8 Range	1	15.058	(14.988-15.128)		0	4899211	2.00	1.98	
S 124 Xylenes, Total	100				0		5.99	6.04	
S 145 1,2-Dichloroethene, Total	1				0		3.99	3.94	

Reagents:

CDN2C00X05_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

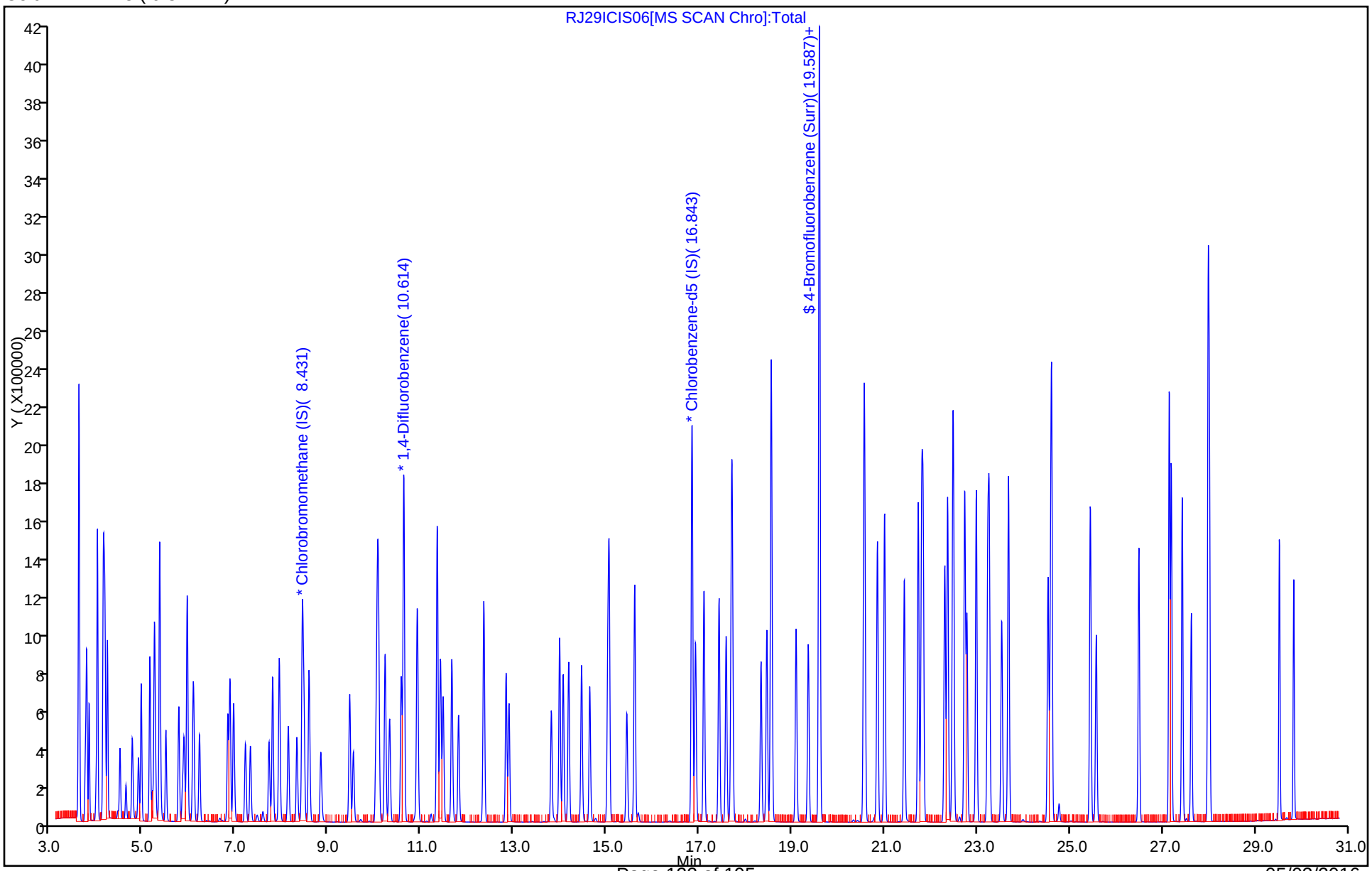
Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D

Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

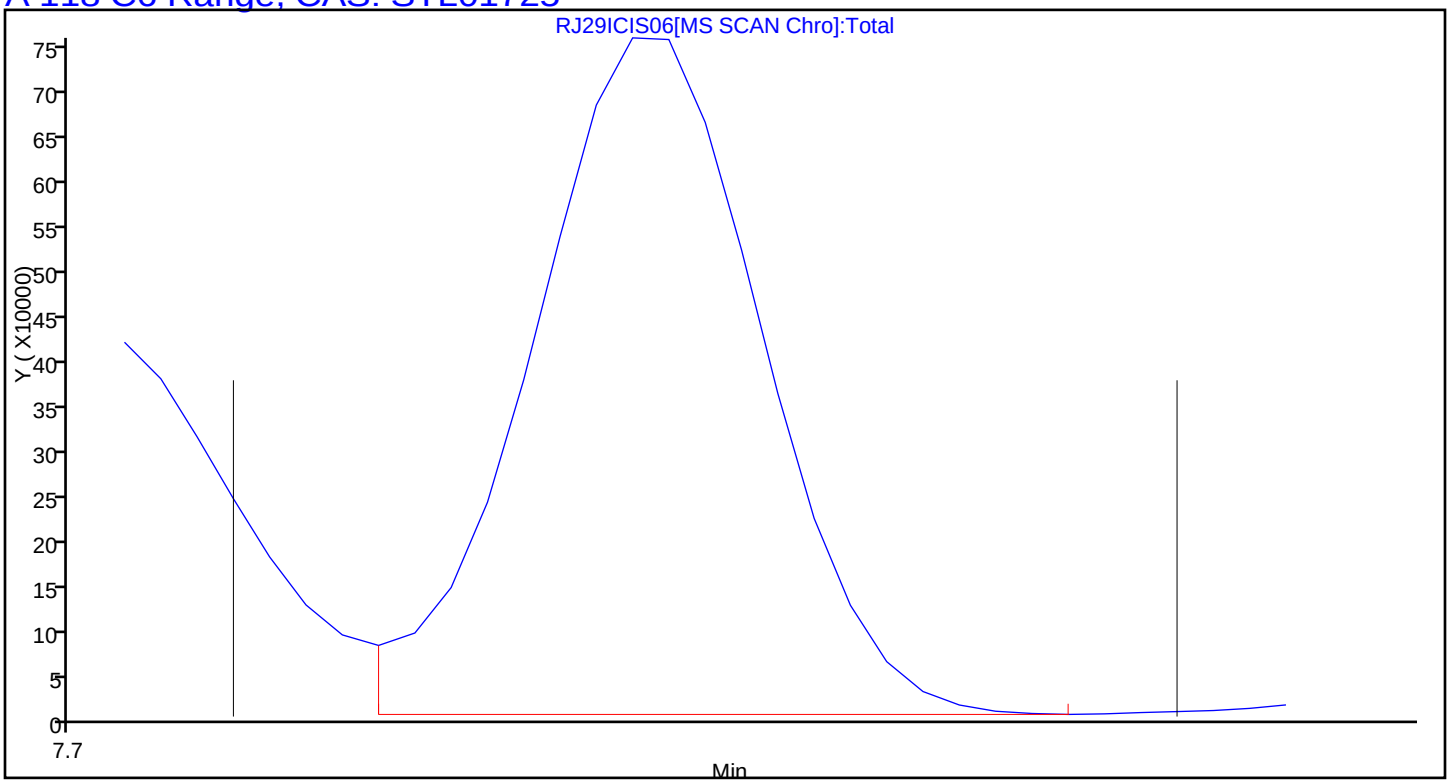


Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D				
Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

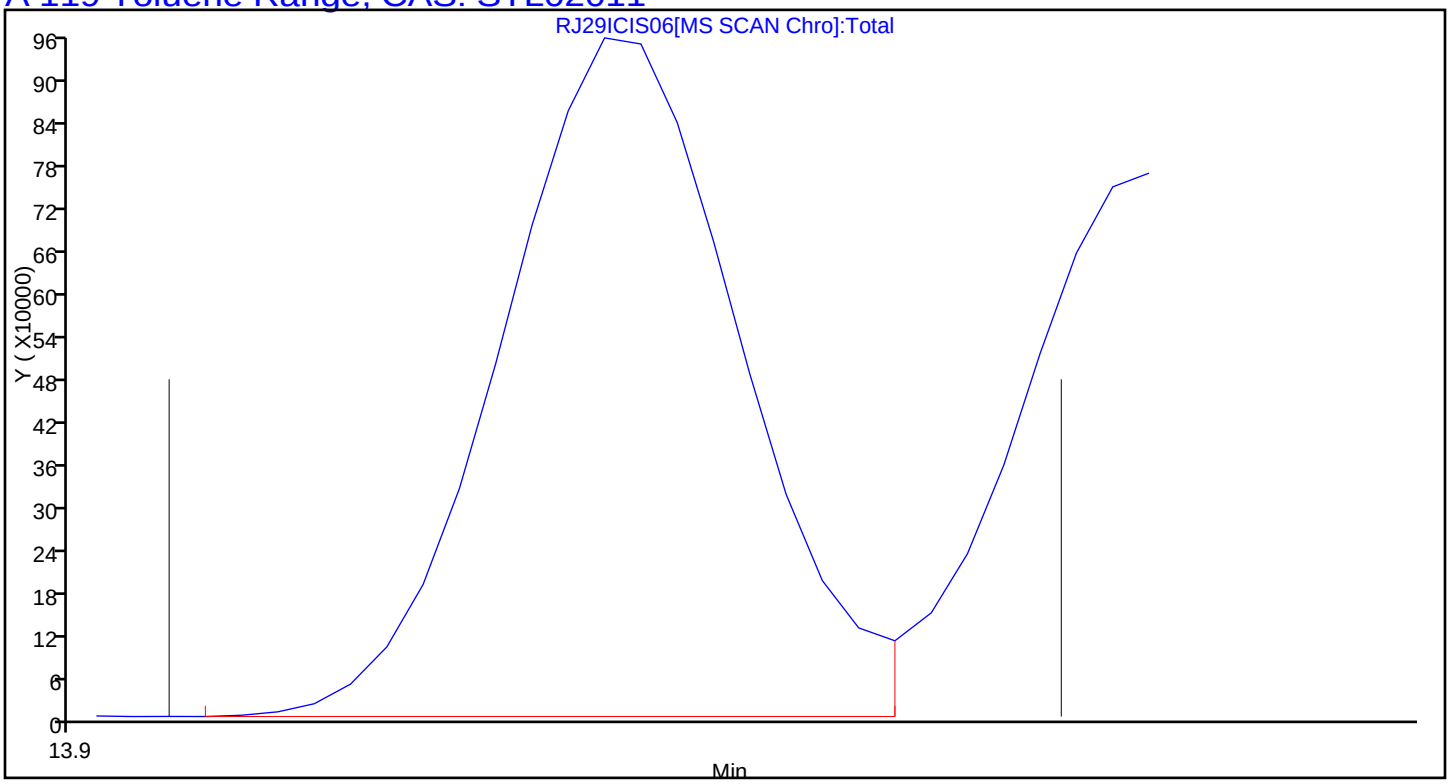


Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D				
Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

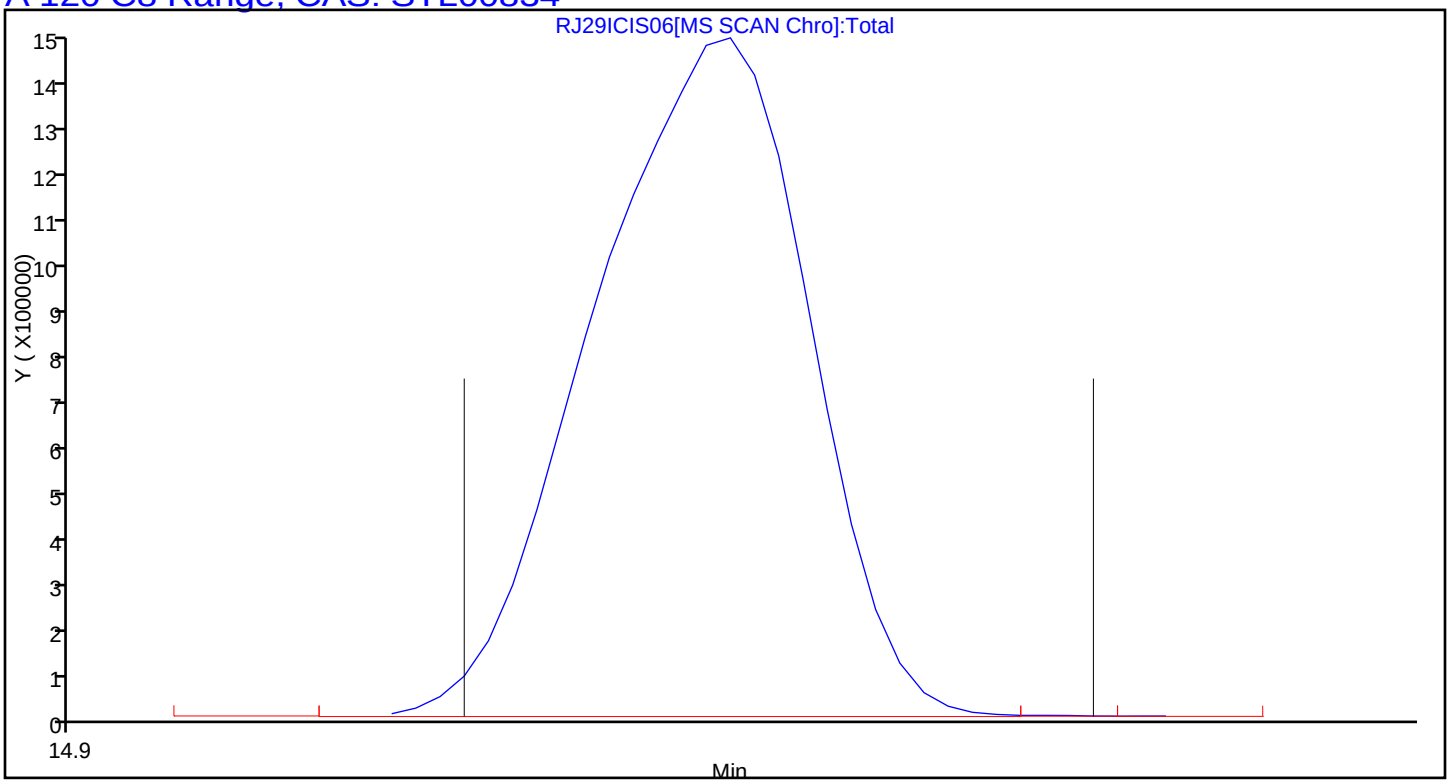


Report Date: 04-Nov-2015 15:48:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICIS06.D				
Injection Date:	29-Oct-2015 18:33:30	Instrument ID:	MR		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:		ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 29-Oct-2015 19:26:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-008
Misc. Info.: 031527
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:31 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:33:35

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.431	8.431	0.000	91	415463	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.620	10.619	0.001	94	2090615	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.843	16.842	0.001	85	1954460	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.593	19.590	0.003	60	1482255	4.00	4.11	
6 Chlorodifluoromethane	67	3.750	3.777	-0.027	96	131965	4.00	3.66	
7 Propene	41	3.755	3.780	-0.025	99	454322	4.00	3.17	
8 Dichlorodifluoromethane	85	3.804	3.831	-0.027	100	1159472	4.00	3.65	
9 Chloromethane	52	3.960	3.984	-0.024	99	173952	4.00	3.74	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.987	4.011	-0.024	91	1102238	4.00	3.87	
11 Acetaldehyde	44	4.117	4.134	-0.017	86	1187986	20.0	13.7	
12 Vinyl chloride	62	4.117	4.143	-0.026	67	558900	4.00	3.64	
14 Butadiene	54	4.203	4.224	-0.021	95	445565	4.00	3.68	
13 Butane	43	4.203	4.228	-0.025	92	756149	4.00	3.69	
15 Bromomethane	94	4.478	4.498	-0.020	99	532103	4.00	3.62	
16 Chloroethane	64	4.607	4.627	-0.020	93	277829	4.00	3.62	
17 Ethanol	31	4.753	4.758	-0.005	88	698718	20.0	17.1	
18 Vinyl bromide	106	4.877	4.895	-0.018	99	536525	4.00	3.75	
19 2-Methylbutane	43	4.936	4.957	-0.021	90	611926	4.00	3.79	
21 Acrolein	56	5.125	5.139	-0.014	35	220136	4.00	4.21	
20 Trichlorofluoromethane	101	5.125	5.144	-0.019	99	1402228	4.00	3.83	
22 Acetonitrile	40	5.190	5.199	-0.009	99	234702	4.00	3.83	
23 Acetone	58	5.233	5.246	-0.013	96	989477	12.0	10.2	
24 Pentane	72	5.335	5.349	-0.014	97	108809	4.00	3.90	
25 Isopropyl alcohol	45	5.346	5.358	-0.012	96	2338119	12.0	11.6	
26 Ethyl ether	31	5.470	5.493	-0.023	94	534142	4.00	3.85	
27 1,1-Dichloroethene	96	5.751	5.767	-0.016	98	554923	4.00	3.84	
28 Acrylonitrile	53	5.842	5.847	-0.005	95	427655	4.00	3.87	
29 2-Methyl-2-propanol	59	5.875	5.885	-0.010	94	1047012	4.00	3.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.934	5.950	-0.016	99	1206128	4.00	3.89	
31 Methylene Chloride	84	6.063	6.069	-0.006	96	509999	4.00	3.64	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.080	6.090	-0.010	95	448349	4.00	3.60	
33 Carbon disulfide	76	6.198	6.212	-0.014	98	1587301	4.00	3.83	
34 trans-1,2-Dichloroethene	96	6.813	6.822	-0.009	99	577470	4.00	3.84	
35 2-Methylpentane	43	6.856	6.870	-0.014	95	1136674	4.00	3.87	
36 Methyl tert-butyl ether	73	6.937	6.954	-0.017	97	1489106	4.00	3.92	
37 1,1-Dichloroethane	63	7.196	7.200	-0.004	100	1032486	4.00	3.83	
38 Vinyl acetate	43	7.304	7.310	-0.006	100	1538426	4.00	4.07	
39 2-Butanone (MEK)	72	7.703	7.715	-0.012	99	299693	4.00	3.54	
40 Hexane	56	7.783	7.791	-0.008	86	469565	4.00	3.91	
141 Isopropyl ether	45	7.924	7.935	-0.011	98	1979800	4.00	3.88	
41 cis-1,2-Dichloroethene	96	8.123	8.125	-0.002	93	602078	4.00	3.88	
42 Ethyl acetate	43	8.307	8.316	-0.009	100	1269702	4.00	3.94	
43 Chloroform	83	8.463	8.461	0.002	97	1171239	4.00	3.85	
144 Tert-butyl ethyl ether	59	8.571	8.579	-0.008	94	1753657	4.00	4.01	
44 Tetrahydrofuran	42	8.824	8.833	-0.009	94	624002	4.00	3.92	
45 1,1,1-Trichloroethane	97	9.450	9.451	-0.001	96	1166223	4.00	3.98	
46 1,2-Dichloroethane	62	9.531	9.530	0.001	97	760151	4.00	3.89	
49 n-Butanol	31	10.011	10.023	-0.012	57	198227	4.00	4.04	
47 Benzene	78	10.038	10.041	-0.003	97	1722684	4.00	3.88	
48 Cyclohexane	69	10.059	10.062	-0.003	97	270165	4.00	4.03	
50 Carbon tetrachloride	117	10.075	10.077	-0.002	97	1281986	4.00	4.48	
51 2,3-Dimethylpentane	71	10.215	10.217	-0.002	91	391395	4.00	3.96	
52 Thiophene	84	10.313	10.313	0.000	95	969518	4.00	3.95	
142 Tert-amyl methyl ether	73	10.561	10.568	-0.007	98	1609788	4.00	3.93	
53 Isooctane	57	10.906	10.911	-0.005	99	2932690	4.00	3.96	
54 n-Heptane	71	11.337	11.340	-0.003	89	628890	4.00	4.06	
55 1,2-Dichloropropane	63	11.342	11.346	-0.004	93	689377	4.00	3.98	
56 Trichloroethene	130	11.413	11.410	0.003	96	837826	4.00	4.01	
57 Dibromomethane	93	11.466	11.467	-0.001	92	701252	4.00	3.93	
58 Dichlorobromomethane	83	11.655	11.655	0.000	100	1239764	4.00	4.14	
59 1,4-Dioxane	88	11.661	11.668	-0.007	84	273976	4.00	4.04	
60 Methyl methacrylate	41	11.801	11.801	0.000	90	763818	4.00	4.12	
61 Methylcyclohexane	83	12.345	12.347	-0.002	95	1284697	4.00	4.02	
62 4-Methyl-2-pentanone (MIBK	43	12.825	12.831	-0.006	96	1447462	4.00	3.43	
63 cis-1,3-Dichloropropene	75	12.890	12.891	-0.001	92	1026102	4.00	4.13	
64 trans-1,3-Dichloropropene	75	13.807	13.804	0.003	98	939379	4.00	4.16	
65 Toluene	91	13.985	13.983	0.002	94	2121413	4.00	4.00	
66 1,1,2-Trichloroethane	83	14.060	14.060	0.000	97	616596	4.00	3.94	
67 2-Methylthiophene	97	14.179	14.179	0.000	97	1748453	4.00	4.05	
68 3-Methylthiophene	97	14.459	14.457	0.002	98	1734194	4.00	4.07	
69 2-Hexanone	58	14.632	14.637	-0.005	95	772835	4.00	4.14	
71 Chlorodibromomethane	129	15.025	15.023	0.002	98	1385964	4.00	4.47	
70 n-Octane	85	15.052	15.053	-0.001	91	724178	4.00	4.11	
72 Ethylene Dibromide	107	15.435	15.432	0.003	98	1203466	4.00	4.14	
73 Tetrachloroethene	129	15.602	15.602	0.000	98	782310	4.00	4.04	
74 Chlorobenzene	112	16.918	16.918	0.000	95	1700375	4.00	3.93	
75 2,3-Dimethylheptane	43	17.102	17.100	0.002	95	1781528	4.00	3.98	
76 Ethylbenzene	91	17.425	17.426	-0.001	98	2757851	4.00	3.98	
77 2-Ethylthiophene	97	17.581	17.579	0.002	97	2074575	4.00	4.08	
78 m-Xylene & p-Xylene	91	17.700	17.703	-0.003	99	4338191	8.00	8.15	
79 Bromoform	173	18.331	18.330	0.001	97	1415345	4.00	4.89	
80 Styrene	104	18.460	18.457	0.003	98	1688445	4.00	4.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.547	0.000	91	1469256	4.00	4.17	
82 o-Xylene	91	18.557	18.559	-0.002	99	2250949	4.00	4.08	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.088	-0.002	99	1611027	4.00	4.06	
84 1,2,3-Trichloropropane	110	19.356	19.352	0.004	98	485577	4.00	4.03	
85 Isopropylbenzene	105	19.587	19.589	-0.002	95	3191338	4.00	4.07	
86 N-Propylbenzene	120	20.553	20.554	-0.001	98	943679	4.00	4.20	
87 2-Chlorotoluene	126	20.574	20.572	0.002	92	839846	4.00	4.13	
88 4-Ethyltoluene	105	20.844	20.844	0.000	99	3211936	4.00	4.14	
89 1,3,5-Trimethylbenzene	120	21.000	21.000	0.000	94	1558212	4.00	4.19	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	91	1373255	4.00	4.34	
91 n-Decane	57	21.728	21.726	0.002	89	1882295	4.00	4.13	
92 tert-Butylbenzene	119	21.804	21.802	0.002	94	2965326	4.00	4.18	
93 1,2,4-Trimethylbenzene	105	21.831	21.832	-0.001	95	2755463	4.00	4.19	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	97	1950664	4.00	4.12	
95 sec-Butylbenzene	105	22.359	22.361	-0.002	99	3983536	4.00	4.17	
96 Benzyl chloride	91	22.472	22.469	0.003	99	2580331	4.00	4.32	
97 1,4-Dichlorobenzene	146	22.488	22.487	0.001	95	2028767	4.00	4.15	
98 4-Isopropyltoluene	119	22.731	22.729	0.002	97	3638174	4.00	4.23	
99 1,2,3-Trimethylbenzene	105	22.774	22.776	-0.002	98	2180123	4.00	4.11	
100 Butylcyclohexane	83	22.979	22.980	-0.001	95	2091186	4.00	4.12	
101 1,2-Dichlorobenzene	146	23.227	23.227	0.000	97	1918912	4.00	4.12	
102 2,3-Dihydroindene	117	23.260	23.259	0.001	95	2707647	4.00	4.21	
103 Indene	116	23.529	23.527	0.002	93	1999122	4.00	4.28	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	3309124	4.00	4.16	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.528	-0.001	97	2686511	4.00	4.25	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.582	-0.001	94	982347	4.00	4.78	
106 Undecane	57	24.602	24.605	-0.003	95	2254200	4.00	4.30	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.441	-0.003	98	3094196	4.00	4.26	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.569	-0.001	96	1850400	4.00	4.19	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	2564680	4.00	4.24	
110 Dodecane	57	27.142	27.145	-0.003	98	2243771	4.00	4.57	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	94	1906085	4.00	4.48	
112 Naphthalene	128	27.428	27.426	0.002	99	4128915	4.00	4.15	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	2510290	4.00	4.31	
114 Hexachlorobutadiene	225	27.983	27.986	-0.003	96	1559597	4.00	4.82	
115 1,2,3-Trichlorobenzene	180	28.010	28.012	-0.002	97	1869754	4.00	4.59	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	98	2303688	12.5	17.2	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	98	1814582	12.5	17.2	
A 118 C6 Range	1	7.799	(7.719-7.848)		0	3758827	4.00	3.92	
A 119 Toluene Range	1	13.971	(13.915-14.047)		0	5034457	4.00	3.90	
A 120 C8 Range	1	15.058	(14.988-15.128)		0	10554153	4.00	3.96	
S 124 Xylenes, Total	100				0		12.0	12.2	
S 145 1,2-Dichloroethene, Total	1				0		8.00	7.71	

Reagents:

CDN2C00X10_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

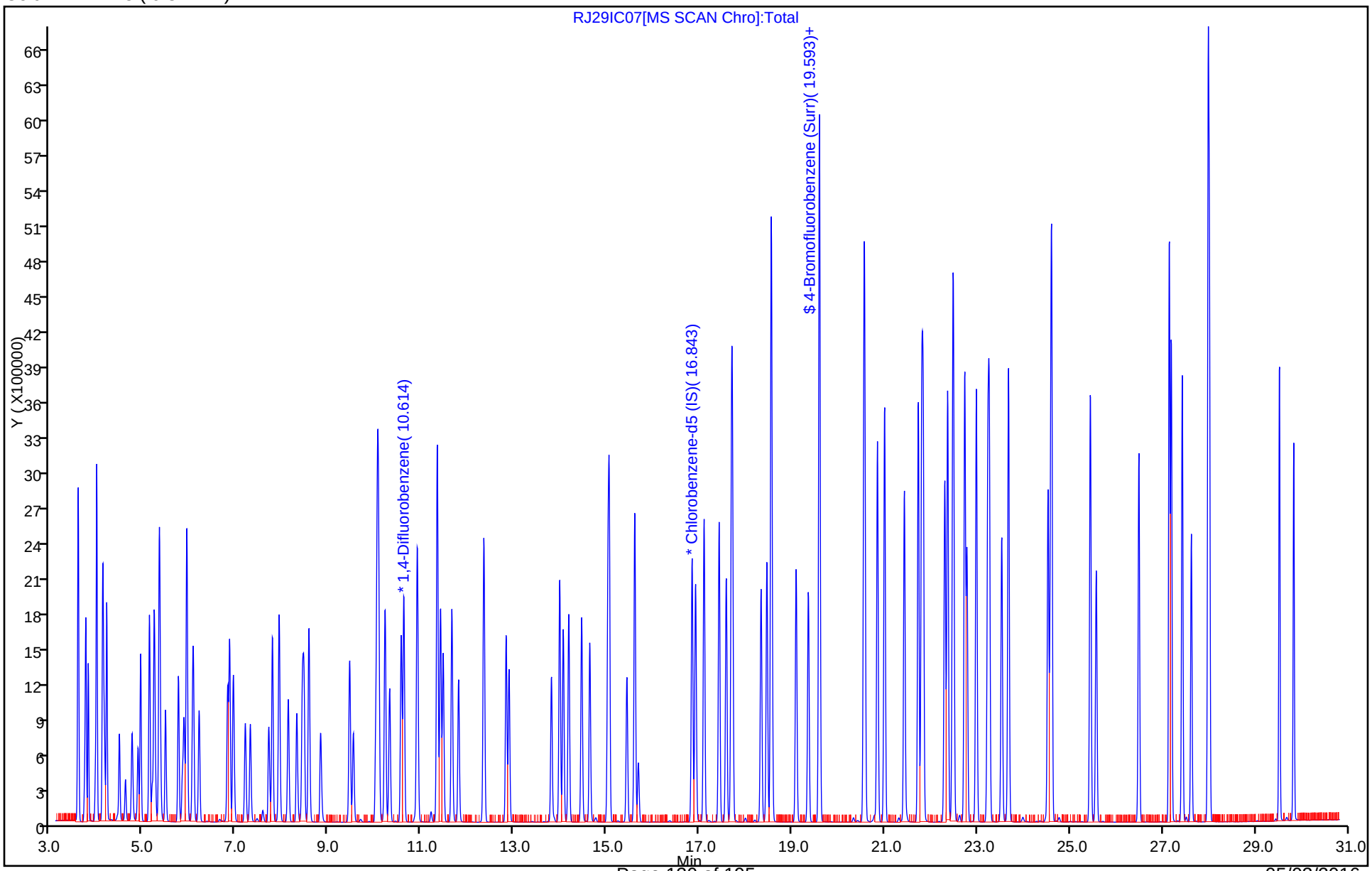
Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D

Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

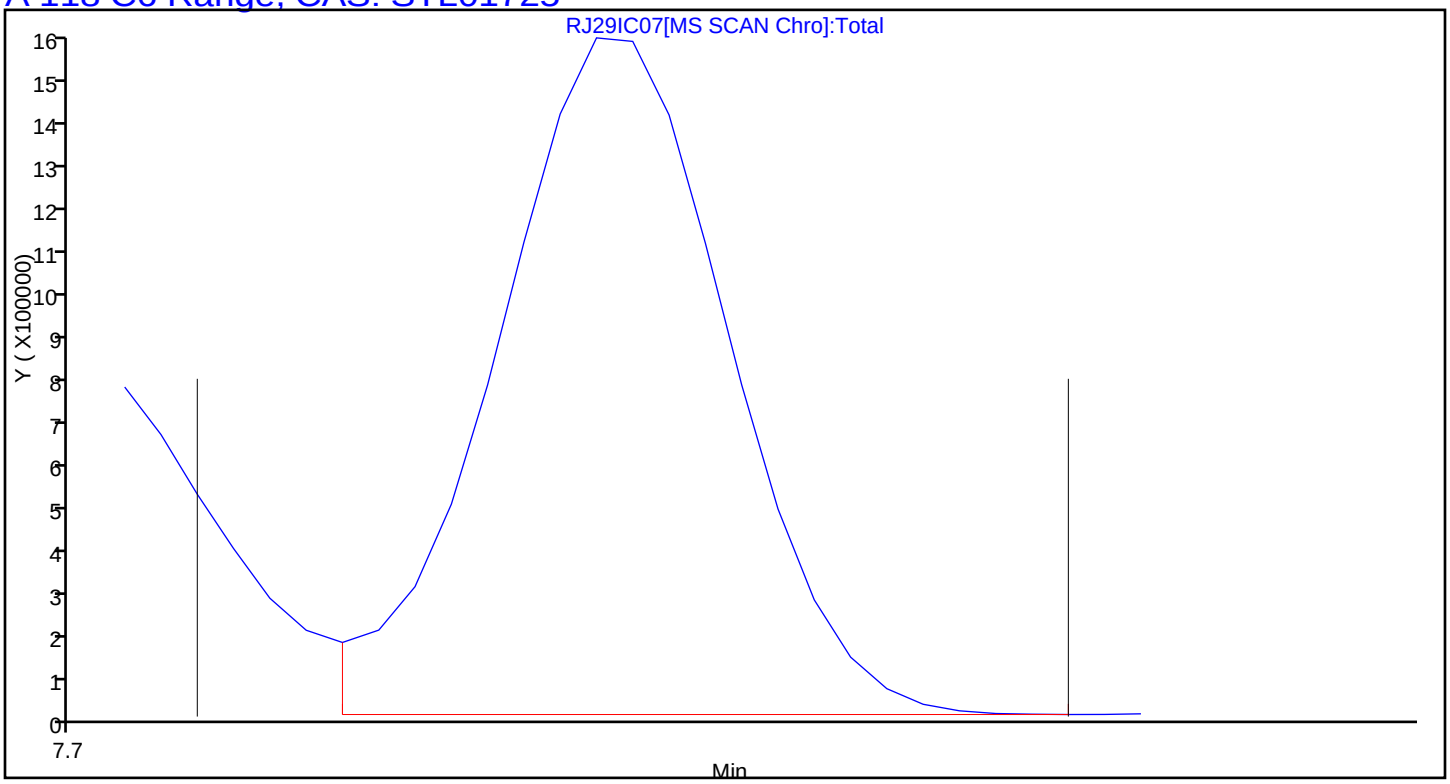


Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D				
Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

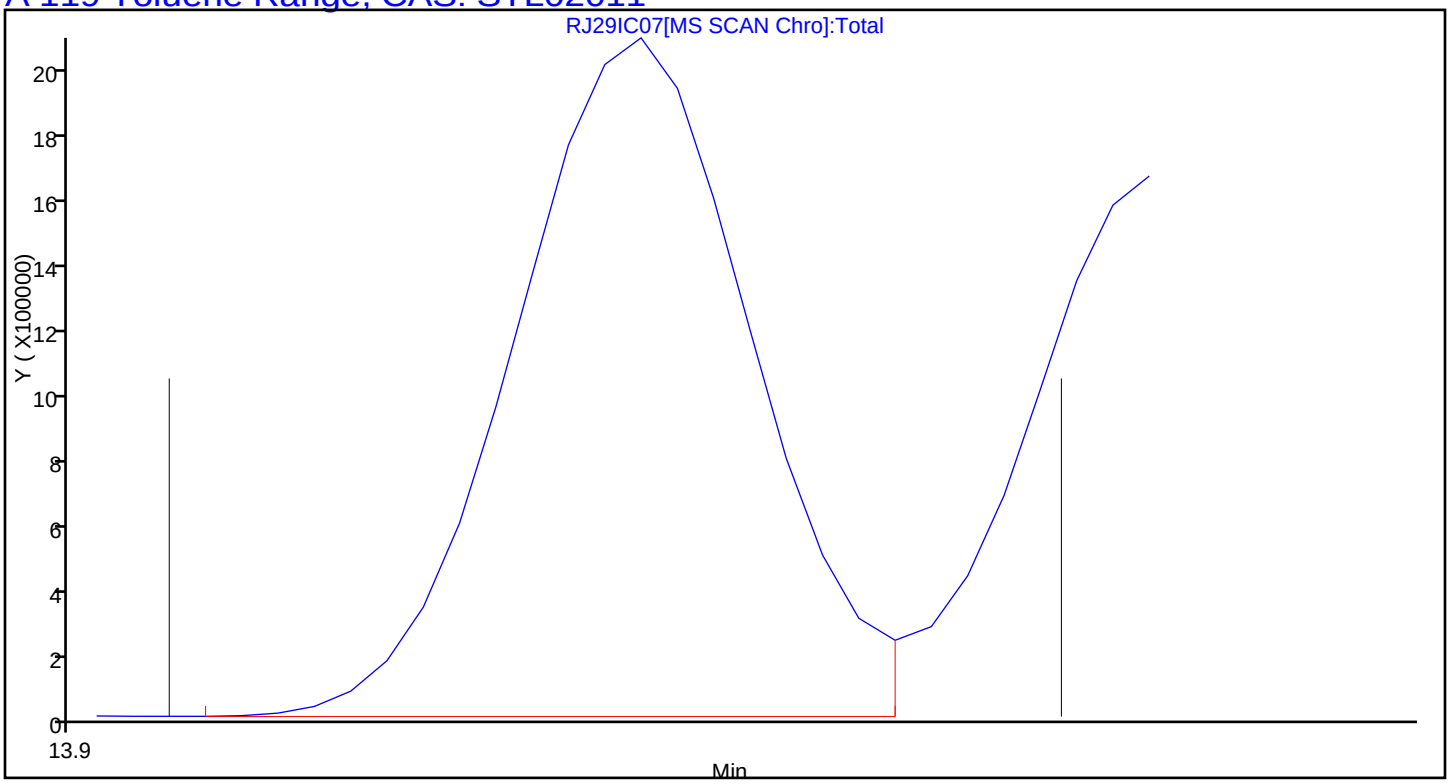


Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D				
Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

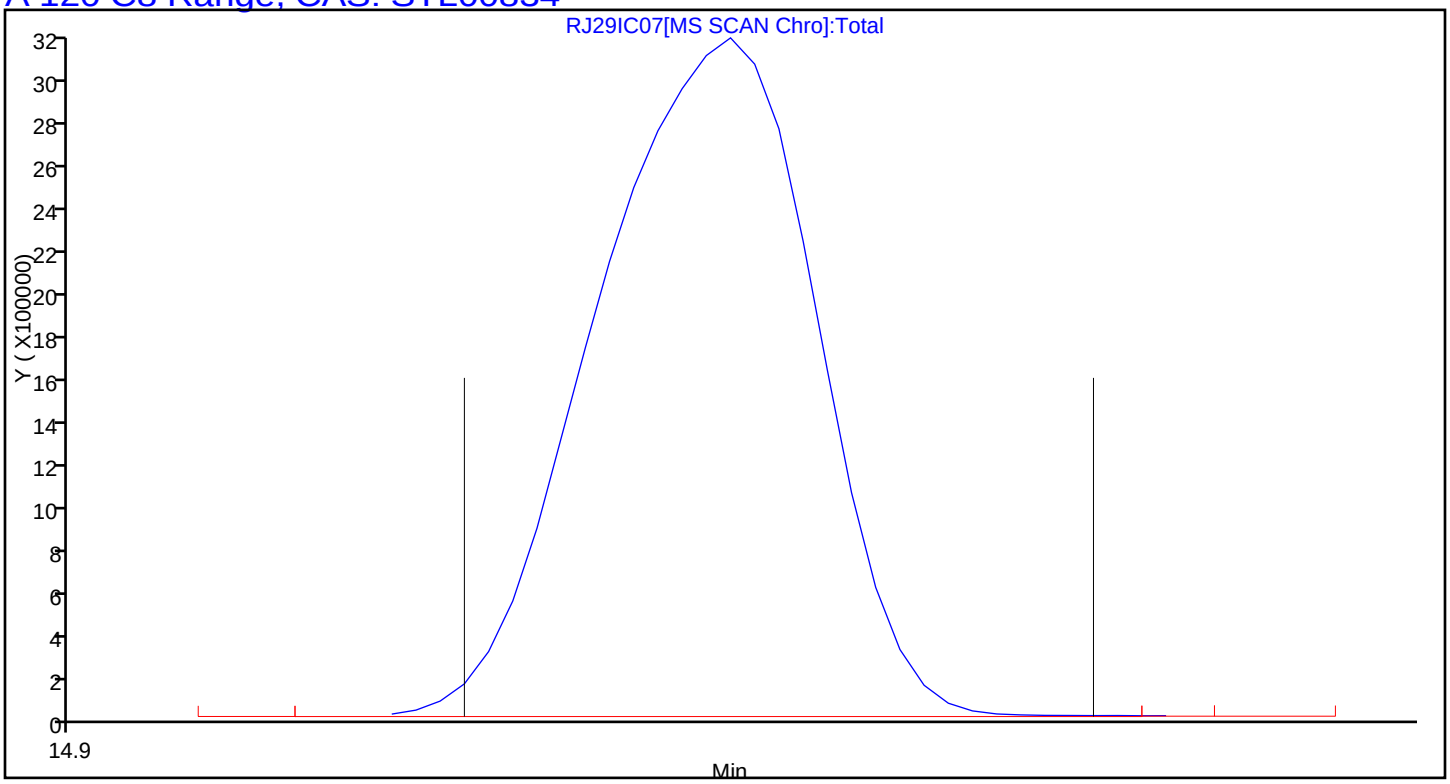


Report Date: 04-Nov-2015 15:48:33 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC07.D				
Injection Date:	29-Oct-2015 19:26:30	Instrument ID:	MR		
Lims ID:	IC L7				
Client ID:					
Operator ID:		ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 29-Oct-2015 20:18:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-009
Misc. Info.: 031526
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:42 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:38:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.447	8.431	0.016	91	454948	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.631	10.619	0.012	94	2258988	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.848	16.842	0.006	85	2138361	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.593	19.590	0.003	44	1598369	4.00	4.05	
6 Chlorodifluoromethane	67	3.782	3.777	0.005	96	272574	8.00	6.91	
7 Propene	41	3.788	3.780	0.008	99	907376	8.00	5.77	
8 Dichlorodifluoromethane	85	3.842	3.831	0.011	99	2392864	8.00	6.88	
9 Chloromethane	52	3.998	3.984	0.014	99	355318	8.00	6.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.020	4.011	0.009	91	2325713	8.00	7.45	
11 Acetaldehyde	44	4.149	4.134	0.015	97	1986969	40.0	21.0	
12 Vinyl chloride	62	4.155	4.143	0.011	98	1143088	8.00	6.80	
14 Butadiene	54	4.235	4.224	0.011	97	927708	8.00	6.99	
13 Butane	43	4.241	4.228	0.013	91	1532407	8.00	6.83	
15 Bromomethane	94	4.510	4.498	0.012	99	1136498	8.00	7.06	
16 Chloroethane	64	4.645	4.627	0.018	92	590343	8.00	7.02	
17 Ethanol	31	4.780	4.758	0.022	87	1383312	40.0	31.0	
18 Vinyl bromide	106	4.915	4.895	0.020	99	1158727	8.00	7.40	
19 2-Methylbutane	43	4.969	4.957	0.012	90	1328810	8.00	7.51	
21 Acrolein	56	5.152	5.139	0.013	90	466743	8.00	8.14	
20 Trichlorofluoromethane	101	5.157	5.144	0.013	99	3042568	8.00	7.58	
22 Acetonitrile	40	5.217	5.199	0.018	99	492512	8.00	7.33	
23 Acetone	58	5.260	5.246	0.014	99	1860214	24.0	17.5	
24 Pentane	72	5.362	5.349	0.013	97	236807	8.00	7.75	
25 Isopropyl alcohol	45	5.373	5.358	0.015	98	4899594	24.0	22.2	
26 Ethyl ether	31	5.503	5.493	0.010	93	1125617	8.00	7.41	
27 1,1-Dichloroethene	96	5.783	5.767	0.016	98	1221079	8.00	7.71	
28 Acrylonitrile	53	5.864	5.847	0.017	95	944908	8.00	7.80	
29 2-Methyl-2-propanol	59	5.896	5.885	0.011	92	2261803	8.00	7.70	
30 1,1,2-Trichloro-1,2,2-trif	101	5.961	5.950	0.011	98	2642823	8.00	7.78	
31 Methylene Chloride	84	6.090	6.069	0.021	95	1088367	8.00	7.10	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.107	6.090	0.017	95	941169	8.00	6.91	
33 Carbon disulfide	76	6.231	6.212	0.019	97	3461632	8.00	7.62	
34 trans-1,2-Dichloroethene	96	6.840	6.822	0.018	99	1274909	8.00	7.74	
35 2-Methylpentane	43	6.883	6.870	0.013	95	2395365	8.00	7.45	
36 Methyl tert-butyl ether	73	6.959	6.954	0.005	97	3242166	8.00	7.79	
37 1,1-Dichloroethane	63	7.217	7.200	0.017	100	2240128	8.00	7.60	
38 Vinyl acetate	43	7.325	7.310	0.015	100	3344517	8.00	8.08	
39 2-Butanone (MEK)	72	7.724	7.715	0.009	99	615977	8.00	6.65	
40 Hexane	56	7.800	7.791	0.009	85	1022501	8.00	7.77	
141 Isopropyl ether	45	7.945	7.935	0.010	98	4223787	8.00	7.56	
41 cis-1,2-Dichloroethene	96	8.145	8.125	0.020	93	1325594	8.00	7.80	
42 Ethyl acetate	43	8.323	8.316	0.007	100	2730736	8.00	7.74	
43 Chloroform	83	8.479	8.461	0.018	97	2505006	8.00	7.51	
144 Tert-butyl ethyl ether	59	8.587	8.579	0.008	93	3771671	8.00	7.88	
44 Tetrahydrofuran	42	8.835	8.833	0.002	94	1344781	8.00	7.71	
45 1,1,1-Trichloroethane	97	9.466	9.451	0.015	96	2545336	8.00	7.93	
46 1,2-Dichloroethane	62	9.547	9.530	0.017	97	1617907	8.00	7.67	
49 n-Butanol	31	10.021	10.023	-0.002	81	415934	8.00	7.84	
47 Benzene	78	10.054	10.041	0.013	97	3697831	8.00	7.71	
48 Cyclohexane	69	10.075	10.062	0.013	95	570677	8.00	7.89	
50 Carbon tetrachloride	117	10.092	10.077	0.015	98	2638814	8.00	8.54	
51 2,3-Dimethylpentane	71	10.226	10.217	0.009	90	844188	8.00	7.91	
52 Thiophene	84	10.329	10.313	0.016	95	2113673	8.00	7.98	
142 Tert-amyl methyl ether	73	10.571	10.568	0.003	99	3476380	8.00	7.86	
53 Isooctane	57	10.922	10.911	0.011	99	6312213	8.00	7.89	
54 n-Heptane	71	11.348	11.340	0.008	88	1351309	8.00	8.07	
55 1,2-Dichloropropane	63	11.359	11.346	0.013	95	1473064	8.00	7.87	
56 Trichloroethene	130	11.423	11.410	0.013	94	1845788	8.00	8.17	
57 Dibromomethane	93	11.477	11.467	0.010	90	1514037	8.00	7.86	
58 Dichlorobromomethane	83	11.666	11.655	0.011	99	2665437	8.00	8.23	
59 1,4-Dioxane	88	11.671	11.668	0.003	82	586133	8.00	7.99	
60 Methyl methacrylate	41	11.806	11.801	0.005	89	1618663	8.00	8.09	
61 Methylcyclohexane	83	12.356	12.347	0.009	95	2779758	8.00	8.05	
62 4-Methyl-2-pentanone (MIBK	43	12.836	12.831	0.005	95	2991645	8.00	6.56	
63 cis-1,3-Dichloropropene	75	12.901	12.891	0.010	91	2248978	8.00	8.37	
64 trans-1,3-Dichloropropene	75	13.812	13.804	0.008	97	2065343	8.00	8.37	
65 Toluene	91	13.990	13.983	0.007	94	4570212	8.00	7.88	
66 1,1,2-Trichloroethane	83	14.066	14.060	0.006	97	1329359	8.00	7.77	
67 2-Methylthiophene	97	14.184	14.179	0.005	97	3819634	8.00	8.09	
68 3-Methylthiophene	97	14.465	14.457	0.008	98	3785045	8.00	8.12	
69 2-Hexanone	58	14.637	14.637	0.000	95	1681654	8.00	8.23	
71 Chlorodibromomethane	129	15.031	15.023	0.008	98	3071816	8.00	9.06	
70 n-Octane	85	15.058	15.053	0.005	89	1564530	8.00	8.12	
72 Ethylene Dibromide	107	15.441	15.432	0.009	99	2633951	8.00	8.28	
73 Tetrachloroethene	129	15.608	15.602	0.006	98	1724895	8.00	8.15	
74 Chlorobenzene	112	16.924	16.918	0.006	96	3791193	8.00	8.00	
75 2,3-Dimethylheptane	43	17.107	17.100	0.007	97	3775786	8.00	7.71	
76 Ethylbenzene	91	17.431	17.426	0.005	98	6073848	8.00	8.02	
77 2-Ethylthiophene	97	17.587	17.579	0.008	97	4609501	8.00	8.28	
78 m-Xylene & p-Xylene	91	17.711	17.703	0.008	100	9448325	16.0	16.2	
79 Bromoform	173	18.336	18.330	0.006	98	3274328	8.00	10.3	
80 Styrene	104	18.460	18.457	0.003	97	3808385	8.00	8.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.552	18.547	0.005	88	3087316	8.00	8.00	
82 o-Xylene	91	18.563	18.559	0.004	99	4860434	8.00	8.05	
83 1,1,2,2-Tetrachloroethane	83	19.091	19.088	0.003	98	3547918	8.00	8.17	
84 1,2,3-Trichloropropane	110	19.356	19.352	0.004	98	1078212	8.00	8.18	
85 Isopropylbenzene	105	19.593	19.589	0.004	95	6924078	8.00	8.07	
86 N-Propylbenzene	120	20.558	20.554	0.004	99	2117797	8.00	8.61	
87 2-Chlorotoluene	126	20.574	20.572	0.002	92	1873215	8.00	8.41	
88 4-Ethyltoluene	105	20.849	20.844	0.005	99	7108118	8.00	8.38	
89 1,3,5-Trimethylbenzene	120	21.006	21.000	0.006	94	3525676	8.00	8.67	
90 Alpha Methyl Styrene	118	21.426	21.426	0.000	92	3241964	8.00	9.35	
91 n-Decane	57	21.728	21.726	0.002	90	4034285	8.00	8.10	
92 tert-Butylbenzene	119	21.809	21.802	0.007	95	6609661	8.00	8.52	
93 1,2,4-Trimethylbenzene	105	21.836	21.832	0.004	95	6067725	8.00	8.43	
94 1,3-Dichlorobenzene	146	22.300	22.300	0.000	97	4385579	8.00	8.47	
95 sec-Butylbenzene	105	22.365	22.361	0.004	99	8724571	8.00	8.35	
96 Benzyl chloride	91	22.472	22.469	0.003	100	5656118	8.00	8.65	
97 1,4-Dichlorobenzene	146	22.494	22.487	0.007	96	4531126	8.00	8.48	
98 4-Isopropyltoluene	119	22.731	22.729	0.002	97	8025529	8.00	8.53	
99 1,2,3-Trimethylbenzene	105	22.780	22.776	0.004	97	4780460	8.00	8.24	
100 Butylcyclohexane	83	22.985	22.980	0.005	95	4506164	8.00	8.12	
101 1,2-Dichlorobenzene	146	23.233	23.227	0.006	98	4273803	8.00	8.39	
102 2,3-Dihydroindene	117	23.265	23.259	0.006	95	5991009	8.00	8.51	
103 Indene	116	23.529	23.527	0.002	93	4563045	8.00	8.93	
104 n-Butylbenzene	91	23.675	23.674	0.001	98	7009088	8.00	8.06	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.532	24.528	0.004	98	5841893	8.00	8.45	
143 1,2-Dibromo-3-Chloropropan	157	24.586	24.582	0.004	90	2152032	8.00	9.58	
106 Undecane	57	24.608	24.605	0.003	94	4463670	8.00	7.78	
107 1,2,4,5-Tetramethylbenzene	119	25.444	25.441	0.003	98	6608938	8.00	8.31	
108 1,2,3,5-Tetramethylbenzene	119	25.573	25.569	0.004	96	3940832	8.00	8.16	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.489	0.001	98	5397558	8.00	8.15	
110 Dodecane	57	27.148	27.145	0.003	98	4228844	8.00	7.87	
111 1,2,4-Trichlorobenzene	180	27.191	27.189	0.002	94	4015190	8.00	8.63	
112 Naphthalene	128	27.428	27.426	0.002	99	8451930	8.00	7.76	
113 Benzo(b)thiophene	134	27.622	27.623	-0.001	100	5205487	8.00	8.17	
114 Hexachlorobutadiene	225	27.989	27.986	0.003	95	3241421	8.00	9.15	
115 1,2,3-Trichlorobenzene	180	28.016	28.012	0.004	97	3835748	8.00	8.61	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	98	4734820	25.0	32.4	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	98	3723019	25.0	32.3	
A 118 C6 Range	1	7.816	(7.746-7.897)		0	8057924	8.00	7.78	
A 119 Toluene Range	1	14.002	(13.920-14.074)		0	19564471	8.00	14.0	
A 120 C8 Range	1	15.058	(14.988-15.128)		0	22138042	8.00	7.68	
S 124 Xylenes, Total	100				0		24.0	24.3	
S 145 1,2-Dichloroethene, Total	1				0		16.0	15.5	

Reagents:

CDN2C00X20_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

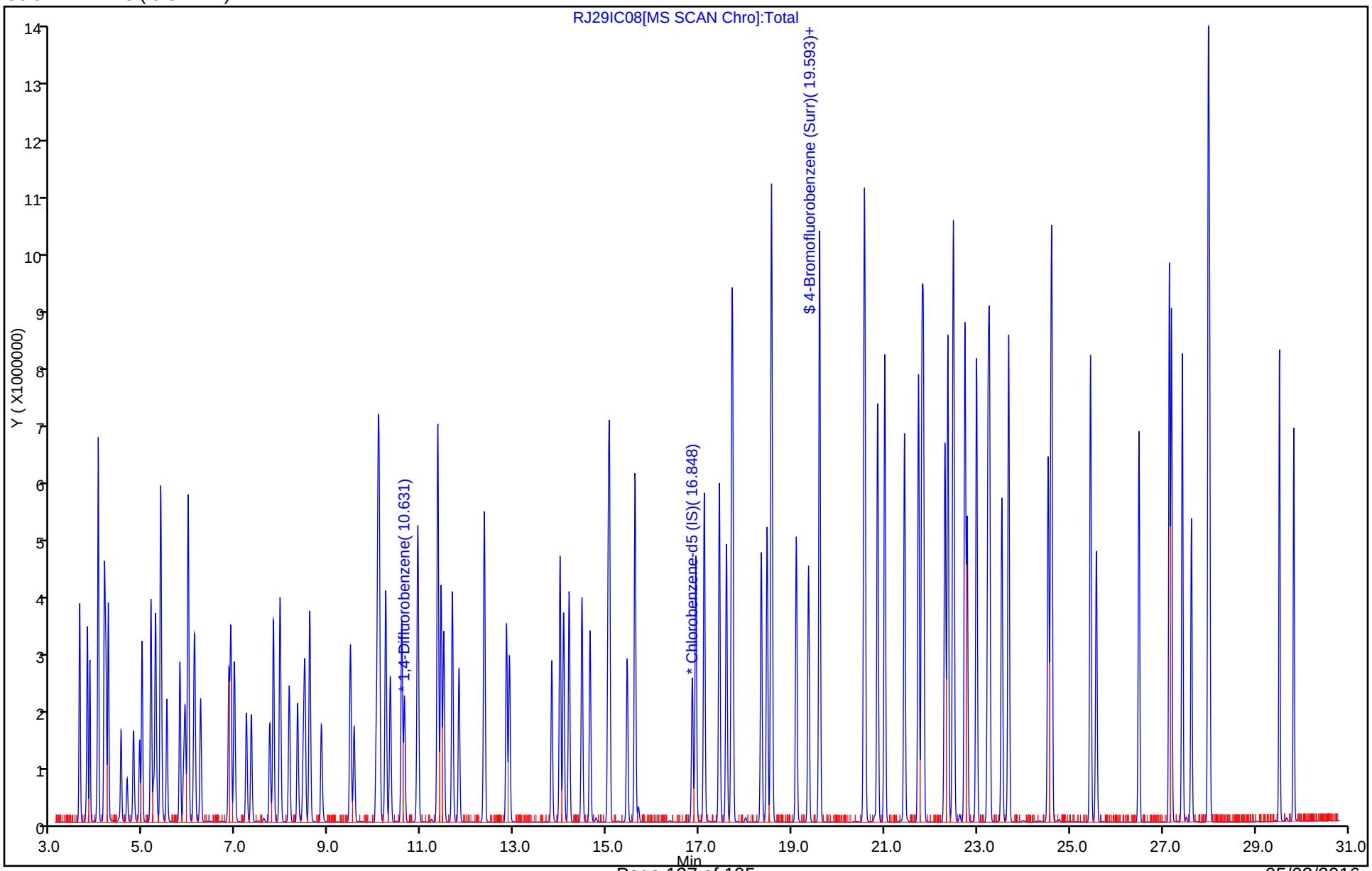
Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D

Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

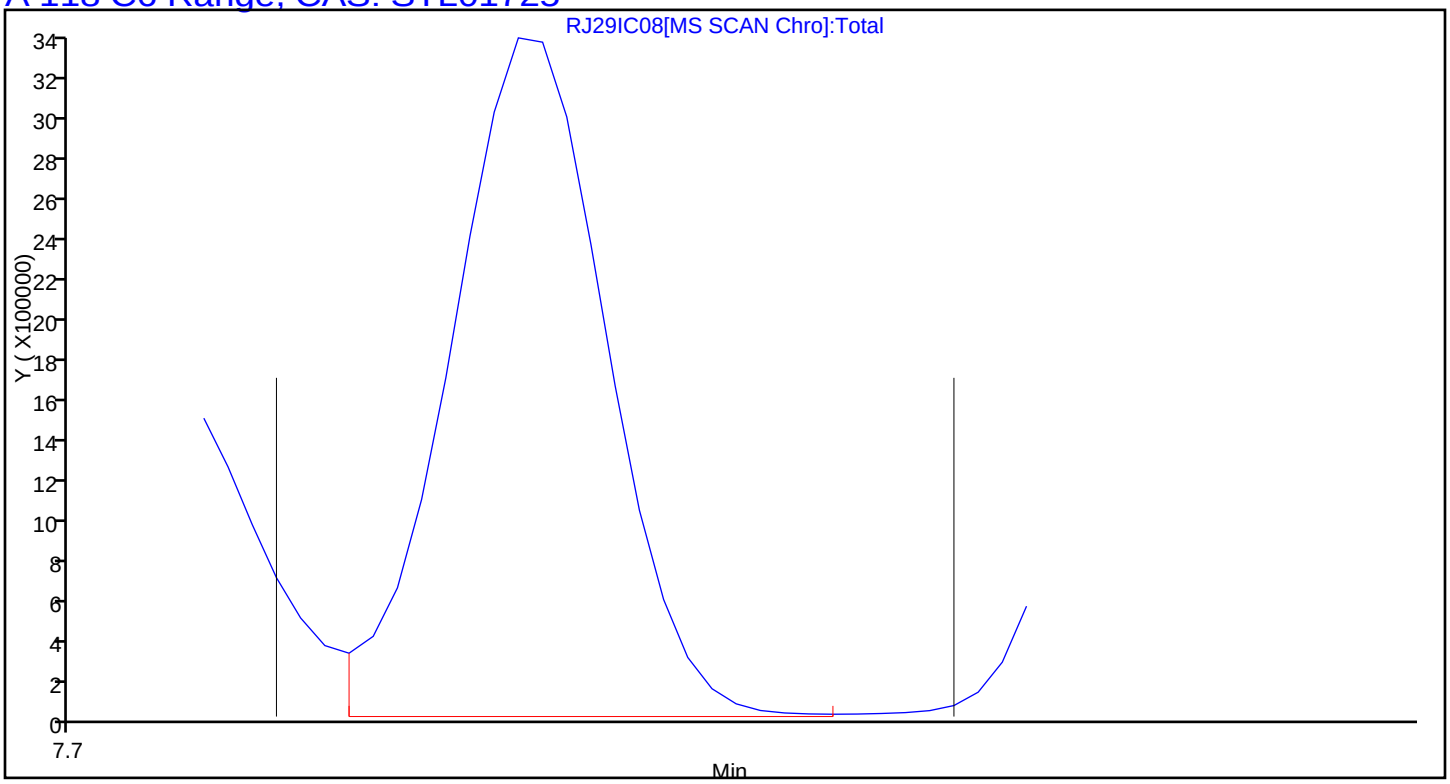


Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D				
Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

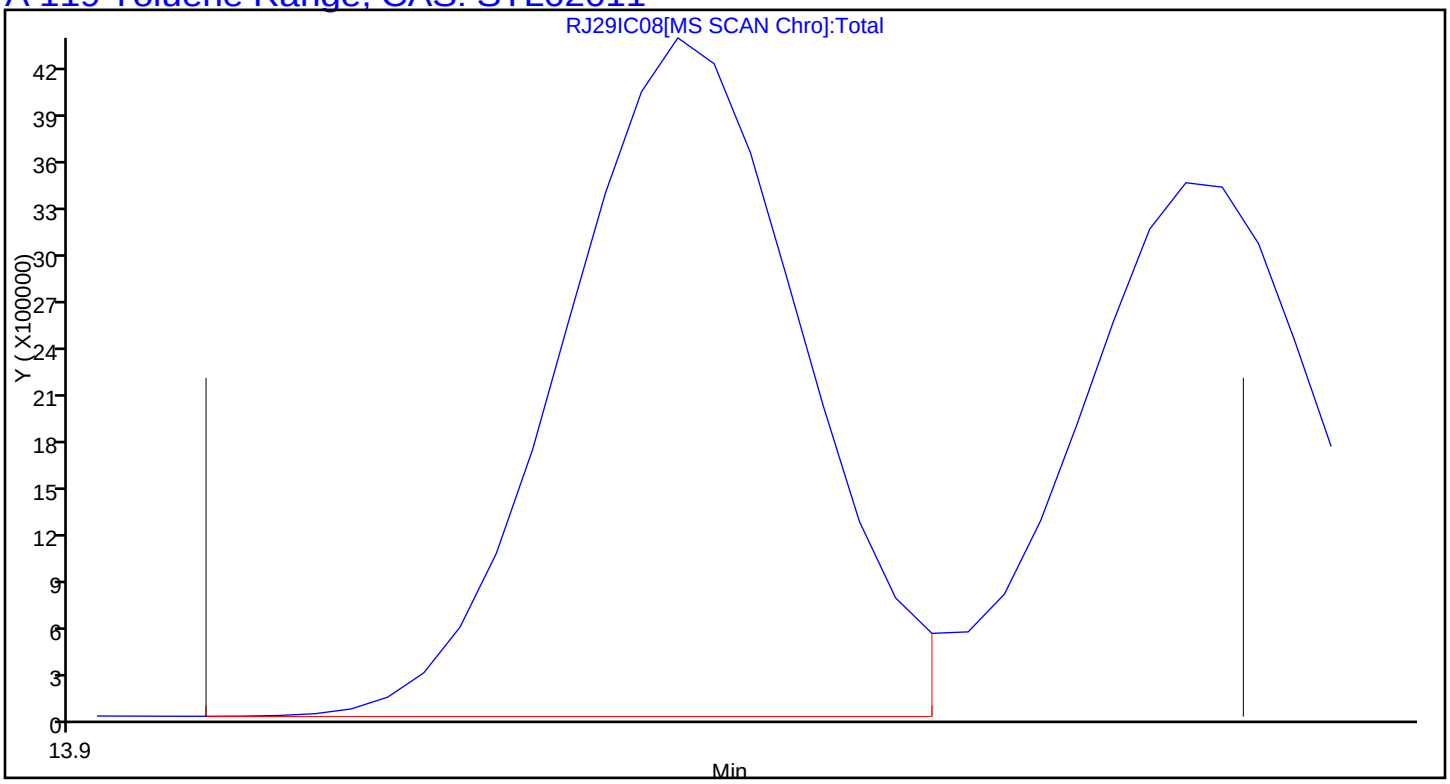


Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D				
Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

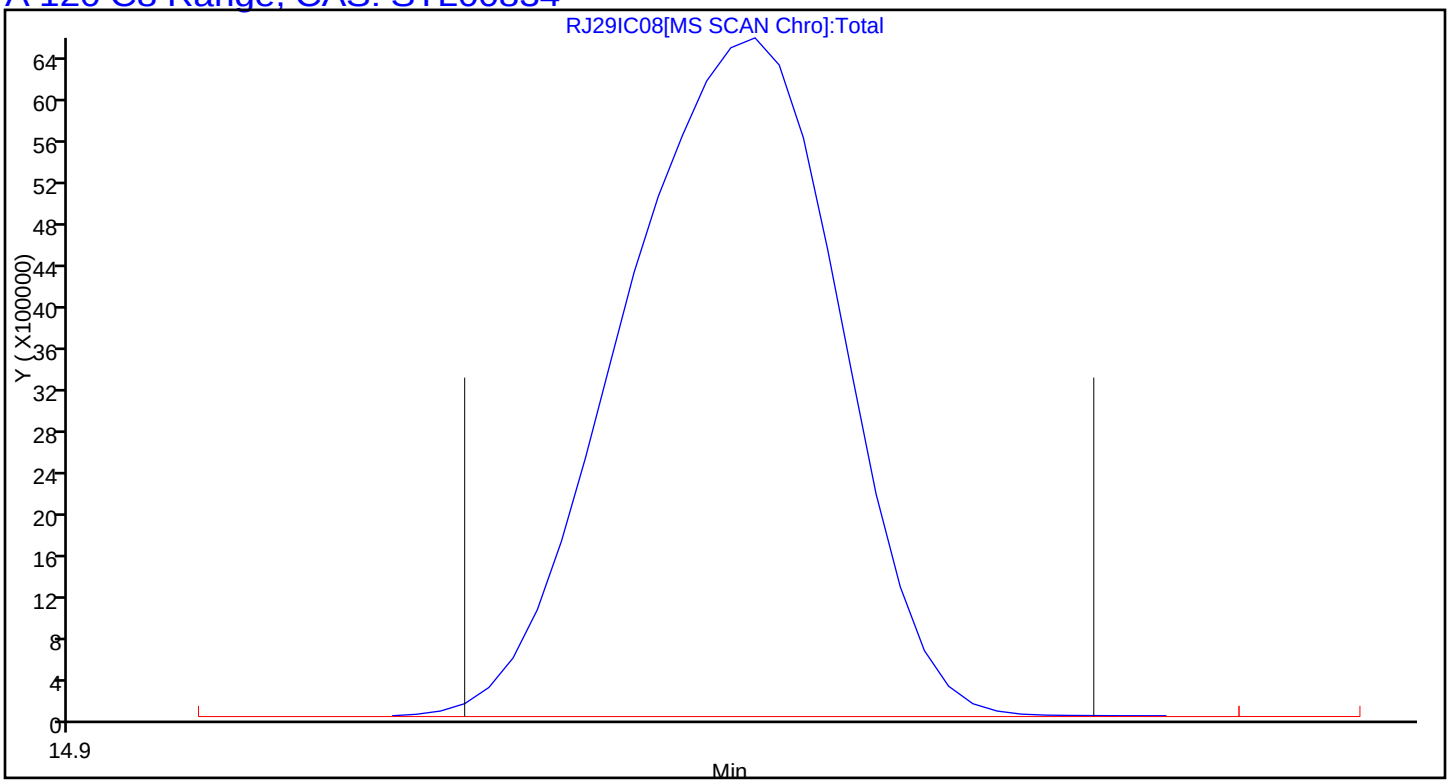


Report Date: 04-Nov-2015 15:48:44 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC08.D				
Injection Date:	29-Oct-2015 20:18:30	Instrument ID:	MR		
Lims ID:	IC L8				
Client ID:					
Operator ID:		ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 29-Oct-2015 21:11:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-010
Misc. Info.: 031525
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:48:53 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 30-Oct-2015 13:38:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.458	8.431	0.027	95	510396	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.636	10.619	0.017	94	2491041	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.854	16.842	0.012	84	2352299	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.598	19.590	0.008	64	1712632	4.00	3.94	
6 Chlorodifluoromethane	67	3.782	3.777	0.005	96	540426	16.0	12.2	
7 Propene	41	3.788	3.780	0.008	98	1765222	16.0	10.0	
8 Dichlorodifluoromethane	85	3.842	3.831	0.011	99	5027990	16.0	12.9	
9 Chloromethane	52	4.003	3.984	0.019	99	694820	16.0	12.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.025	4.011	0.014	98	4732267	16.0	13.5	
11 Acetaldehyde	44	4.160	4.134	0.026	88	3712581	80.0	35.0	
12 Vinyl chloride	62	4.160	4.143	0.017	98	2273528	16.0	12.1	
14 Butadiene	54	4.241	4.224	0.017	75	1868473	16.0	12.6	
13 Butane	43	4.246	4.228	0.018	84	3006124	16.0	11.9	
15 Bromomethane	94	4.521	4.498	0.023	99	2339668	16.0	13.0	
16 Chloroethane	64	4.651	4.627	0.024	91	1227936	16.0	13.0	
17 Ethanol	31	4.785	4.758	0.027	86	2644048	80.0	52.8	
18 Vinyl bromide	106	4.926	4.895	0.031	100	2483740	16.0	14.1	
19 2-Methylbutane	43	4.974	4.957	0.017	89	2711263	16.0	13.7	
21 Acrolein	56	5.163	5.139	0.024	90	965739	16.0	15.0	
20 Trichlorofluoromethane	101	5.168	5.144	0.024	99	6348924	16.0	14.1	
22 Acetonitrile	40	5.228	5.199	0.029	99	1013753	16.0	13.5	
23 Acetone	58	5.265	5.246	0.019	95	3808835	48.0	32.0	
24 Pentane	72	5.368	5.349	0.019	96	497795	16.0	14.5	
25 Isopropyl alcohol	45	5.389	5.358	0.031	96	9573808	48.0	38.6	
26 Ethyl ether	31	5.508	5.493	0.015	90	2248035	16.0	13.2	
27 1,1-Dichloroethene	96	5.794	5.767	0.027	98	2630603	16.0	14.8	
28 Acrylonitrile	53	5.875	5.847	0.028	97	2015627	16.0	14.8	
29 2-Methyl-2-propanol	59	5.907	5.885	0.022	93	4735364	16.0	14.4	
30 1,1,2-Trichloro-1,2,2-trif	101	5.972	5.950	0.022	97	5571061	16.0	14.6	
31 Methylene Chloride	84	6.096	6.069	0.027	94	2304869	16.0	13.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.117	6.090	0.027	95	1846882	16.0	12.1	
33 Carbon disulfide	76	6.236	6.212	0.024	97	7342693	16.0	14.4	
34 trans-1,2-Dichloroethene	96	6.851	6.822	0.029	98	2735476	16.0	14.8	
35 2-Methylpentane	43	6.888	6.870	0.018	94	4893654	16.0	13.6	
36 Methyl tert-butyl ether	73	6.969	6.954	0.015	96	6855095	16.0	14.7	
37 1,1-Dichloroethane	63	7.228	7.200	0.028	100	4716818	16.0	14.3	
38 Vinyl acetate	43	7.336	7.310	0.026	100	6942989	16.0	14.9	
39 2-Butanone (MEK)	72	7.730	7.715	0.015	99	1311844	16.0	12.6	
40 Hexane	56	7.811	7.791	0.019	83	2144501	16.0	14.5	
141 Isopropyl ether	45	7.951	7.935	0.016	97	8506719	16.0	13.6	
41 cis-1,2-Dichloroethene	96	8.150	8.125	0.025	92	2838815	16.0	14.9	
42 Ethyl acetate	43	8.334	8.316	0.018	100	5617273	16.0	14.2	
43 Chloroform	83	8.490	8.461	0.029	97	5247650	16.0	14.0	
144 Tert-butyl ethyl ether	59	8.592	8.579	0.013	92	7853517	16.0	14.6	
44 Tetrahydrofuran	42	8.840	8.833	0.007	94	2810050	16.0	14.4	
45 1,1,1-Trichloroethane	97	9.471	9.451	0.020	96	5363645	16.0	14.9	
46 1,2-Dichloroethane	62	9.552	9.530	0.022	97	3367163	16.0	14.5	
49 n-Butanol	31	10.027	10.023	0.004	78	828029	16.0	14.1	
47 Benzene	78	10.065	10.041	0.024	96	7615521	16.0	14.4	
48 Cyclohexane	69	10.081	10.062	0.019	90	1171679	16.0	14.7	
50 Carbon tetrachloride	117	10.097	10.077	0.020	98	5976711	16.0	17.5	
51 2,3-Dimethylpentane	71	10.232	10.217	0.015	90	1795323	16.0	15.3	
52 Thiophene	84	10.334	10.313	0.021	94	4499652	16.0	15.4	
142 Tert-amyl methyl ether	73	10.582	10.568	0.014	99	7336251	16.0	15.0	
53 Isooctane	57	10.927	10.911	0.016	99	12947237	16.0	14.7	
54 n-Heptane	71	11.359	11.340	0.019	85	2814638	16.0	15.2	
55 1,2-Dichloropropane	63	11.364	11.346	0.018	95	3028775	16.0	14.7	
56 Trichloroethene	130	11.429	11.410	0.019	96	4036727	16.0	16.2	
57 Dibromomethane	93	11.483	11.467	0.016	89	3195717	16.0	15.0	
58 Dichlorobromomethane	83	11.671	11.655	0.016	99	5602203	16.0	15.7	
59 1,4-Dioxane	88	11.677	11.668	0.009	82	1231880	16.0	15.2	
60 Methyl methacrylate	41	11.817	11.801	0.016	87	3303219	16.0	15.0	
61 Methylcyclohexane	83	12.362	12.347	0.015	95	5899945	16.0	15.5	
62 4-Methyl-2-pentanone (MIBK	43	12.842	12.831	0.011	94	6069313	16.0	12.1	
63 cis-1,3-Dichloropropene	75	12.906	12.891	0.015	90	4732844	16.0	16.0	
64 trans-1,3-Dichloropropene	75	13.818	13.804	0.014	96	4383688	16.0	16.1	
65 Toluene	91	13.996	13.983	0.013	94	9654968	16.0	15.1	
66 1,1,2-Trichloroethane	83	14.076	14.060	0.016	96	2808159	16.0	14.9	
67 2-Methylthiophene	97	14.195	14.179	0.016	96	8094755	16.0	15.6	
68 3-Methylthiophene	97	14.470	14.457	0.013	98	8024092	16.0	15.6	
69 2-Hexanone	58	14.648	14.637	0.011	97	3524101	16.0	15.7	
71 Chlorodibromomethane	129	15.036	15.023	0.013	97	6621514	16.0	17.8	
70 n-Octane	85	15.063	15.053	0.010	86	3249197	16.0	15.3	
72 Ethylene Dibromide	107	15.446	15.432	0.014	99	5615191	16.0	16.0	
73 Tetrachloroethene	129	15.613	15.602	0.011	96	3688597	16.0	15.8	
74 Chlorobenzene	112	16.929	16.918	0.011	97	8108986	16.0	15.6	
75 2,3-Dimethylheptane	43	17.107	17.100	0.007	91	7408213	16.0	13.8	
76 Ethylbenzene	91	17.436	17.426	0.010	97	12678164	16.0	15.2	
77 2-Ethylthiophene	97	17.587	17.579	0.008	96	9807914	16.0	16.0	
78 m-Xylene & p-Xylene	91	17.716	17.703	0.013	99	19211149	32.0	30.0	
79 Bromoform	173	18.342	18.330	0.012	98	7361637	16.0	21.1	
80 Styrene	104	18.466	18.457	0.009	97	8253951	16.0	17.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.552	18.547	0.005	87	5942521	16.0	14.0	
82 o-Xylene	91	18.568	18.559	0.009	99	9903343	16.0	14.9	
83 1,1,2,2-Tetrachloroethane	83	19.097	19.088	0.009	98	7445066	16.0	15.6	
84 1,2,3-Trichloropropane	110	19.361	19.352	0.009	97	2311190	16.0	15.9	
85 Isopropylbenzene	105	19.598	19.589	0.009	95	14334362	16.0	15.2	
86 N-Propylbenzene	120	20.563	20.554	0.009	100	4500545	16.0	16.6	
87 2-Chlorotoluene	126	20.580	20.572	0.008	93	3958594	16.0	16.2	
88 4-Ethyltoluene	105	20.855	20.844	0.011	98	14980816	16.0	16.1	
89 1,3,5-Trimethylbenzene	120	21.011	21.000	0.011	95	7582349	16.0	16.9	
90 Alpha Methyl Styrene	118	21.432	21.426	0.006	92	7136341	16.0	18.7	
91 n-Decane	57	21.739	21.726	0.013	89	8106520	16.0	14.8	
92 tert-Butylbenzene	119	21.814	21.802	0.012	95	13949432	16.0	16.4	
93 1,2,4-Trimethylbenzene	105	21.847	21.832	0.015	95	12655271	16.0	16.0	
94 1,3-Dichlorobenzene	146	22.311	22.300	0.011	95	9631974	16.0	16.9	
95 sec-Butylbenzene	105	22.370	22.361	0.009	98	18121323	16.0	15.8	
96 Benzyl chloride	91	22.483	22.469	0.014	99	11530116	16.0	16.0	
97 1,4-Dichlorobenzene	146	22.505	22.487	0.018	97	9754192	16.0	16.6	
98 4-Isopropyltoluene	119	22.742	22.729	0.013	97	16948735	16.0	16.4	
99 1,2,3-Trimethylbenzene	105	22.785	22.776	0.009	97	10278175	16.0	16.1	
100 Butylcyclohexane	83	22.990	22.980	0.010	95	9400588	16.0	15.4	
101 1,2-Dichlorobenzene	146	23.238	23.227	0.011	98	9269460	16.0	16.5	
102 2,3-Dihydroindene	117	23.270	23.259	0.011	95	12593037	16.0	16.3	
103 Indene	116	23.535	23.527	0.008	94	10067376	16.0	17.9	
104 n-Butylbenzene	91	23.686	23.674	0.012	98	14478085	16.0	15.1	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.538	24.528	0.010	98	12796605	16.0	16.8	
143 1,2-Dibromo-3-Chloropropan	157	24.592	24.582	0.010	88	4871923	16.0	19.7	
106 Undecane	57	24.619	24.605	0.014	92	8642784	16.0	13.7	
107 1,2,4,5-Tetramethylbenzene	119	25.449	25.441	0.008	98	14315531	16.0	16.4	
108 1,2,3,5-Tetramethylbenzene	119	25.578	25.569	0.009	97	8794750	16.0	16.6	
109 1,2,3,4-Tetramethylbenzene	119	26.495	26.489	0.006	98	11949321	16.0	16.4	
110 Dodecane	57	27.153	27.145	0.008	97	8556466	16.0	14.5	
111 1,2,4-Trichlorobenzene	180	27.196	27.189	0.007	93	8897824	16.0	17.4	
112 Naphthalene	128	27.433	27.426	0.007	99	18211095	16.0	15.2	
113 Benzo(b)thiophene	134	27.627	27.623	0.004	100	11672515	16.0	16.7	
114 Hexachlorobutadiene	225	27.994	27.986	0.008	94	7178125	16.0	18.4	
115 1,2,3-Trichlorobenzene	180	28.021	28.012	0.009	97	7956596	16.0	16.2	
116 2-Methylnaphthalene	142	29.526	29.523	0.003	98	6507661	50.0	40.5	
117 1-Methylnaphthalene	142	29.833	29.833	0.000	99	4488346	50.0	35.4	
A 118 C6 Range	1	7.821	(7.746-7.908)		0	16395428	16.0	14.4	
A 119 Toluene Range	1	14.032	(13.920-14.128)		0	40862736	16.0	26.6	
A 120 C8 Range	1	15.091	(14.999-15.214)		0	44749832	16.0	14.1	
S 124 Xylenes, Total	100				0		48.0	44.9	
S 145 1,2-Dichloroethene, Total	1				0		32.0	29.7	

Reagents:

CDN2C00X40_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

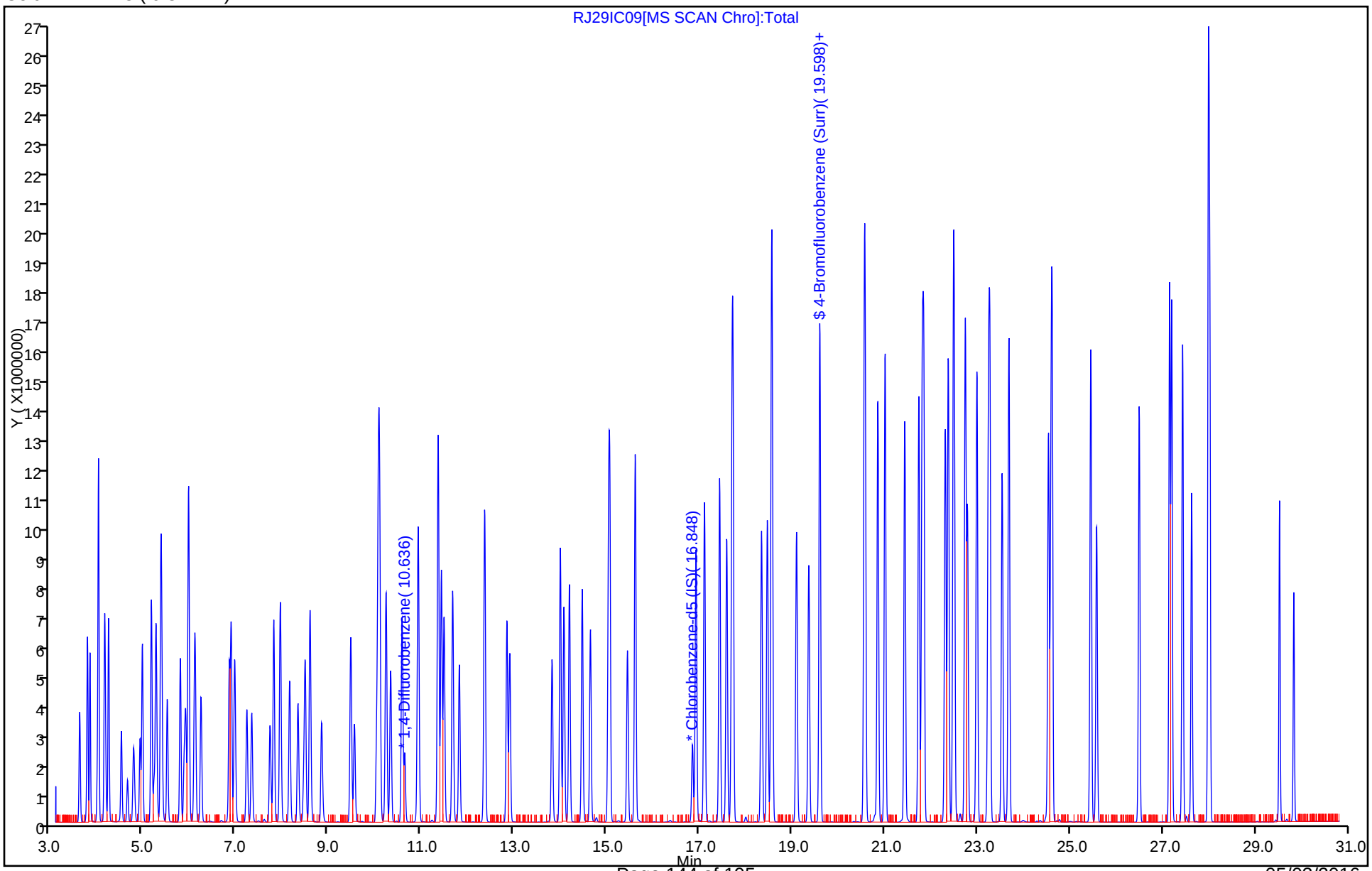
Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR	Operator ID:	
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

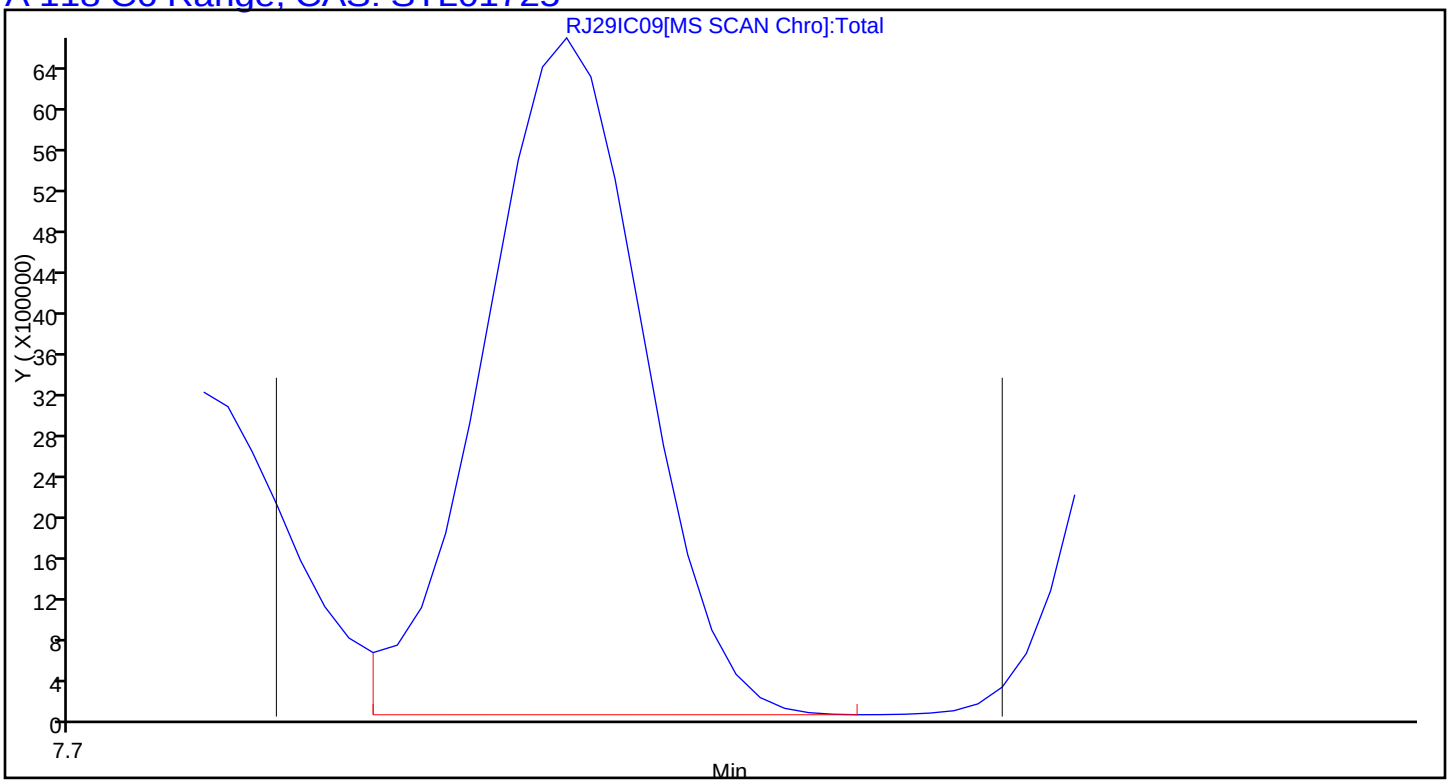


Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 118 C6 Range, CAS: STL01725

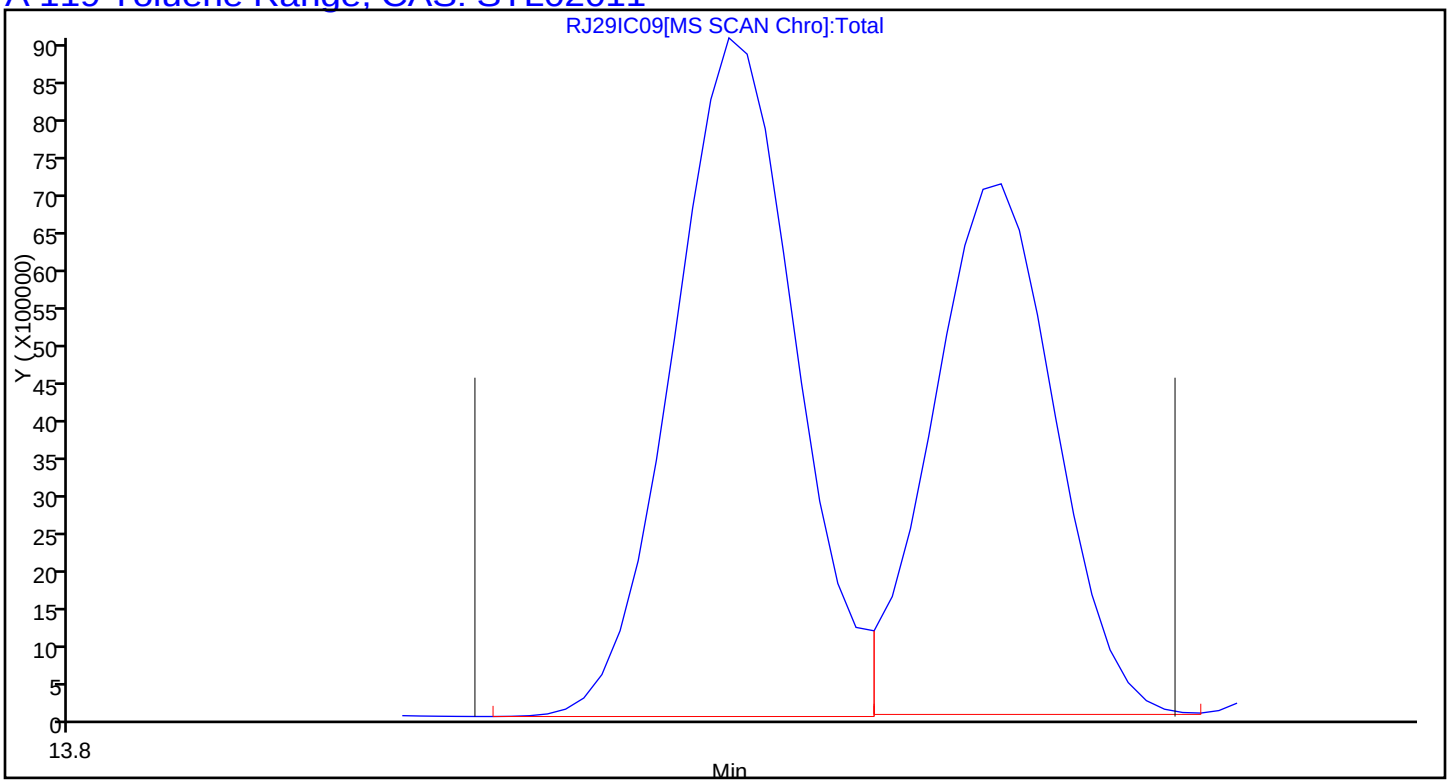


Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 119 Toluene Range, CAS: STL02011

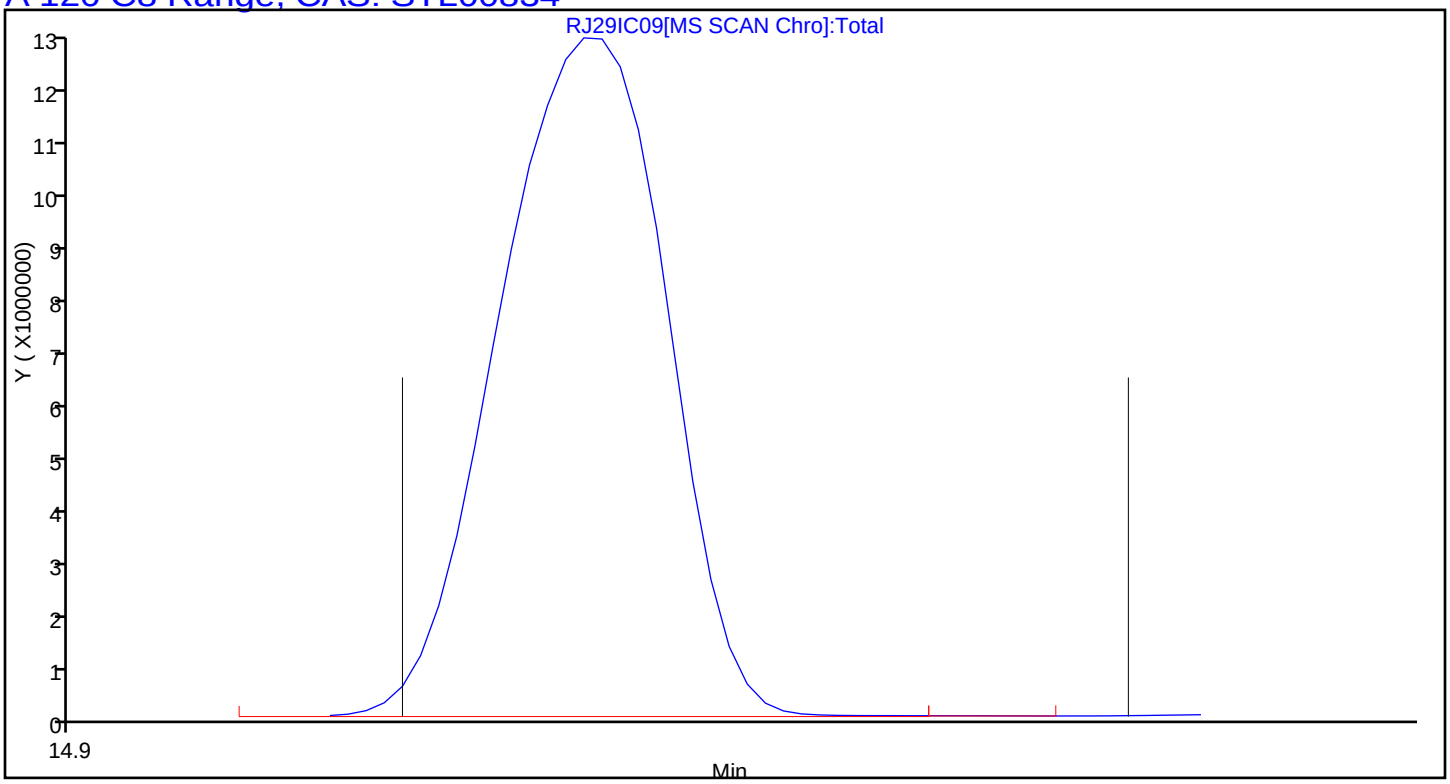


Report Date: 04-Nov-2015 15:48:55 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Injection Date:	29-Oct-2015 21:11:30	Instrument ID:	MR		
Lims ID:	IC L9				
Client ID:					
Operator ID:		ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 120 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab Sample ID: ICV 140-3621/12 Calibration Date: 10/29/2015 22:54

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RJ29ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3468	0.3265		1.88	2.00	-5.9	35.0
Propene	Ave	1.381	1.043		1.51	2.00	-24.5	35.0
Dichlorodifluoromethane	Ave	3.057	2.465		1.61	2.00	-19.4	35.0
Chloromethane	Ave	0.4474	0.3819		1.71	2.00	-14.6	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.744	2.536		1.85	2.00	-7.6	35.0
Acetaldehyde	Ave	0.8319	0.4637		5.58	10.0	-44.3*	35.0
Vinyl chloride	Ave	1.477	1.303		1.77	2.00	-11.8	35.0
1,3-Butadiene	Ave	1.166	1.026		1.76	2.00	-12.1	35.0
Butane	Ave	1.974	1.821		1.85	2.00	-7.7	35.0
Bromomethane	Ave	1.415	1.225		1.73	2.00	-13.4	35.0
Chloroethane	Ave	0.7397	0.6572		1.78	2.00	-11.2	35.0
Ethanol	Ave	0.3923	0.3243		8.27	10.0	-17.3	35.0
Vinyl bromide	Ave	1.377	1.355		1.97	2.00	-1.6	35.0
2-Methylbutane	Ave	1.555	1.538		1.98	2.00	-1.1	35.0
Acrolein	Ave	0.5039	0.5993		2.38	2.00	18.9	35.0
Trichlorofluoromethane	Ave	3.529	3.376		1.91	2.00	-4.4	35.0
Acetonitrile	Ave	0.5905	0.5262		1.78	2.00	-10.9	35.0
Acetone	Ave	0.9331	0.7005		4.51	6.00	-24.9	35.0
Isopropyl alcohol	Ave	1.942	1.564		4.83	6.00	-19.5	35.0
Pentane	Ave	0.2686	0.2924		2.18	2.00	8.9	35.0
Ethyl ether	Ave	1.335	1.297		1.94	2.00	-2.8	35.0
1,1-Dichloroethene	Ave	1.392	1.361		1.96	2.00	-2.2	35.0
Acrylonitrile	Ave	1.065	1.062		2.00	2.00	-0.2	35.0
tert-Butyl alcohol	Ave	2.583	2.516		1.95	2.00	-2.6	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.988	2.935		1.97	2.00	-1.8	35.0
Methylene Chloride	Ave	1.348	1.575		2.34	2.00	16.9	35.0
3-Chloropropene	Ave	1.198	1.030		1.72	2.00	-14.0	35.0
Carbon disulfide	Ave	3.992	3.799		1.90	2.00	-4.8	35.0
trans-1,2-Dichloroethene	Ave	1.449	1.400		1.93	2.00	-3.4	35.0
2-Methylpentane	Ave	2.828	3.006		2.13	2.00	6.3	35.0
Methyl tert-butyl ether	Ave	3.658	3.607		1.97	2.00	-1.4	35.0
1,1-Dichloroethane	Ave	2.592	2.507		1.94	2.00	-3.3	35.0
Vinyl acetate	Ave	3.641	3.662		2.01	2.00	0.6	35.0
2-Butanone (MEK)	Ave	0.8144	0.6884		1.69	2.00	-15.5	35.0
Hexane	Ave	1.157	1.153		1.99	2.00	-0.4	35.0
Isopropyl ether	Ave	4.913	4.868		1.98	2.00	-0.9	35.0
cis-1,2-Dichloroethene	Ave	1.495	1.488		1.99	2.00	-0.5	35.0
Ethyl acetate	Ave	3.102	2.850		1.84	2.00	-8.1	35.0
Chloroform	Ave	2.933	2.801		1.91	2.00	-4.5	35.0
Tert-butyl ethyl ether	Ave	4.209	4.973		2.36	2.00	18.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab Sample ID: ICV 140-3621/12 Calibration Date: 10/29/2015 22:54

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RJ29ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.533	1.477		1.93	2.00	-3.7	35.0
1,1,1-Trichloroethane	Ave	2.823	2.786		1.97	2.00	-1.3	35.0
1,2-Dichloroethane	Ave	0.3736	0.3630		1.94	2.00	-2.8	35.0
1-Butanol	Ave	0.0940	0.0932		1.99	2.00	-0.8	35.0
Benzene	Ave	0.8488	0.8531		2.01	2.00	0.5	35.0
Cyclohexane	Ave	0.1281	0.1292		2.02	2.00	0.8	35.0
Carbon tetrachloride	Ave	0.5469	0.5747		2.10	2.00	5.1	35.0
2,3-Dimethylpentane	Ave	0.1890	0.1778		1.88	2.00	-5.9	35.0
Thiophene	Ave	0.4690	0.4944		2.11	2.00	5.4	35.0
Tert-amyl methyl ether	Ave	0.7829	0.8453		2.16	2.00	8.0	35.0
2,2,4-Trimethylpentane	Ave	1.416	1.429		2.02	2.00	1.0	35.0
Heptane	Ave	0.2964	0.3024		2.04	2.00	2.0	35.0
1,2-Dichloropropane	Ave	0.3316	0.3304		1.99	2.00	-0.4	35.0
Trichloroethene	Ave	0.4001	0.4127		2.06	2.00	3.1	35.0
Dibromomethane	Ave	0.3413	0.3419		2.00	2.00	0.2	35.0
Bromodichloromethane	Ave	0.5734	0.5783		2.02	2.00	0.9	35.0
1,4-Dioxane	Ave	0.1299	0.1303		2.01	2.00	0.3	35.0
Methyl methacrylate	Ave	0.3544	0.3477		1.96	2.00	-1.9	35.0
Methylcyclohexane	Ave	0.6115	0.5043		1.65	2.00	-17.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8079	0.6960		1.72	2.00	-13.8	35.0
cis-1,3-Dichloropropene	Ave	0.4758	0.4955		2.08	2.00	4.1	35.0
trans-1,3-Dichloropropene	Ave	0.4617	0.4856		2.10	2.00	5.2	35.0
Toluene	Ave	1.086	1.166		2.15	2.00	7.4	35.0
1,1,2-Trichloroethane	Ave	0.3200	0.3188		1.99	2.00	-0.4	35.0
2-Methylthiophene	Ave	0.8830	0.9622		2.18	2.00	9.0	35.0
3-Methylthiophene	Ave	0.8722	0.9822		2.25	2.00	12.6	35.0
2-Hexanone	Ave	0.3824	0.3788		1.98	2.00	-0.9	35.0
Dibromochloromethane	Ave	0.6340	0.6677		2.11	2.00	5.3	35.0
Octane	Ave	0.3604	0.3792		2.11	2.00	5.2	35.0
1,2-Dibromoethane (EDB)	Ave	0.5950	0.6196		2.08	2.00	4.1	35.0
Tetrachloroethene	Ave	0.3959	0.4122		2.08	2.00	4.1	35.0
Chlorobenzene	Ave	0.8860	0.9121		2.06	2.00	2.9	35.0
2,3-Dimethylheptane	Ave	0.9157	0.9457		2.07	2.00	3.3	35.0
Ethylbenzene	Ave	1.417	1.447		2.04	2.00	2.1	35.0
2-Ethylthiophene	Ave	1.041	1.075		2.07	2.00	3.3	35.0
m-Xylene & p-Xylene	Ave	1.090	1.131		4.15	4.00	3.7	35.0
Bromoform	Ave	0.5920	0.6199		2.10	2.00	4.7	35.0
Styrene	Ave	0.8010	0.8714		2.18	2.00	8.8	35.0
Nonane	Ave	0.7217	0.7537		2.09	2.00	4.4	35.0
o-Xylene	Ave	1.130	1.140		2.02	2.00	0.9	35.0
1,1,2,2-Tetrachloroethane	Ave	0.8121	0.8070		1.99	2.00	-0.6	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab Sample ID: ICV 140-3621/12 Calibration Date: 10/29/2015 22:54

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RJ29ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2467	0.2520		2.04	2.00	2.2	35.0
Isopropylbenzene	Ave	1.605	1.669		2.08	2.00	4.0	35.0
Propylbenzene	Ave	0.4601	0.4837		2.10	2.00	5.1	35.0
2-Chlorotoluene	Ave	0.4165	0.4379		2.10	2.00	5.1	35.0
4-Ethyltoluene	Ave	1.587	1.514		1.91	2.00	-4.6	35.0
1,3,5-Trimethylbenzene	Ave	0.7610	0.7956		2.09	2.00	4.6	35.0
Alpha Methyl Styrene	Ave	0.6483	0.6786		2.09	2.00	4.7	35.0
Decane	Ave	0.9320	0.9557		2.05	2.00	2.5	35.0
tert-Butylbenzene	Ave	1.451	1.489		2.05	2.00	2.7	35.0
1,2,4-Trimethylbenzene	Ave	1.346	1.355		2.01	2.00	0.7	35.0
1,3-Dichlorobenzene	Ave	0.9689	0.9633		1.99	2.00	-0.6	35.0
sec-Butylbenzene	Ave	1.955	1.988		2.03	2.00	1.7	35.0
Benzyl chloride	Ave	1.223	1.211		1.98	2.00	-1.0	35.0
1,4-Dichlorobenzene	Ave	1.000	0.9773		1.96	2.00	-2.3	35.0
4-Isopropyltoluene	Ave	1.760	1.779		2.02	2.00	1.1	35.0
1,2,3-Trimethylbenzene	Ave	1.086	1.177		2.17	2.00	8.4	35.0
Butylcyclohexane	Ave	1.038	1.028		1.98	2.00	-0.9	35.0
1,2-Dichlorobenzene	Ave	0.9528	0.9273		1.95	2.00	-2.7	35.0
Indane	Ave	1.317	1.257		1.91	2.00	-4.5	35.0
Indene	Ave	0.9563	1.251		2.62	2.00	30.9	35.0
Butylbenzene	Ave	1.626	1.611		1.98	2.00	-0.9	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.294	1.636		2.53	2.00	26.4	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4204	0.3075		1.46	2.00	-26.8	35.0
Undecane	Ave	1.073	1.083		2.02	2.00	0.9	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.487	1.647		2.22	2.00	10.7	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.9029	1.030		2.28	2.00	14.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.239	1.351		2.18	2.00	9.0	35.0
Dodecane	Ave	1.005	1.028		2.05	2.00	2.3	35.0
1,2,4-Trichlorobenzene	Ave	0.8701	0.8001		1.84	2.00	-8.0	35.0
Naphthalene	Ave	2.038	1.710		1.68	2.00	-16.1	35.0
Benzo(b)thiophene	Ave	1.192	1.284		2.16	2.00	7.7	35.0
Hexachlorobutadiene	Ave	0.6625	0.6619		2.00	2.00	-0.0	35.0
1,2,3-Trichlorobenzene	Ave	0.8332	0.7683		1.85	2.00	-7.8	35.0
2-Methylnaphthalene	Ave	0.2735	0.3756		8.59	6.25	37.3	50.0
1-Methylnaphthalene	Ave	0.2158	0.2963		8.58	6.25	37.3	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7387	0.7306		3.96	4.00	-1.1	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 29-Oct-2015 22:54:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-012
Misc. Info.: 031519
Operator ID: Instrument ID: MR
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 16:31:32 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: barlozhetskayaa Date: 04-Nov-2015 16:31:32

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.436	8.431	0.005	90	485034	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.625	10.619	0.006	94	2411549	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	16.843	16.842	0.001	85	2232798	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	19.588	19.592	-0.002	86	1631208	4.00	3.96	
	6 Chlorodifluoromethane	67	3.788	3.779	0.011	96	79219	2.00	1.88	
	7 Propene	41	3.788	3.782	0.008	98	253197	2.00	1.51	
	8 Dichlorodifluoromethane	85	3.842	3.833	0.011	100	598060	2.00	1.61	
	9 Chloromethane	52	3.998	3.987	0.014	100	92673	2.00	1.71	
	10 1,2-Dichloro-1,1,2,2-tetra	135	4.020	4.013	0.009	97	615338	2.00	1.85	
	11 Acetaldehyde	44	4.144	4.137	0.010	97	562541	10.0	5.58	
	12 Vinyl chloride	62	4.155	4.145	0.012	98	316186	2.00	1.77	
	14 Butadiene	54	4.235	4.227	0.011	94	248835	2.00	1.76	
	13 Butane	43	4.235	4.230	0.007	92	441903	2.00	1.85	
	15 Bromomethane	94	4.510	4.501	0.012	99	297344	2.00	1.73	
	16 Chloroethane	64	4.634	4.630	0.007	93	159471	2.00	1.78	
	17 Ethanol	31	4.759	4.761	0.000	88	393473	10.0	8.27	
	18 Vinyl bromide	106	4.904	4.898	0.009	99	328712	2.00	1.97	
	19 2-Methylbutane	43	4.963	4.960	0.006	90	373091	2.00	1.98	
	21 Acrolein	56	5.147	5.143	0.008	89	145412	2.00	2.38	
	20 Trichlorofluoromethane	101	5.152	5.147	0.008	99	819083	2.00	1.91	
	22 Acetonitrile	40	5.201	5.203	0.002	100	127671	2.00	1.78	
	23 Acetone	58	5.249	5.250	0.003	97	509987	6.00	4.51	
	24 Pentane	72	5.362	5.353	0.013	97	70958	2.00	2.18	
	25 Isopropyl alcohol	45	5.357	5.362	-0.001	82	1138704	6.00	4.83	
	26 Ethyl ether	31	5.497	5.497	0.004	93	314712	2.00	1.94	
	27 1,1-Dichloroethene	96	5.778	5.771	0.011	98	330185	2.00	1.96	
	28 Acrylonitrile	53	5.853	5.851	0.006	94	257675	2.00	2.00	
	29 2-Methyl-2-propanol	59	5.880	5.889	-0.005	93	610538	2.00	1.95	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.956	5.953	0.006	98	712071	2.00	1.97	
	31 Methylene Chloride	84	6.080	6.073	0.011	95	382167	2.00	2.34	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.096	6.094	0.006	95	249950	2.00	1.72	
33 Carbon disulfide	76	6.220	6.216	0.008	97	921784	2.00	1.90	
34 trans-1,2-Dichloroethene	96	6.829	6.826	0.007	99	339618	2.00	1.93	
35 2-Methylpentane	43	6.878	6.874	0.008	95	729474	2.00	2.13	
36 Methyl tert-butyl ether	73	6.953	6.959	-0.001	97	875214	2.00	1.97	
37 1,1-Dichloroethane	63	7.207	7.205	0.007	100	608254	2.00	1.94	
38 Vinyl acetate	43	7.314	7.315	0.004	100	888457	2.00	2.01	
39 2-Butanone (MEK)	72	7.714	7.720	-0.001	99	167039	2.00	1.69	
40 Hexane	56	7.800	7.796	0.009	86	279670	2.00	1.99	
141 Isopropyl ether	45	7.935	7.940	0.000	98	1181320	2.00	1.98	
41 cis-1,2-Dichloroethene	96	8.134	8.130	0.009	93	360936	2.00	1.99	
42 Ethyl acetate	43	8.317	8.321	0.001	100	691626	2.00	1.84	
43 Chloroform	83	8.468	8.467	0.007	96	679681	2.00	1.91	
144 Tert-butyl ethyl ether	59	8.576	8.584	-0.003	94	1206806	2.00	2.36	
44 Tetrahydrofuran	42	8.830	8.839	-0.003	94	358353	2.00	1.93	
45 1,1,1-Trichloroethane	97	9.455	9.457	0.004	96	676015	2.00	1.97	
46 1,2-Dichloroethane	62	9.536	9.531	0.006	97	437913	2.00	1.94	
49 n-Butanol	31	10.016	10.024	-0.007	80	112469	2.00	1.99	
47 Benzene	78	10.048	10.042	0.007	96	1029231	2.00	2.01	
48 Cyclohexane	69	10.070	10.063	0.008	96	155841	2.00	2.02	
50 Carbon tetrachloride	117	10.081	10.078	0.004	98	693316	2.00	2.10	
51 2,3-Dimethylpentane	71	10.221	10.219	0.004	90	214442	2.00	1.88	
52 Thiophene	84	10.318	10.314	0.005	95	596412	2.00	2.11	
142 Tert-amyl methyl ether	73	10.566	10.569	-0.002	98	1019893	2.00	2.16	
53 Isooctane	57	10.917	10.912	0.006	99	1724237	2.00	2.02	
54 n-Heptane	71	11.343	11.341	0.003	89	364840	2.00	2.04	
55 1,2-Dichloropropane	63	11.348	11.347	0.002	95	398592	2.00	1.99	
56 Trichloroethene	130	11.413	11.411	0.003	95	497865	2.00	2.06	
57 Dibromomethane	93	11.472	11.469	0.005	90	412420	2.00	2.00	
58 Dichlorobromomethane	83	11.655	11.656	0.000	99	697722	2.00	2.02	
59 1,4-Dioxane	88	11.666	11.670	-0.002	83	157194	2.00	2.01	
60 Methyl methacrylate	41	11.801	11.803	0.000	89	419520	2.00	1.96	
61 Methylcyclohexane	83	12.351	12.349	0.004	95	608417	2.00	1.65	
62 4-Methyl-2-pentanone (MIBK	43	12.831	12.832	0.000	95	839701	2.00	1.72	
63 cis-1,3-Dichloropropene	75	12.890	12.892	-0.001	92	597732	2.00	2.08	
64 trans-1,3-Dichloropropene	75	13.807	13.805	0.003	97	542361	2.00	2.10	
65 Toluene	91	13.985	13.984	0.002	94	1302550	2.00	2.15	
66 1,1,2-Trichloroethane	83	14.060	14.069	0.000	97	356084	2.00	1.99	
67 2-Methylthiophene	97	14.179	14.180	0.000	97	1074731	2.00	2.18	
68 3-Methylthiophene	97	14.459	14.458	0.002	98	1097057	2.00	2.25	
69 2-Hexanone	58	14.632	14.638	-0.005	95	423160	2.00	1.98	
71 Chlorodibromomethane	129	15.026	15.024	0.003	98	745795	2.00	2.11	
70 n-Octane	85	15.058	15.054	0.005	90	423612	2.00	2.11	
72 Ethylene Dibromide	107	15.435	15.434	0.003	99	692029	2.00	2.08	
73 Tetrachloroethene	129	15.603	15.604	0.001	98	460413	2.00	2.08	
74 Chlorobenzene	112	16.918	16.919	0.000	95	1018801	2.00	2.06	
75 2,3-Dimethylheptane	43	17.102	17.101	0.002	94	1056320	2.00	2.07	
76 Ethylbenzene	91	17.425	17.427	-0.001	98	1616029	2.00	2.04	
77 2-Ethylthiophene	97	17.582	17.580	0.003	97	1200971	2.00	2.07	
78 m-Xylene & p-Xylene	91	17.706	17.704	0.003	99	2525875	4.00	4.15	
79 Bromoform	173	18.331	18.332	0.001	97	692471	2.00	2.10	
80 Styrene	104	18.455	18.458	-0.002	98	973359	2.00	2.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
81 n-Nonane	57	18.547	18.549	0.000	91	841903	2.00	2.09	
82 o-Xylene	91	18.558	18.561	-0.001	99	1273136	2.00	2.02	
83 1,1,2,2-Tetrachloroethane	83	19.086	19.090	-0.002	99	901428	2.00	1.99	
84 1,2,3-Trichloropropane	110	19.356	19.353	0.004	98	281529	2.00	2.04	
85 Isopropylbenzene	105	19.588	19.591	-0.001	95	1864043	2.00	2.08	
86 N-Propylbenzene	120	20.553	20.555	-0.001	98	540287	2.00	2.10	
87 2-Chlorotoluene	126	20.569	20.573	-0.003	97	489159	2.00	2.10	
88 4-Ethyltoluene	105	20.844	20.845	0.000	99	1690755	2.00	1.91	
89 1,3,5-Trimethylbenzene	120	21.000	21.001	0.000	94	888665	2.00	2.09	
90 Alpha Methyl Styrene	118	21.426	21.427	0.000	90	758013	2.00	2.09	
91 n-Decane	57	21.723	21.727	-0.003	89	1067505	2.00	2.05	
92 tert-Butylbenzene	119	21.798	21.804	-0.004	95	1663545	2.00	2.05	
93 1,2,4-Trimethylbenzene	105	21.831	21.834	-0.001	95	1514016	2.00	2.01	
94 1,3-Dichlorobenzene	146	22.300	22.302	0.000	97	1076043	2.00	1.99	
95 sec-Butylbenzene	105	22.359	22.363	-0.002	99	2220120	2.00	2.03	
96 Benzyl chloride	91	22.467	22.471	-0.002	99	1352752	2.00	1.98	
97 1,4-Dichlorobenzene	146	22.489	22.489	0.002	96	1091655	2.00	1.96	
98 4-Isopropyltoluene	119	22.726	22.731	-0.003	98	1987121	2.00	2.02	
99 1,2,3-Trimethylbenzene	105	22.774	22.777	-0.002	98	1314672	2.00	2.17	
100 Butylcyclohexane	83	22.979	22.982	-0.001	95	1148352	2.00	1.98	
101 1,2-Dichlorobenzene	146	23.227	23.229	0.000	97	1035798	2.00	1.95	
102 2,3-Dihydroindene	117	23.260	23.261	0.001	95	1404581	2.00	1.91	
103 Indene	116	23.524	23.529	-0.003	93	1397679	2.00	2.62	
104 n-Butylbenzene	91	23.675	23.676	0.001	98	1799922	2.00	1.98	
105 1,2-Dimethyl-4-Ethylbenzen	119	24.527	24.530	-0.001	98	1827221	2.00	2.53	
143 1,2-Dibromo-3-Chloropropan	157	24.581	24.584	-0.001	93	343552	2.00	1.46	
106 Undecane	57	24.602	24.607	-0.003	95	1209676	2.00	2.02	
107 1,2,4,5-Tetramethylbenzene	119	25.438	25.443	-0.003	98	1839310	2.00	2.22	
108 1,2,3,5-Tetramethylbenzene	119	25.568	25.571	-0.001	96	1150455	2.00	2.28	
109 1,2,3,4-Tetramethylbenzene	119	26.490	26.491	0.001	98	1508674	2.00	2.18	
110 Dodecane	57	27.142	27.147	-0.003	98	1148273	2.00	2.05	
111 1,2,4-Trichlorobenzene	180	27.185	27.191	-0.004	94	893724	2.00	1.84	
112 Naphthalene	128	27.423	27.428	-0.003	99	1909986	2.00	1.68	
113 Benzo(b)thiophene	134	27.622	27.625	-0.001	100	1434467	2.00	2.16	
114 Hexachlorobutadiene	225	27.983	27.988	-0.003	96	739310	2.00	2.00	
115 1,2,3-Trichlorobenzene	180	28.010	28.014	-0.002	95	858149	2.00	1.85	
116 2-Methylnaphthalene	142	29.526	29.525	0.003	99	1311091	6.25	8.59	
117 1-Methylnaphthalene	142	29.833	29.835	0.000	99	1034352	6.25	8.58	
A 118 C6 Range	1	7.824	(7.767-7.881)		0	2781415	2.00	2.52	
A 119 Toluene Range	1	14.031	(13.946-14.115)		0	6768238	2.00	4.55	E
A 120 C8 Range	1	15.106	(14.999-15.214)		0	7620157	2.00	2.48	
S 124 Xylenes, Total	100				0		6.00	6.17	
S 145 1,2-Dichloroethene, Total	1				0		4.00	3.92	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

ICM2C00X10_00006	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

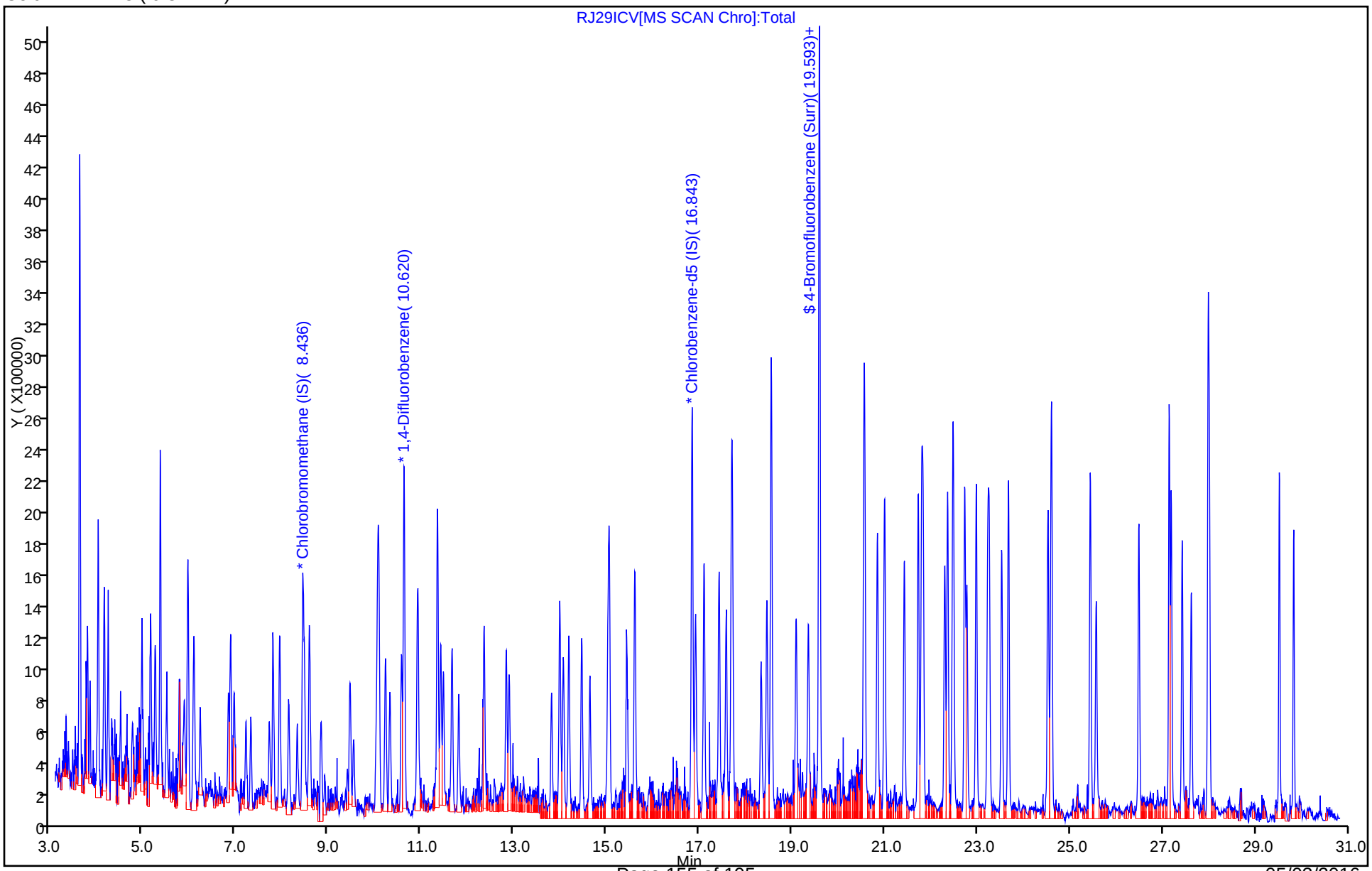
Report Date: 04-Nov-2015 16:31:34 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29ICV.D

Injection Date:	29-Oct-2015 22:54:30	Instrument ID:	MR	Operator ID:	
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab Sample ID: CCVIS 140-4733/2 Calibration Date: 04/28/2016 10:09

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RCCVD28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3468	0.3906		2.25	2.00	12.6	30.0
Propene	Ave	1.381	1.443		2.09	2.00	4.4	30.0
Dichlorodifluoromethane	Ave	3.057	3.554		2.32	2.00	16.2	30.0
Chloromethane	Ave	0.4474	0.5279		2.36	2.00	18.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.744	2.544		1.85	2.00	-7.3	30.0
Acetaldehyde	Ave	0.8319	0.6321		7.60	10.0	-24.0	30.0
Vinyl chloride	Ave	1.477	1.490		2.02	2.00	0.9	30.0
1,3-Butadiene	Ave	1.166	1.249		2.14	2.00	7.1	30.0
Butane	Ave	1.974	2.470		2.50	2.00	25.2	30.0
Bromomethane	Ave	1.415	1.351		1.91	2.00	-4.6	30.0
Chloroethane	Ave	0.7397	0.7398		2.00	2.00	0.0	30.0
Ethanol	Ave	0.3923	0.4951		12.6	10.0	26.2	30.0
Vinyl bromide	Ave	1.377	1.232		1.79	2.00	-10.5	30.0
2-Methylbutane	Ave	1.555	1.842		2.37	2.00	18.5	30.0
Acrolein	Ave	0.5039	0.5353		2.12	2.00	6.2	30.0
Trichlorofluoromethane	Ave	3.529	3.674		2.08	2.00	4.1	30.0
Acetonitrile	Ave	0.5905	0.7375		2.50	2.00	24.9	30.0
Acetone	Ave	0.9331	0.7359		4.73	6.00	-21.1	30.0
Isopropyl alcohol	Ave	1.942	2.040		6.30	6.00	5.1	30.0
Pentane	Ave	0.2686	0.2528		1.88	2.00	-5.9	30.0
Ethyl ether	Ave	1.335	1.684		2.52	2.00	26.2	30.0
1,1-Dichloroethene	Ave	1.392	1.211		1.74	2.00	-13.0	30.0
Acrylonitrile	Ave	1.065	1.163		2.19	2.00	9.3	30.0
tert-Butyl alcohol	Ave	2.583	2.395		1.85	2.00	-7.3	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.988	2.914		1.95	2.00	-2.5	30.0
Methylene Chloride	Ave	1.348	1.237		1.84	2.00	-8.2	30.0
3-Chloropropene	Ave	1.198	1.391		2.32	2.00	16.1	30.0
Carbon disulfide	Ave	3.992	3.986		2.00	2.00	-0.2	30.0
trans-1,2-Dichloroethene	Ave	1.449	1.266		1.75	2.00	-12.7	30.0
2-Methylpentane	Ave	2.828	3.304		2.34	2.00	16.8	30.0
Methyl tert-butyl ether	Ave	3.658	3.455		1.89	2.00	-5.5	30.0
1,1-Dichloroethane	Ave	2.592	2.642		2.04	2.00	1.9	30.0
Vinyl acetate	Ave	3.641	4.074		2.24	2.00	11.9	30.0
2-Butanone (MEK)	Ave	0.8144	0.6122		1.50	2.00	-24.8	30.0
Hexane	Ave	1.157	1.218		2.11	2.00	5.3	30.0
Isopropyl ether	Ave	4.913	5.503		2.24	2.00	12.0	30.0
cis-1,2-Dichloroethene	Ave	1.495	1.347		1.80	2.00	-9.9	30.0
Ethyl acetate	Ave	3.102	3.532		2.28	2.00	13.8	30.0
Chloroform	Ave	2.933	2.978		2.03	2.00	1.6	30.0
Tert-butyl ethyl ether	Ave	4.209	4.165		1.98	2.00	-1.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab Sample ID: CCVIS 140-4733/2 Calibration Date: 04/28/2016 10:09

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RCCVD28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.533	1.756		2.29	2.00	14.5	30.0
1,1,1-Trichloroethane	Ave	2.823	2.896		2.05	2.00	2.6	30.0
1,2-Dichloroethane	Ave	0.3736	0.4055		2.17	2.00	8.5	30.0
1-Butanol	Ave	0.0940	0.0876		1.86	2.00	-6.8	30.0
Benzene	Ave	0.8488	0.7777		1.83	2.00	-8.4	30.0
Cyclohexane	Ave	0.1281	0.1173		1.83	2.00	-8.5	30.0
Carbon tetrachloride	Ave	0.5469	0.6062		2.22	2.00	10.8	30.0
2,3-Dimethylpentane	Ave	0.1890	0.1739		1.84	2.00	-8.0	30.0
Thiophene	Ave	0.4690	0.4384		1.87	2.00	-6.5	30.0
Tert-amyl methyl ether	Ave	0.7829	0.7098		1.81	2.00	-9.3	30.0
2,2,4-Trimethylpentane	Ave	1.416	1.439		2.03	2.00	1.6	30.0
Heptane	Ave	0.2964	0.2749		1.86	2.00	-7.2	30.0
1,2-Dichloropropane	Ave	0.3316	0.3327		2.01	2.00	0.3	30.0
Trichloroethene	Ave	0.4001	0.3305		1.65	2.00	-17.4	30.0
Dibromomethane	Ave	0.3413	0.3422		2.01	2.00	0.3	30.0
Bromodichloromethane	Ave	0.5734	0.6043		2.11	2.00	5.4	30.0
1,4-Dioxane	Ave	0.1299	0.1065		1.64	2.00	-18.0	30.0
Methyl methacrylate	Ave	0.3544	0.3969		2.24	2.00	12.0	30.0
Methylcyclohexane	Ave	0.6115	0.5640		1.84	2.00	-7.8	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.8079	0.7703		1.91	2.00	-4.7	30.0
cis-1,3-Dichloropropene	Ave	0.4758	0.4762		2.00	2.00	0.0	30.0
trans-1,3-Dichloropropene	Ave	0.4617	0.4433		1.92	2.00	-4.0	30.0
Toluene	Ave	1.086	0.9712		1.79	2.00	-10.5	30.0
1,1,2-Trichloroethane	Ave	0.3200	0.3069		1.92	2.00	-4.1	30.0
2-Methylthiophene	Ave	0.8830	0.7967		1.80	2.00	-9.8	30.0
3-Methylthiophene	Ave	0.8722	0.7918		1.82	2.00	-9.2	30.0
2-Hexanone	Ave	0.3824	0.3618		1.89	2.00	-5.4	30.0
Dibromochloromethane	Ave	0.6340	0.6270		1.98	2.00	-1.1	30.0
Octane	Ave	0.3604	0.3272		1.82	2.00	-9.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.5950	0.5550		1.87	2.00	-6.7	30.0
Tetrachloroethene	Ave	0.3959	0.3499		1.77	2.00	-11.6	30.0
Chlorobenzene	Ave	0.8860	0.8026		1.81	2.00	-9.4	30.0
2,3-Dimethylheptane	Ave	0.9157	1.092		2.39	2.00	19.3	30.0
Ethylbenzene	Ave	1.417	1.348		1.90	2.00	-4.9	30.0
2-Ethylthiophene	Ave	1.041	1.018		1.96	2.00	-2.2	30.0
m-Xylene & p-Xylene	Ave	1.090	1.118		4.10	4.00	2.6	30.0
Bromoform	Ave	0.5920	0.5495		1.86	2.00	-7.2	30.0
Styrene	Ave	0.8010	0.7816		1.95	2.00	-2.4	30.0
Nonane	Ave	0.7217	0.8247		2.29	2.00	14.3	30.0
o-Xylene	Ave	1.130	1.197		2.12	2.00	5.9	30.0
1,1,2,2-Tetrachloroethane	Ave	0.8121	0.8851		2.18	2.00	9.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Lab Sample ID: CCVIS 140-4733/2 Calibration Date: 04/28/2016 10:09

Instrument ID: MR Calib Start Date: 10/29/2015 14:14

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 10/29/2015 21:11

Lab File ID: RCCVD28.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2467	0.2506		2.03	2.00	1.6	30.0
Isopropylbenzene	Ave	1.605	1.666		2.08	2.00	3.8	30.0
Propylbenzene	Ave	0.4601	0.4484		1.95	2.00	-2.6	30.0
2-Chlorotoluene	Ave	0.4165	0.4171		2.00	2.00	0.1	30.0
4-Ethyltoluene	Ave	1.587	1.636		2.06	2.00	3.1	30.0
1,3,5-Trimethylbenzene	Ave	0.7610	0.7798		2.05	2.00	2.5	30.0
Alpha Methyl Styrene	Ave	0.6483	0.6445		1.99	2.00	-0.6	30.0
Decane	Ave	0.9320	1.100		2.36	2.00	18.1	30.0
tert-Butylbenzene	Ave	1.451	1.560		2.15	2.00	7.5	30.0
1,2,4-Trimethylbenzene	Ave	1.346	1.487		2.21	2.00	10.5	30.0
1,3-Dichlorobenzene	Ave	0.9689	0.9548		1.97	2.00	-1.5	30.0
sec-Butylbenzene	Ave	1.955	2.215		2.27	2.00	13.3	30.0
Benzyl chloride	Ave	1.223	1.352		2.21	2.00	10.5	30.0
1,4-Dichlorobenzene	Ave	1.000	0.996		1.99	2.00	-0.4	30.0
4-Isopropyltoluene	Ave	1.760	1.940		2.20	2.00	10.2	30.0
1,2,3-Trimethylbenzene	Ave	1.086	1.239		2.28	2.00	14.1	30.0
Butylcyclohexane	Ave	1.038	1.229		2.37	2.00	18.4	30.0
1,2-Dichlorobenzene	Ave	0.9528	0.9862		2.07	2.00	3.5	30.0
Indane	Ave	1.317	1.498		2.27	2.00	13.7	30.0
Indene	Ave	0.9563	1.036		2.17	2.00	8.4	30.0
Butylbenzene	Ave	1.626	1.995		2.45	2.00	22.6	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.294	1.432		2.21	2.00	10.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4204	0.4590		2.18	2.00	9.2	30.0
Undecane	Ave	1.073	1.412		2.63	2.00	31.6*	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.487	1.698		2.28	2.00	14.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.9029	1.029		2.28	2.00	14.0	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.239	1.395		2.25	2.00	12.7	30.0
Dodecane	Ave	1.005	1.326		2.64	2.00	31.9*	30.0
1,2,4-Trichlorobenzene	Ave	0.8701	0.8628		1.98	2.00	-0.8	30.0
Naphthalene	Ave	2.038	2.138		2.10	2.00	4.9	30.0
Benzo(b)thiophene	Ave	1.192	1.239		2.08	2.00	4.0	30.0
Hexachlorobutadiene	Ave	0.6625	0.7115		2.15	2.00	7.4	30.0
1,2,3-Trichlorobenzene	Ave	0.8332	0.8329		2.00	2.00	-0.0	30.0
2-Methylnaphthalene	Ave	0.2735	0.2941		6.72	6.25	7.5	50.0
1-Methylnaphthalene	Ave	0.2158	0.3030		8.77	6.25	40.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7387	0.8305		4.50	4.00	12.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RCCVD28.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 28-Apr-2016 10:09:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002793-002
Misc. Info.: P18
Operator ID: Instrument ID: MR
Sublist: chrom-MR_TO15*sub7

Method: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Apr-2016 09:59:30 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 29-Apr-2016 09:59:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.420	8.420	0.000	95	221528	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	10.598	10.598	0.000	96	1136375	4.00	4.00	s
* 3 Chlorobenzene-d5 (IS)	117	16.805	16.805	0.000	90	1090793	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.555	0.000	83	905910	4.00	4.50	
7 Chlorodifluoromethane	67	3.799	3.799	0.000	97	43262	2.00	2.25	
6 Propene	41	3.799	3.799	0.000	96	159781	2.00	2.09	
8 Dichlorodifluoromethane	85	3.847	3.847	0.000	100	393634	2.00	2.32	
9 Chloromethane	52	4.004	4.004	0.000	100	58474	2.00	2.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.025	4.025	0.000	95	281773	2.00	1.85	
11 Acetaldehyde	44	4.149	4.149	0.000	100	350065	10.0	7.60	
12 Vinyl chloride	62	4.160	4.160	0.000	99	165093	2.00	2.02	
13 Butadiene	54	4.241	4.241	0.000	94	138383	2.00	2.14	
14 Butane	43	4.246	4.246	0.000	92	273598	2.00	2.50	
15 Bromomethane	94	4.510	4.510	0.000	98	149599	2.00	1.91	
16 Chloroethane	64	4.640	4.640	0.000	98	81947	2.00	2.00	
17 Ethanol	31	4.764	4.764	0.000	93	274175	10.0	12.6	
18 Vinyl bromide	106	4.904	4.904	0.000	97	136444	2.00	1.79	
19 2-Methylbutane	43	4.963	4.963	0.000	92	204018	2.00	2.37	
20 Acrolein	56	5.141	5.141	0.000	93	59292	2.00	2.12	
21 Trichlorofluoromethane	101	5.152	5.152	0.000	99	406948	2.00	2.08	
22 Acetonitrile	40	5.201	5.201	0.000	100	81690	2.00	2.50	
23 Acetone	58	5.244	5.244	0.000	98	244533	6.00	4.73	
25 Isopropyl alcohol	45	5.352	5.352	0.000	96	678069	6.00	6.30	
24 Pentane	72	5.357	5.357	0.000	95	27998	2.00	1.88	
26 Ethyl ether	31	5.492	5.492	0.000	93	186543	2.00	2.52	
27 1,1-Dichloroethene	96	5.767	5.767	0.000	94	134153	2.00	1.74	
28 Acrylonitrile	53	5.848	5.848	0.000	93	128839	2.00	2.19	
29 2-Methyl-2-propanol	59	5.875	5.875	0.000	97	265276	2.00	1.85	
30 1,1,2-Trichloro-1,2,2-trif	101	5.950	5.950	0.000	92	322806	2.00	1.95	
31 Methylene Chloride	84	6.074	6.074	0.000	95	137055	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.090	6.090	0.000	95	154064	2.00	2.32	
33 Carbon disulfide	76	6.214	6.214	0.000	100	441467	2.00	2.00	
34 trans-1,2-Dichloroethene	96	6.818	6.818	0.000	95	140183	2.00	1.75	
35 2-Methylpentane	43	6.867	6.867	0.000	96	366006	2.00	2.34	
36 Methyl tert-butyl ether	73	6.942	6.942	0.000	97	382744	2.00	1.89	
37 1,1-Dichloroethane	63	7.196	7.196	0.000	100	292656	2.00	2.04	
38 Vinyl acetate	43	7.298	7.298	0.000	100	451293	2.00	2.24	
39 2-Butanone (MEK)	72	7.697	7.697	0.000	98	67804	2.00	1.50	
40 Hexane	56	7.778	7.778	0.000	90	134915	2.00	2.11	
41 Isopropyl ether	45	7.918	7.918	0.000	96	609546	2.00	2.24	
42 cis-1,2-Dichloroethene	96	8.113	8.113	0.000	97	149176	2.00	1.80	
43 Ethyl acetate	43	8.296	8.296	0.000	98	391180	2.00	2.28	
44 Chloroform	83	8.447	8.447	0.000	97	329885	2.00	2.03	
45 Tert-butyl ethyl ether	59	8.560	8.560	0.000	97	461283	2.00	1.98	
46 Tetrahydrofuran	42	8.808	8.808	0.000	94	194510	2.00	2.29	
47 1,1,1-Trichloroethane	97	9.434	9.434	0.000	96	320774	2.00	2.05	
48 1,2-Dichloroethane	62	9.509	9.509	0.000	96	230394	2.00	2.17	
49 n-Butanol	31	9.989	9.989	0.000	87	49777	2.00	1.86	
50 Benzene	78	10.021	10.021	0.000	98	441892	2.00	1.83	
51 Cyclohexane	69	10.043	10.043	0.000	95	66638	2.00	1.83	
52 Carbon tetrachloride	117	10.059	10.059	0.000	97	344405	2.00	2.22	
53 2,3-Dimethylpentane	71	10.199	10.199	0.000	90	98780	2.00	1.84	
54 Thiophene	84	10.291	10.291	0.000	97	249103	2.00	1.87	
55 Tert-amyl methyl ether	73	10.539	10.539	0.000	95	403312	2.00	1.81	
56 Isooctane	57	10.890	10.890	0.000	98	817595	2.00	2.03	
57 n-Heptane	71	11.316	11.316	0.000	94	156206	2.00	1.86	
58 1,2-Dichloropropane	63	11.321	11.321	0.000	90	189047	2.00	2.01	
59 Trichloroethene	130	11.386	11.386	0.000	95	187800	2.00	1.65	
60 Dibromomethane	93	11.445	11.445	0.000	84	194447	2.00	2.01	
61 Dichlorobromomethane	83	11.628	11.628	0.000	98	343353	2.00	2.11	
62 1,4-Dioxane	88	11.634	11.634	0.000	92	60534	2.00	1.64	
63 Methyl methacrylate	41	11.774	11.774	0.000	93	225534	2.00	2.24	
64 Methylcyclohexane	83	12.324	12.324	0.000	91	320469	2.00	1.84	
65 4-Methyl-2-pentanone (MIBK	43	12.798	12.798	0.000	98	437644	2.00	1.91	
66 cis-1,3-Dichloropropene	75	12.863	12.863	0.000	97	270557	2.00	2.00	
67 trans-1,3-Dichloropropene	75	13.774	13.774	0.000	98	241779	2.00	1.92	
68 Toluene	91	13.952	13.952	0.000	93	529683	2.00	1.79	
69 1,1,2-Trichloroethane	83	14.028	14.028	0.000	97	167399	2.00	1.92	
70 2-Methylthiophene	97	14.147	14.147	0.000	98	434514	2.00	1.80	
71 3-Methylthiophene	97	14.427	14.427	0.000	99	431820	2.00	1.82	
72 2-Hexanone	58	14.605	14.605	0.000	91	197332	2.00	1.89	
73 Chlorodibromomethane	129	14.993	14.993	0.000	97	341960	2.00	1.98	
74 n-Octane	85	15.026	15.026	0.000	96	178431	2.00	1.82	
75 Ethylene Dibromide	107	15.403	15.403	0.000	97	302717	2.00	1.87	
76 Tetrachloroethene	129	15.570	15.570	0.000	89	190806	2.00	1.77	
77 Chlorobenzene	112	16.886	16.886	0.000	92	437756	2.00	1.81	
78 2,3-Dimethylheptane	43	17.069	17.069	0.000	96	595692	2.00	2.39	
79 Ethylbenzene	91	17.387	17.387	0.000	99	735305	2.00	1.90	
80 2-Ethylthiophene	97	17.544	17.544	0.000	99	555191	2.00	1.96	
81 m-Xylene & p-Xylene	91	17.668	17.668	0.000	99	1219652	4.00	4.10	
82 Bromoform	173	18.293	18.293	0.000	91	299693	2.00	1.86	
83 Styrene	104	18.423	18.423	0.000	99	426298	2.00	1.95	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 n-Nonane	57	18.514	18.514	0.000	94	449799	2.00	2.29	
85 o-Xylene	91	18.525	18.525	0.000	99	652604	2.00	2.12	
86 1,1,2,2-Tetrachloroethane	83	19.054	19.054	0.000	99	482754	2.00	2.18	
87 1,2,3-Trichloropropane	110	19.318	19.318	0.000	96	136653	2.00	2.03	
88 Isopropylbenzene	105	19.555	19.555	0.000	95	908619	2.00	2.08	
89 N-Propylbenzene	120	20.520	20.520	0.000	98	244530	2.00	1.95	
90 2-Chlorotoluene	126	20.537	20.537	0.000	92	227491	2.00	2.00	
91 4-Ethyltoluene	105	20.812	20.812	0.000	98	892237	2.00	2.06	
92 1,3,5-Trimethylbenzene	120	20.963	20.963	0.000	92	425305	2.00	2.05	
93 Alpha Methyl Styrene	118	21.394	21.394	0.000	89	351505	2.00	1.99	
94 n-Decane	57	21.696	21.696	0.000	89	600095	2.00	2.36	
95 tert-Butylbenzene	119	21.766	21.766	0.000	93	850741	2.00	2.15	
96 1,2,4-Trimethylbenzene	105	21.798	21.798	0.000	95	811212	2.00	2.21	
97 1,3-Dichlorobenzene	146	22.262	22.262	0.000	98	520757	2.00	1.97	
98 sec-Butylbenzene	105	22.327	22.327	0.000	98	1207994	2.00	2.27	
99 Benzyl chloride	91	22.429	22.429	0.000	98	737321	2.00	2.21	
100 1,4-Dichlorobenzene	146	22.451	22.451	0.000	94	543031	2.00	1.99	
101 4-Isopropyltoluene	119	22.693	22.693	0.000	97	1058272	2.00	2.20	
102 1,2,3-Trimethylbenzene	105	22.737	22.737	0.000	99	675909	2.00	2.28	
103 Butylcyclohexane	83	22.947	22.947	0.000	93	670405	2.00	2.37	
104 1,2-Dichlorobenzene	146	23.190	23.190	0.000	94	537843	2.00	2.07	
105 2,3-Dihydroindene	117	23.222	23.222	0.000	94	816816	2.00	2.27	
106 Indene	116	23.492	23.492	0.000	87	565282	2.00	2.17	
107 n-Butylbenzene	91	23.637	23.637	0.000	98	1087861	2.00	2.45	
108 1,2-Dimethyl-4-Ethylbenzen	119	24.489	24.489	0.000	98	780773	2.00	2.21	
109 1,2-Dibromo-3-Chloropropan	157	24.543	24.543	0.000	95	250337	2.00	2.18	
110 Undecane	57	24.570	24.570	0.000	97	770352	2.00	2.63	
111 1,2,4,5-Tetramethylbenzene	119	25.406	25.406	0.000	97	925813	2.00	2.28	
112 1,2,3,5-Tetramethylbenzene	119	25.530	25.530	0.000	95	561377	2.00	2.28	
113 1,2,3,4-Tetramethylbenzene	119	26.452	26.452	0.000	97	761077	2.00	2.25	
114 Dodecane	57	27.115	27.115	0.000	95	723015	2.00	2.64	
115 1,2,4-Trichlorobenzene	180	27.153	27.153	0.000	94	470579	2.00	1.98	
116 Naphthalene	128	27.390	27.390	0.000	99	1166267	2.00	2.10	
117 Benzo(b)thiophene	134	27.590	27.590	0.000	99	675947	2.00	2.08	
118 Hexachlorobutadiene	225	27.956	27.956	0.000	90	388024	2.00	2.15	
119 1,2,3-Trichlorobenzene	180	27.978	27.978	0.000	95	454269	2.00	2.00	
120 2-Methylnaphthalene	142	29.466	29.466	0.000	99	501260	6.25	6.72	
121 1-Methylnaphthalene	142	29.763	29.763	0.000	99	516343	6.25	8.77	
A 122 C6 Range	1	7.794	(7.724-7.875)		0	1170991	2.00	2.25	
S 124 Xylenes, Total	100				0		6.00	6.22	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.55	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00018	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

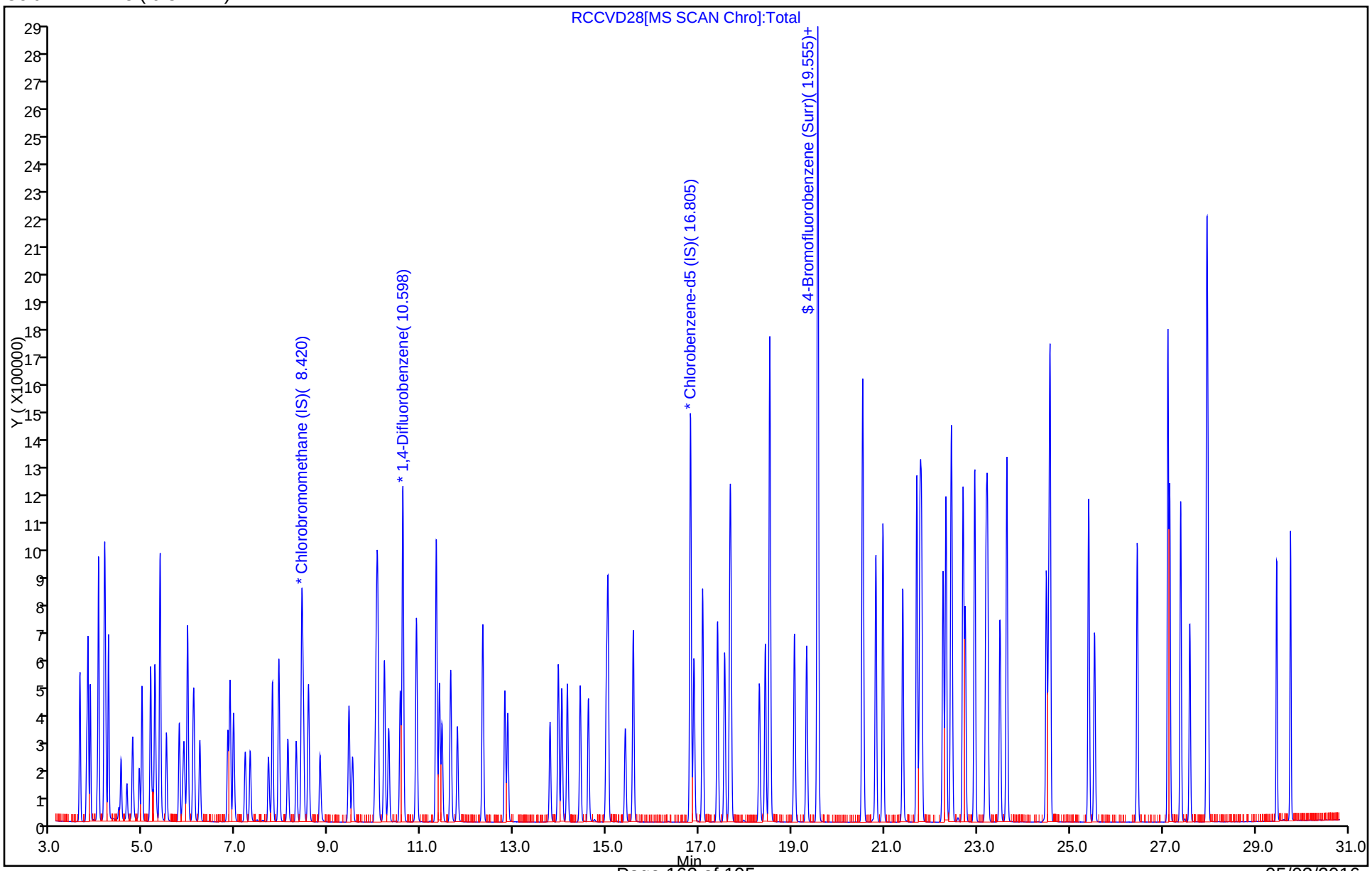
Report Date: 29-Apr-2016 09:59:31 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RCCVD28.D

Injection Date:	28-Apr-2016 10:09:30	Instrument ID:	MR	Operator ID:	
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 29-Oct-2015 12:53:30 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0002223-001
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 04-Nov-2015 15:47:16 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: barlozhetskayaa Date: 29-Oct-2015 13:10:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 133 BFB	95	4.658	4.658	0.000	0	1110281	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

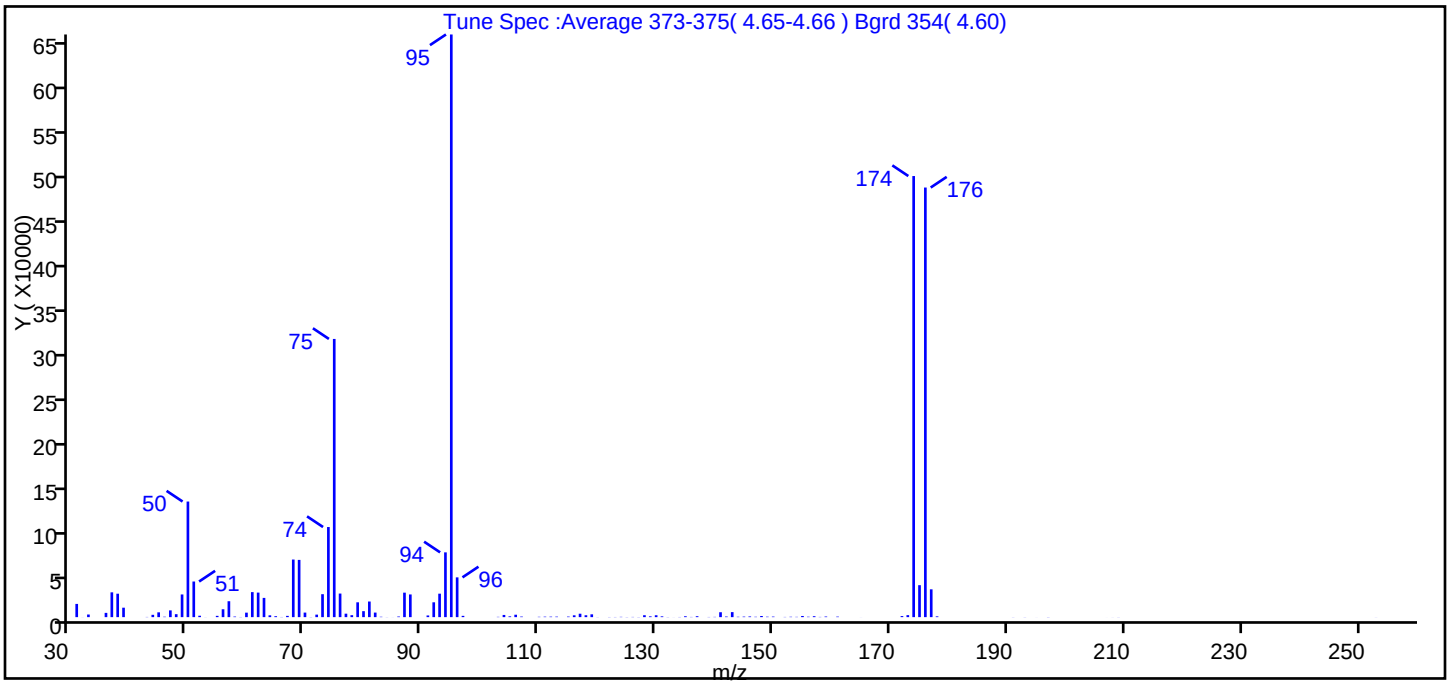
MAbfb1_00003 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D
Injection Date: 29-Oct-2015 12:53:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 133 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.8
75	30 to 60% of m/z 95	47.7
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	75.7
175	5 to 9% of m/z 174	5.5 (7.2)
176	Greater than 95% but less than 101% of m/z 174	73.7 (97.4)
177	5 to 9% of m/z 176	4.8 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D\MR_TO15.rslt\spectra.d
Injection Date: 29-Oct-2015 12:53:30
Spectrum: Tune Spec :Average 373-375(4.65-4.66) Bgrd 354(4.60)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 127

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	14802	69.00	64056	110.00	381	145.00	595
32.00	57	70.00	5093	111.00	538	146.00	770
33.00	2939	71.00	156	112.00	562	147.00	410
36.00	4780	72.00	2813	113.00	578	148.00	1277
37.00	27760	73.00	25680	115.00	625	149.00	488
38.00	26224	74.00	100832	116.00	2051	150.00	603
39.00	10577	75.00	311296	117.00	3835	152.00	232
43.00	221	76.00	26392	118.00	2123	153.00	421
44.00	2599	77.00	3876	119.00	3155	154.00	316
45.00	5369	78.00	2178	120.00	98	155.00	1292
46.00	460	79.00	16600	122.00	168	156.00	463
47.00	7566	80.00	6698	123.00	176	157.00	1032
48.00	3312	81.00	17488	124.00	326	158.00	248
49.00	25384	82.00	5097	125.00	154	159.00	689
50.00	129352	83.00	415	126.00	237	161.00	587
51.00	39872	84.00	96	127.00	157	165.00	41
52.00	1584	85.00	42	128.00	2149	172.00	1187
53.00	70	86.00	691	129.00	867	173.00	2233
55.00	1445	87.00	27400	130.00	2105	174.00	493568
56.00	8828	88.00	25400	131.00	870	175.00	35768
57.00	17808	91.00	1879	132.00	143	176.00	480704
58.00	638	92.00	16608	133.00	53	177.00	31136
59.00	173	93.00	26264	134.00	186	178.00	865
60.00	5024	94.00	72488	135.00	985	191.00	100
61.00	27992	95.00	651968	136.00	225	193.00	106
62.00	27464	96.00	44512	137.00	1036	195.00	36
63.00	21536	97.00	1442	139.00	196	197.00	154
64.00	2030	103.00	319	140.00	285	207.00	20
65.00	1055	104.00	2456	141.00	5504	208.00	50
66.00	179	105.00	865	142.00	663	209.00	94
67.00	1424	106.00	2707	143.00	5616	253.00	62
68.00	64456	107.00	639	144.00	422		

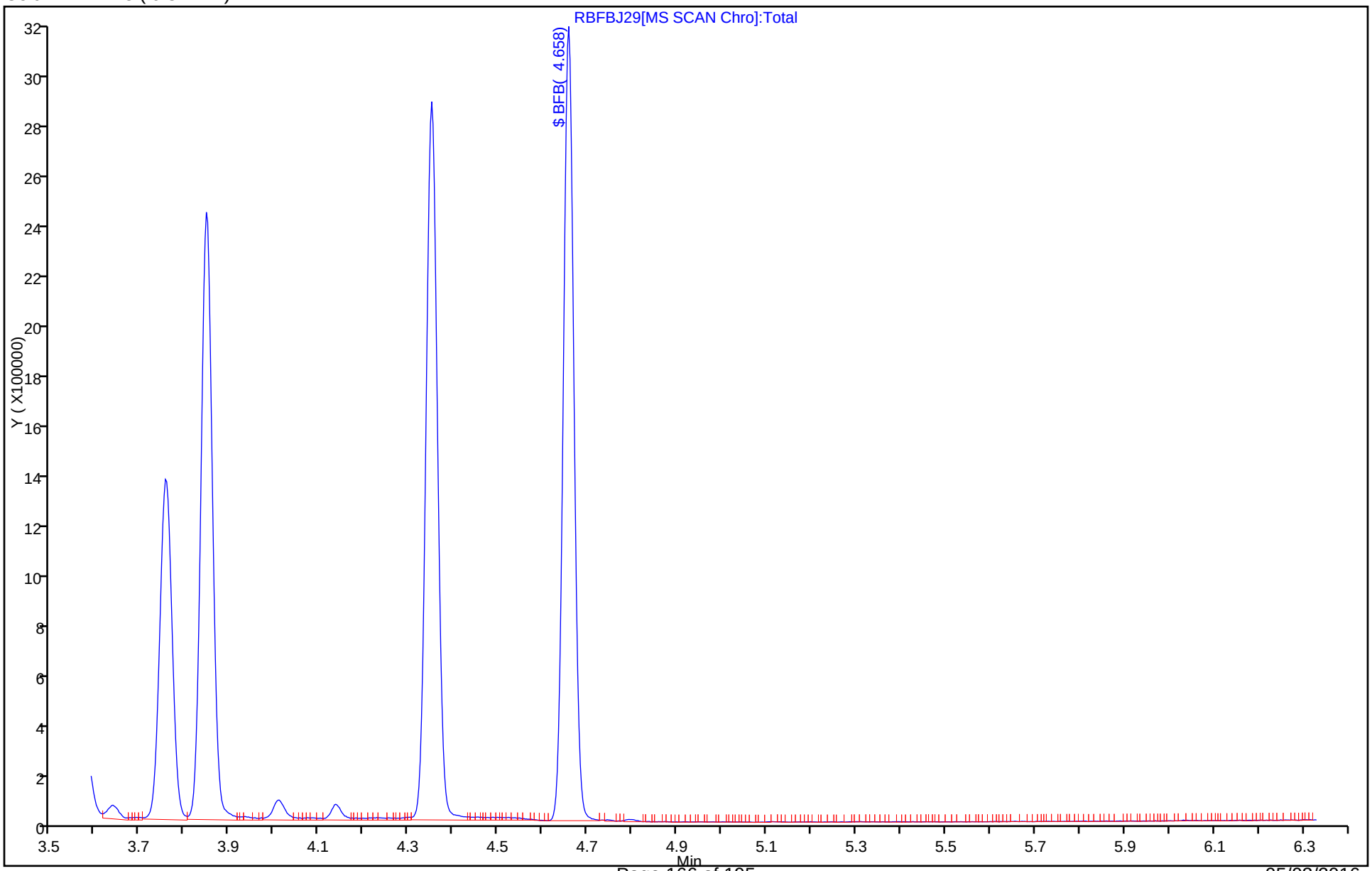
Report Date: 04-Nov-2015 15:47:17 Chrom Revision: 2.2 08-Oct-2015 07:17:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RBFBJ29.D

Injection Date:	29-Oct-2015 12:53:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RBFBD28.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	28-Apr-2016 09:38:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0002793-001				
Misc. Info.:	BFB				
Operator ID:		Instrument ID:	MR		
Method:	\\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	29-Apr-2016 09:56:44	Calib Date:	29-Oct-2015 21:11:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK028				
First Level Reviewer: tajh		Date:	29-Apr-2016 09:56:44		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.664	4.664	0.000	0	699687	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

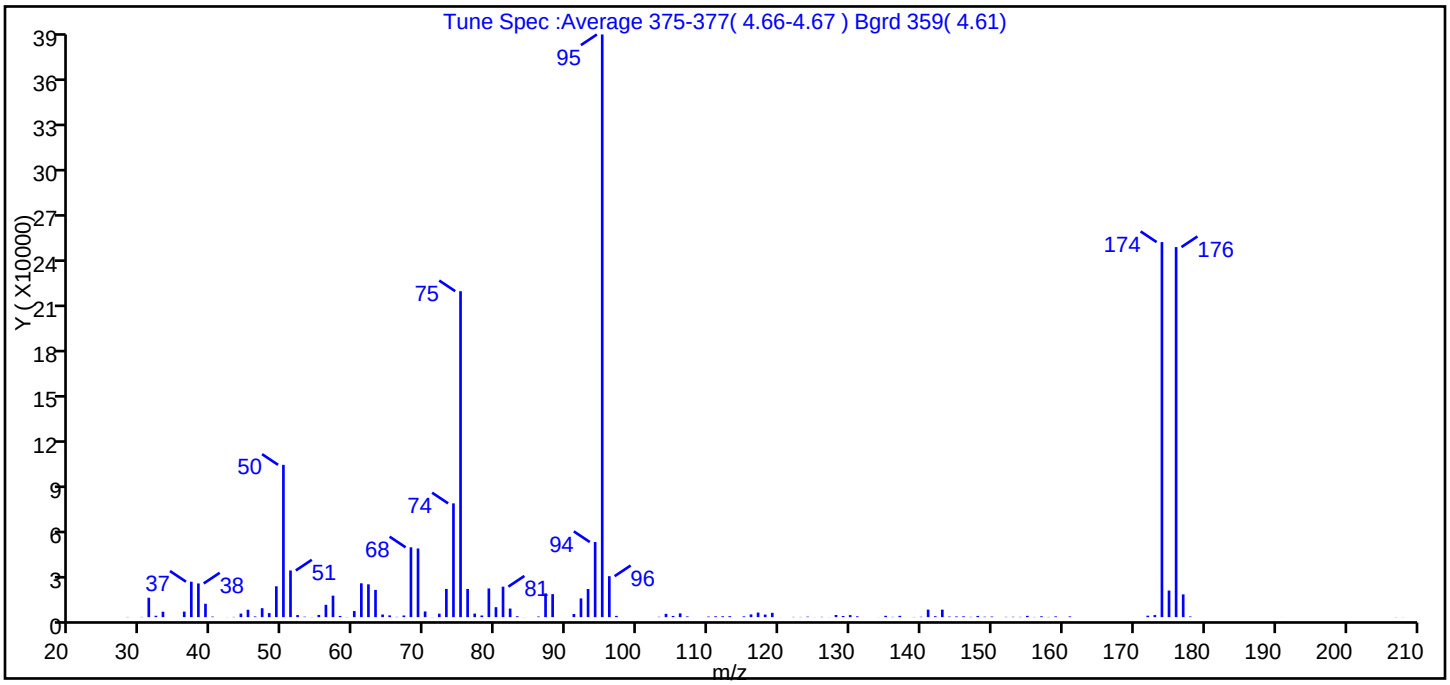
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RBFBD28.D
Injection Date: 28-Apr-2016 09:38:30 Instrument ID: MR
Lims ID: BFB
Client ID:
Operator ID: ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MR_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	26.1
75	30 to 60% of m/z 95	55.9
96	5 to 9% of m/z 95	7.0
173	Less than 2% of m/z 174	0.4 (0.6)
174	50 to 120% of m/z 95	64.4
175	5 to 9% of m/z 174	4.6 (7.1)
176	Greater than 95% but less than 101% of m/z 174	63.5 (98.7)
177	5 to 9% of m/z 176	3.9 (6.2)

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RBFBD28.D\MR_TO15.rslt\spectra.d
Injection Date: 28-Apr-2016 09:38:30
Spectrum: Tune Spec :Average 375-377(4.66-4.67) Bgrd 359(4.61)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 125

m/z	Y	m/z	Y	m/z	Y	m/z	Y
28.00	138	62.00	21760	97.00	854	141.00	4992
29.00	20	63.00	18072	103.00	220	142.00	617
30.00	148	64.00	1740	104.00	2207	143.00	4966
31.00	12874	65.00	1161	105.00	790	144.00	356
32.00	926	66.00	170	106.00	2506	145.00	450
33.00	3607	67.00	1081	107.00	472	146.00	534
36.00	3681	68.00	46320	110.00	387	147.00	195
37.00	23520	69.00	45552	111.00	563	148.00	810
38.00	22352	70.00	3787	112.00	576	149.00	287
39.00	8878	71.00	77	113.00	641	150.00	406
40.00	362	72.00	2299	115.00	514	152.00	186
41.00	6	73.00	18728	116.00	1807	153.00	245
42.00	53	74.00	75480	117.00	3042	154.00	182
43.00	160	75.00	216256	118.00	1720	155.00	851
44.00	2356	76.00	18712	119.00	2851	156.00	122
45.00	4909	77.00	2357	120.00	35	157.00	561
46.00	451	78.00	1089	122.00	162	158.00	158
47.00	5945	79.00	19032	123.00	144	159.00	510
48.00	2679	80.00	6620	124.00	332	161.00	485
49.00	20456	81.00	20240	125.00	57	172.00	962
50.00	101048	82.00	5709	126.00	198	173.00	1380
51.00	30968	83.00	587	127.00	72	174.00	248832
52.00	1365	84.00	72	128.00	1425	175.00	17640
53.00	295	86.00	411	129.00	764	176.00	245504
54.00	95	87.00	15776	130.00	1355	177.00	15113
55.00	1470	88.00	15263	131.00	556	178.00	426
56.00	8187	91.00	2096	134.00	49	191.00	35
57.00	14271	92.00	12420	135.00	890	207.00	95
58.00	807	93.00	18672	136.00	178	208.00	68
59.00	114	94.00	49824	137.00	868		
60.00	4035	95.00	386560	139.00	120		
61.00	22456	96.00	27176	140.00	271		

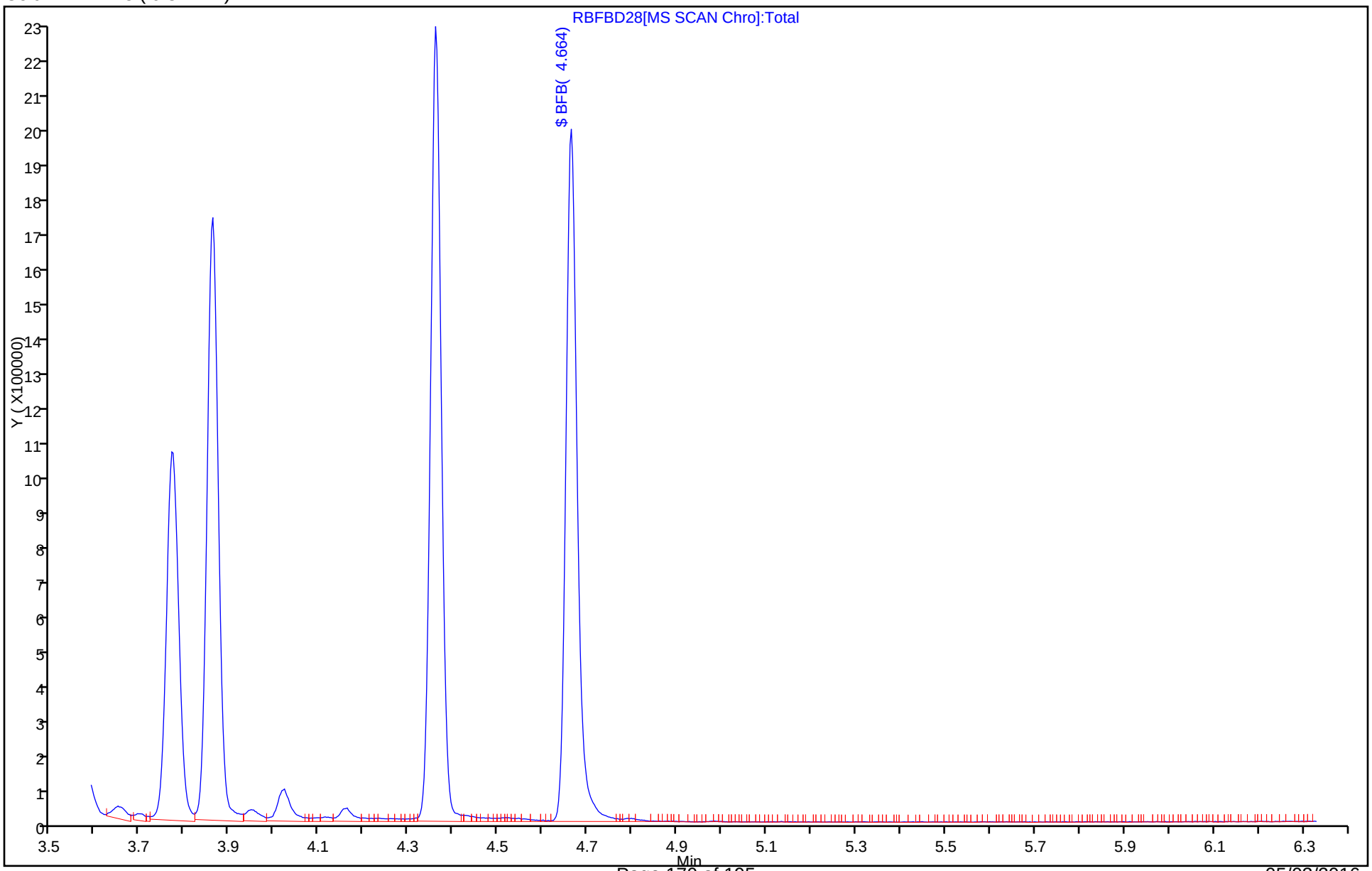
Report Date: 29-Apr-2016 09:56:44 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RBFBD28.D

Injection Date:	28-Apr-2016 09:38:30	Instrument ID:	MR	Operator ID:	
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-4733/13

Matrix: Air Lab File ID: R500D28R.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 04/28/2016 16:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4733 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-4733/13

Matrix: Air Lab File ID: R500D28R.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 04/28/2016 16:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4733 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\R500D28R.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 28-Apr-2016 16:03:30 ALS Bottle#: 16 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 500ML BLK
Misc. Info.: 140-0002793-013
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Apr-2016 09:59:30 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: barlozhetskayaa Date: 28-Apr-2016 16:50:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.409	8.420	-0.011	94	215012	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.593	10.598	-0.005	97	1069265	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.805	16.805	0.000	91	946511	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.555	0.000	81	677623	4.00	3.88	
31 Methylene Chloride	84	6.074	6.074	0.000	97	3972		0.0548	
65 4-Methyl-2-pentanone (MIBK	43	12.815	12.798	0.017	98	15590		0.0722	
T 126 Propane TIC	29	3.777	3.793	-0.023	1	315324		5.87	
T 127 Methanol TIC	31	4.165	4.192	-0.035	89	103557		1.93	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

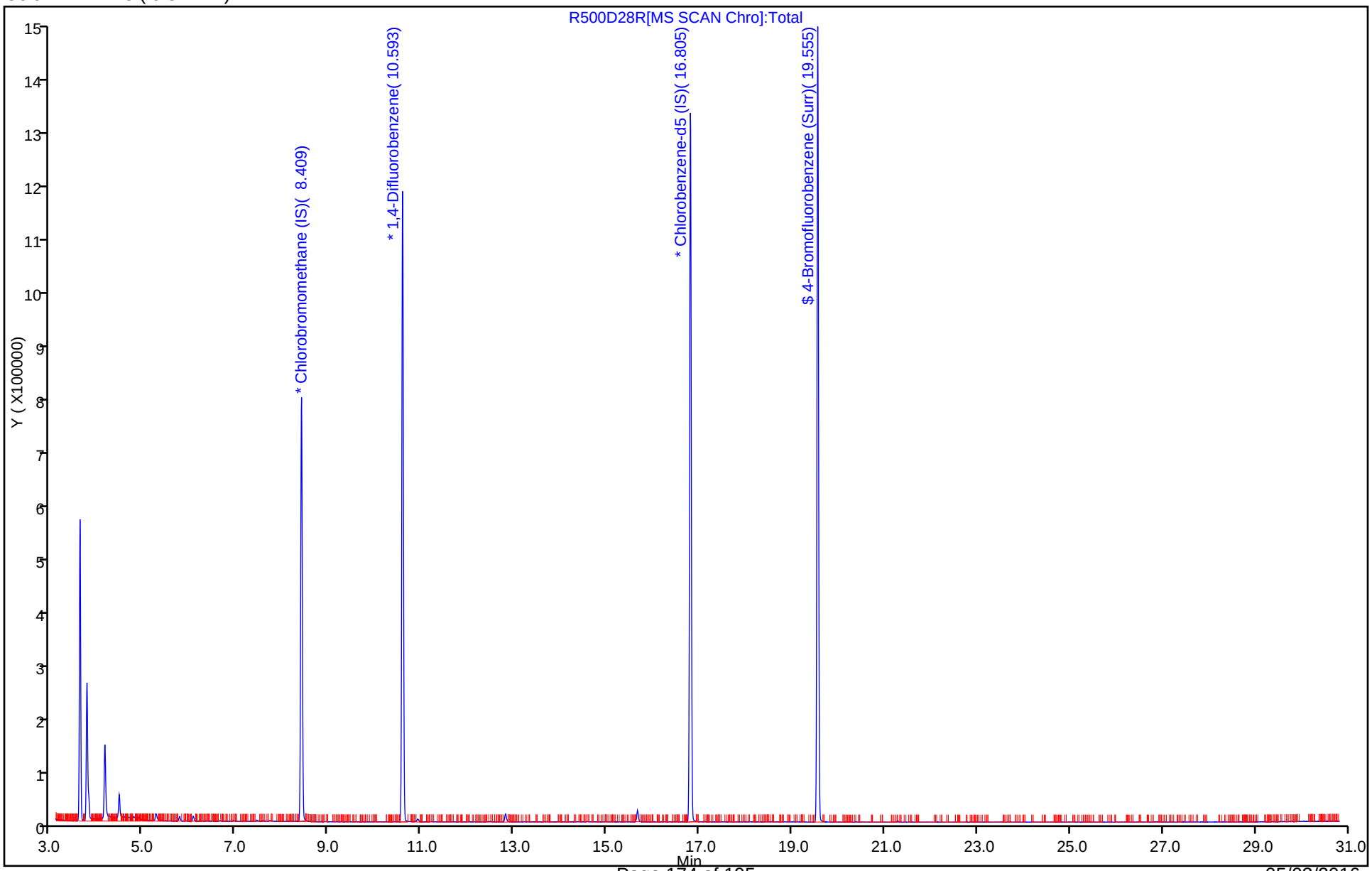
Report Date: 29-Apr-2016 10:00:20 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\R500D28R.D

Injection Date:	28-Apr-2016 16:03:30	Instrument ID:	MR	Operator ID:	
Lims ID:	mb			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-4733/1002

Matrix: Air Lab File ID: RCCVD28-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 04/28/2016 10:09

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4733 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.83		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.22		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.25		0.080	0.015
67-66-3	Chloroform	119.38	2.03		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.80		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.32		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.04		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.17		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.74		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.90		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.84		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.89		0.40	0.068
91-20-3	Naphthalene	128.17	2.10		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.77		0.080	0.016
108-88-3	Toluene	92.14	1.79		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.75		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.98		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.05		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.92		0.080	0.021
79-01-6	Trichloroethene	131.39	1.65		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.28		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.21		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.05		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.02		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.22		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	112		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RCCVD28-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 28-Apr-2016 10:09:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002793-002
Misc. Info.: P18
Operator ID: Instrument ID: MR

Method: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\MR_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 29-Apr-2016 09:59:30 Calib Date: 29-Oct-2015 21:11:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b\RJ29IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: tajh Date: 29-Apr-2016 09:59:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.420	8.420	0.000	95	221528	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.598	10.598	0.000	96	1136375	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.805	16.805	0.000	90	1090793	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	19.555	19.555	0.000	83	905910	4.00	4.50	
6 Propene	41	3.799	3.799	0.000	96	159781	2.00	2.09	
7 Chlorodifluoromethane	67	3.799	3.799	0.000	97	43262	2.00	2.25	
8 Dichlorodifluoromethane	85	3.847	3.847	0.000	100	393634	2.00	2.32	
9 Chloromethane	52	4.004	4.004	0.000	100	58474	2.00	2.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.025	4.025	0.000	95	281773	2.00	1.85	
11 Acetaldehyde	44	4.149	4.149	0.000	100	350065	10.0	7.60	
12 Vinyl chloride	62	4.160	4.160	0.000	99	165093	2.00	2.02	
13 Butadiene	54	4.241	4.241	0.000	94	138383	2.00	2.14	
14 Butane	43	4.246	4.246	0.000	92	273598	2.00	2.50	
15 Bromomethane	94	4.510	4.510	0.000	98	149599	2.00	1.91	
16 Chloroethane	64	4.640	4.640	0.000	98	81947	2.00	2.00	
17 Ethanol	31	4.764	4.764	0.000	93	274175	10.0	12.6	
18 Vinyl bromide	106	4.904	4.904	0.000	97	136444	2.00	1.79	
19 2-Methylbutane	43	4.963	4.963	0.000	92	204018	2.00	2.37	
20 Acrolein	56	5.141	5.141	0.000	93	59292	2.00	2.12	
21 Trichlorofluoromethane	101	5.152	5.152	0.000	99	406948	2.00	2.08	
22 Acetonitrile	40	5.201	5.201	0.000	100	81690	2.00	2.50	
23 Acetone	58	5.244	5.244	0.000	98	244533	6.00	4.73	
25 Isopropyl alcohol	45	5.352	5.352	0.000	96	678069	6.00	6.30	
24 Pentane	72	5.357	5.357	0.000	95	27998	2.00	1.88	
26 Ethyl ether	31	5.492	5.492	0.000	93	186543	2.00	2.52	
27 1,1-Dichloroethene	96	5.767	5.767	0.000	94	134153	2.00	1.74	
28 Acrylonitrile	53	5.848	5.848	0.000	93	128839	2.00	2.19	
29 2-Methyl-2-propanol	59	5.875	5.875	0.000	97	265276	2.00	1.85	
30 1,1,2-Trichloro-1,2,2-trif	101	5.950	5.950	0.000	92	322806	2.00	1.95	
31 Methylene Chloride	84	6.074	6.074	0.000	95	137055	2.00	1.84	
32 3-Chloro-1-propene	39	6.090	6.090	0.000	95	154064	2.00	2.32	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.214	6.214	0.000	100	441467	2.00	2.00	
34 trans-1,2-Dichloroethene	96	6.818	6.818	0.000	95	140183	2.00	1.75	
35 2-Methylpentane	43	6.867	6.867	0.000	96	366006	2.00	2.34	
36 Methyl tert-butyl ether	73	6.942	6.942	0.000	97	382744	2.00	1.89	
37 1,1-Dichloroethane	63	7.196	7.196	0.000	100	292656	2.00	2.04	
38 Vinyl acetate	43	7.298	7.298	0.000	100	451293	2.00	2.24	
39 2-Butanone (MEK)	72	7.697	7.697	0.000	98	67804	2.00	1.50	
40 Hexane	56	7.778	7.778	0.000	90	134915	2.00	2.11	
41 Isopropyl ether	45	7.918	7.918	0.000	96	609546	2.00	2.24	
42 cis-1,2-Dichloroethene	96	8.113	8.113	0.000	97	149176	2.00	1.80	
43 Ethyl acetate	43	8.296	8.296	0.000	98	391180	2.00	2.28	
44 Chloroform	83	8.447	8.447	0.000	97	329885	2.00	2.03	
45 Tert-butyl ethyl ether	59	8.560	8.560	0.000	97	461283	2.00	1.98	
46 Tetrahydrofuran	42	8.808	8.808	0.000	94	194510	2.00	2.29	
47 1,1,1-Trichloroethane	97	9.434	9.434	0.000	96	320774	2.00	2.05	
48 1,2-Dichloroethane	62	9.509	9.509	0.000	96	230394	2.00	2.17	
49 n-Butanol	31	9.989	9.989	0.000	87	49777	2.00	1.86	
50 Benzene	78	10.021	10.021	0.000	98	441892	2.00	1.83	
51 Cyclohexane	69	10.043	10.043	0.000	95	66638	2.00	1.83	
52 Carbon tetrachloride	117	10.059	10.059	0.000	97	344405	2.00	2.22	
53 2,3-Dimethylpentane	71	10.199	10.199	0.000	90	98780	2.00	1.84	
54 Thiophene	84	10.291	10.291	0.000	97	249103	2.00	1.87	
55 Tert-amyl methyl ether	73	10.539	10.539	0.000	95	403312	2.00	1.81	
56 Isooctane	57	10.890	10.890	0.000	98	817595	2.00	2.03	
57 n-Heptane	71	11.316	11.316	0.000	94	156206	2.00	1.86	
58 1,2-Dichloropropane	63	11.321	11.321	0.000	90	189047	2.00	2.01	
59 Trichloroethene	130	11.386	11.386	0.000	95	187800	2.00	1.65	
60 Dibromomethane	93	11.445	11.445	0.000	84	194447	2.00	2.01	
61 Dichlorobromomethane	83	11.628	11.628	0.000	98	343353	2.00	2.11	
62 1,4-Dioxane	88	11.634	11.634	0.000	92	60534	2.00	1.64	
63 Methyl methacrylate	41	11.774	11.774	0.000	93	225534	2.00	2.24	
64 Methylcyclohexane	83	12.324	12.324	0.000	91	320469	2.00	1.84	
65 4-Methyl-2-pentanone (MIBK	43	12.798	12.798	0.000	98	437644	2.00	1.91	
66 cis-1,3-Dichloropropene	75	12.863	12.863	0.000	97	270557	2.00	2.00	
67 trans-1,3-Dichloropropene	75	13.774	13.774	0.000	98	241779	2.00	1.92	
68 Toluene	91	13.952	13.952	0.000	93	529683	2.00	1.79	
69 1,1,2-Trichloroethane	83	14.028	14.028	0.000	97	167399	2.00	1.92	
70 2-Methylthiophene	97	14.147	14.147	0.000	98	434514	2.00	1.80	
71 3-Methylthiophene	97	14.427	14.427	0.000	99	431820	2.00	1.82	
72 2-Hexanone	58	14.605	14.605	0.000	91	197332	2.00	1.89	
73 Chlorodibromomethane	129	14.993	14.993	0.000	97	341960	2.00	1.98	
74 n-Octane	85	15.026	15.026	0.000	96	178431	2.00	1.82	
75 Ethylene Dibromide	107	15.403	15.403	0.000	97	302717	2.00	1.87	
76 Tetrachloroethene	129	15.570	15.570	0.000	89	190806	2.00	1.77	
77 Chlorobenzene	112	16.886	16.886	0.000	92	437756	2.00	1.81	
78 2,3-Dimethylheptane	43	17.069	17.069	0.000	96	595692	2.00	2.39	
79 Ethylbenzene	91	17.387	17.387	0.000	99	735305	2.00	1.90	
80 2-Ethylthiophene	97	17.544	17.544	0.000	99	555191	2.00	1.96	
81 m-Xylene & p-Xylene	91	17.668	17.668	0.000	99	1219652	4.00	4.10	
82 Bromoform	173	18.293	18.293	0.000	91	299693	2.00	1.86	
83 Styrene	104	18.423	18.423	0.000	99	426298	2.00	1.95	
84 n-Nonane	57	18.514	18.514	0.000	94	449799	2.00	2.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	18.525	18.525	0.000	99	652604	2.00	2.12	
86 1,1,2,2-Tetrachloroethane	83	19.054	19.054	0.000	99	482754	2.00	2.18	
87 1,2,3-Trichloropropane	110	19.318	19.318	0.000	96	136653	2.00	2.03	
88 Isopropylbenzene	105	19.555	19.555	0.000	95	908619	2.00	2.08	
89 N-Propylbenzene	120	20.520	20.520	0.000	98	244530	2.00	1.95	
90 2-Chlorotoluene	126	20.537	20.537	0.000	92	227491	2.00	2.00	
91 4-Ethyltoluene	105	20.812	20.812	0.000	98	892237	2.00	2.06	
92 1,3,5-Trimethylbenzene	120	20.963	20.963	0.000	92	425305	2.00	2.05	
93 Alpha Methyl Styrene	118	21.394	21.394	0.000	89	351505	2.00	1.99	
94 n-Decane	57	21.696	21.696	0.000	89	600095	2.00	2.36	
95 tert-Butylbenzene	119	21.766	21.766	0.000	93	850741	2.00	2.15	
96 1,2,4-Trimethylbenzene	105	21.798	21.798	0.000	95	811212	2.00	2.21	
97 1,3-Dichlorobenzene	146	22.262	22.262	0.000	98	520757	2.00	1.97	
98 sec-Butylbenzene	105	22.327	22.327	0.000	98	1207994	2.00	2.27	
99 Benzyl chloride	91	22.429	22.429	0.000	98	737321	2.00	2.21	
100 1,4-Dichlorobenzene	146	22.451	22.451	0.000	94	543031	2.00	1.99	
101 4-Isopropyltoluene	119	22.693	22.693	0.000	97	1058272	2.00	2.20	
102 1,2,3-Trimethylbenzene	105	22.737	22.737	0.000	99	675909	2.00	2.28	
103 Butylcyclohexane	83	22.947	22.947	0.000	93	670405	2.00	2.37	
104 1,2-Dichlorobenzene	146	23.190	23.190	0.000	94	537843	2.00	2.07	
105 2,3-Dihydroindene	117	23.222	23.222	0.000	94	816816	2.00	2.27	
106 Indene	116	23.492	23.492	0.000	87	565282	2.00	2.17	
107 n-Butylbenzene	91	23.637	23.637	0.000	98	1087861	2.00	2.45	
108 1,2-Dimethyl-4-Ethylbenzen	119	24.489	24.489	0.000	98	780773	2.00	2.21	
109 1,2-Dibromo-3-Chloropropan	157	24.543	24.543	0.000	95	250337	2.00	2.18	
110 Undecane	57	24.570	24.570	0.000	97	770352	2.00	2.63	
111 1,2,4,5-Tetramethylbenzene	119	25.406	25.406	0.000	97	925813	2.00	2.28	
112 1,2,3,5-Tetramethylbenzene	119	25.530	25.530	0.000	95	561377	2.00	2.28	
113 1,2,3,4-Tetramethylbenzene	119	26.452	26.452	0.000	97	761077	2.00	2.25	
114 Dodecane	57	27.115	27.115	0.000	95	723015	2.00	2.64	
115 1,2,4-Trichlorobenzene	180	27.153	27.153	0.000	94	470579	2.00	1.98	
116 Naphthalene	128	27.390	27.390	0.000	99	1166267	2.00	2.10	
117 Benzo(b)thiophene	134	27.590	27.590	0.000	99	675947	2.00	2.08	
118 Hexachlorobutadiene	225	27.956	27.956	0.000	90	388024	2.00	2.15	
119 1,2,3-Trichlorobenzene	180	27.978	27.978	0.000	95	454269	2.00	2.00	
120 2-Methylnaphthalene	142	29.466	29.466	0.000	99	501260	6.25	6.72	
121 1-Methylnaphthalene	142	29.763	29.763	0.000	99	516343	6.25	8.77	
A 122 C6 Range	1	7.794	(7.724-7.875)		0	1170991	2.00	2.25	
S 124 Xylenes, Total	100				0		6.00	6.22	
S 125 1,2-Dichloroethene, Total	1				0		4.00	3.55	

Reagents:

40CV101P_00018	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

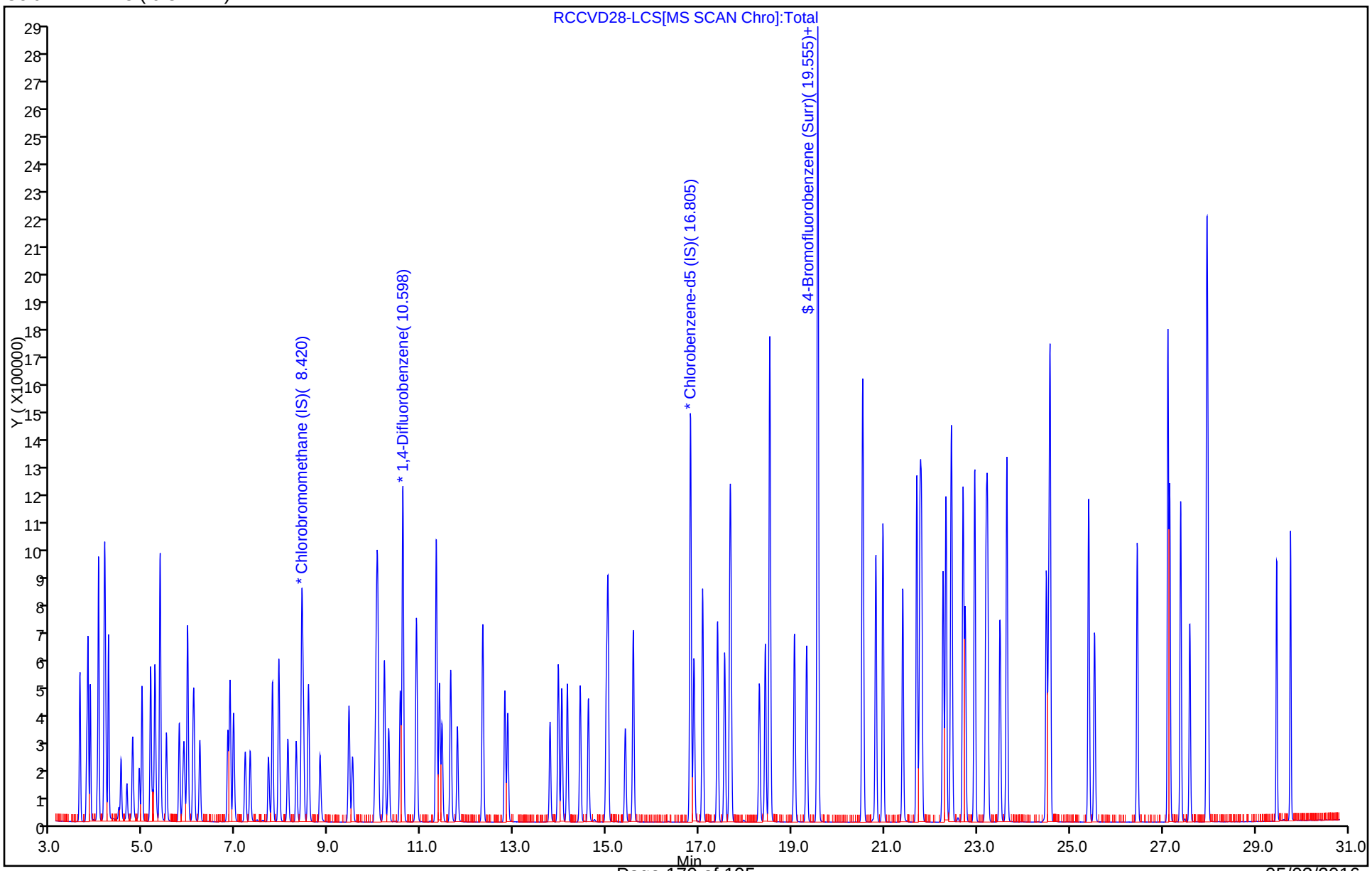
Report Date: 29-Apr-2016 09:59:33 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MR\20160425-2793.b\RCCVD28-LCS.d

Injection Date:	28-Apr-2016 10:09:30	Instrument ID:	MR	Operator ID:	
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MR_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Instrument ID: MR Start Date: 10/29/2015 12:53

Analysis Batch Number: 3621 End Date: 10/29/2015 22:54

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-3621/1		10/29/2015 12:53	1	RBFBJ29.D	RTX-5 0.32(mm)
IC 140-3621/2		10/29/2015 14:14	1	RJ29IC01.D	RTX-5 0.32(mm)
IC 140-3621/3		10/29/2015 15:07	1	RJ29IC02.D	RTX-5 0.32(mm)
IC 140-3621/4		10/29/2015 15:58	1	RJ29IC03.D	RTX-5 0.32(mm)
IC 140-3621/5		10/29/2015 16:50	1	RJ29IC04.D	RTX-5 0.32(mm)
IC 140-3621/6		10/29/2015 17:41	1	RJ29IC05.D	RTX-5 0.32(mm)
ICIS 140-3621/7		10/29/2015 18:33	1	RJ29ICIS06.D	RTX-5 0.32(mm)
IC 140-3621/8		10/29/2015 19:26	1	RJ29IC07.D	RTX-5 0.32(mm)
IC 140-3621/9		10/29/2015 20:18	1	RJ29IC08.D	RTX-5 0.32(mm)
IC 140-3621/10		10/29/2015 21:11	1	RJ29IC09.D	RTX-5 0.32(mm)
ICV 140-3621/12		10/29/2015 22:54	1	RJ29ICV.D	RTX-5 0.32(mm)

TestAmerica Laboratories
Worklist Run Log Report

Worklist Name: R102915ICAL Worklist Num: 2223
Instrument: MR Method: MR_TO15
Batch Directory: \\ChromNA\Knoxville\ChromData\MR\20151029-2223.b
Anaylysis Type: VOA Creator: Barlozhetskaya, Anna F
Inj Volume: 500.00 Inj Vol Units: mL
Run Reagents:
MAissur1_00002, Amount Added: 40.00 , Units: mL

Lab ID	Worklist ID	Sample Type	Cal Lvl	Inj Date/Time	File Name	Vial	Dil Factor	Fract
BFB	140-0002223-001	BFB	0	29-Oct-2015 12:53:30	RBFBJ29.D 100mL	16	1.0	air
IC L1	140-0002223-002	IC	1	29-Oct-2015 14:14:30	RJ29IC01.D	9	1.0	air
IC L2	140-0002223-003	IC	2	29-Oct-2015 15:07:30	RJ29IC02.D 200mL	9	1.0	air
IC L3	140-0002223-004	IC	3	29-Oct-2015 15:58:30	RJ29IC03.D 80mL	9	10 1.0	air
IC L4	140-0002223-005	IC	4	29-Oct-2015 16:50:30	RJ29IC04.D 200mL	9	10 1.0	air
IC L5	140-0002223-006	IC	5	29-Oct-2015 17:41:30	RJ29IC05.D 100mL	10	11 1.0	air
ICIS L6	140-0002223-007	ICIS	6	29-Oct-2015 18:33:30	RJ29ICIS06.D 200mL	11	1.0	air
IC L7	140-0002223-008	IC	7	29-Oct-2015 19:26:30	RJ29IC07.D	12	1.0	air
IC L8	140-0002223-009	IC	8	29-Oct-2015 20:18:30	RJ29IC08.D	13	1.0	air
IC L9	140-0002223-010	IC	9	29-Oct-2015 21:11:30	RJ29IC09.D	14	1.0	air
dnuPRIME	140-0002223-011	Client	0	29-Oct-2015 22:02:30	dnuPrimeJ29.D	15	1.0	air
ICV	140-0002223-012	ICV	0	29-Oct-2015 22:54:30	RJ29ICV.D 100mL	15	1.0	air
dnuFLUSH	140-0002223-013	Client	0	29-Oct-2015 23:44:30	dnuFlushJ29.D	16	1.0	air
MB	140-0002223-014	MB	0	30-Oct-2015 00:30:30	RJ29MB500.D 500mL	16	1.0	air
LCS	140-0002223-015	LCS	0	30-Oct-2015 01:21:30	RJ29LCS.D 100mL	15	2 1.0	air
MDL	140-0002223-016	Client	0	29-Oct-2015 13:23:30	RJ29MDL.D 50mL	8	9 1.0	air
EXPstd	140-0002223-017	Client	0	30-Oct-2015 02:13:30	RJ29expstd.D 100mL	15	3 1.0	air
test	140-0002223-018	Client	0	30-Oct-2015 03:05:30	RJ29test.D	16	4 1.0	air

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

Analysis Date:	10/29/15	Instrument:	MR	Chrom WL #:	2223	TALS Batch & Event #	TO14/15: 3621 / 393	AFCEE: 3624 / 396
							DOD: 3622 / 394	OHIO: 3623 / 395

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓		11/4/15
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]		1, 2, 3, 4, 5, 6, 7, 8, 9 ✓	
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	TPH as Hexane only (DNU TPH as acetone or to here)	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓	Acetone C 35%	✓			
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓			
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓			
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA					NA			
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA					NA			
19. Is the intercept less than the RL for each curve? [F6]	NA					NA			
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA					NA			
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓			
22. Analyst/Date:	AHS 11/3/15 (ic/cv out)				2nd Level Reviewer/Date:				11/3/15
Comments:	DNU Acetal Dehyde				UR propene @ 8				

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓					✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓					✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓					✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	✓					NA			
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							✓		
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst:	Date: 11/4/15				2nd Level Reviewer :		Date: 11/4/15		
Comments:					Comments:				

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-4836-1

SDG No.:

Instrument ID: MR Start Date: 04/28/2016 09:38

Analysis Batch Number: 4733 End Date: 04/28/2016 21:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-4733/1		04/28/2016 09:38	1	RBFBD28.D	RTX-5 0.32(mm)
CCVIS 140-4733/2		04/28/2016 10:09	1	RCCVD28.D	RTX-5 0.32(mm)
LCS 140-4733/1002		04/28/2016 10:09	1	RCCVD28-LCS.d	RTX-5 0.32(mm)
MB 140-4733/13		04/28/2016 16:03	1	R500D28R.D	RTX-5 0.32(mm)
140-4836-1		04/28/2016 16:54	1	RD28P101.D	RTX-5 0.32(mm)
140-4836-2		04/28/2016 17:46	1	RD28P102.D	RTX-5 0.32(mm)
140-4836-3		04/28/2016 18:38	1	RD28P103.D	RTX-5 0.32(mm)
ZZZZZ		04/28/2016 19:31	3.67		RTX-5 0.32(mm)
ZZZZZ		04/28/2016 20:23	1		RTX-5 0.32(mm)
ZZZZZ		04/28/2016 21:15	1		RTX-5 0.32(mm)

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

Instrument/Date	MR 4/28/16	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	2793	CCAL Batch #	4733		
ICAL Chrom WL #	2793	ICAL Batch # / Event #	3681 / 393	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		NA
7. Has the RT been updated to the method?	✓		✓
Analyst: Date: 4/29/16		**2nd Level Reviewer:** Date: 05/03/16	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓	Checked on screen	✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	NA
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		NA
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]			
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?			
22. Sample special instructions verified?			
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.		□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]			
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]			
26. Analytes over calibration range set to secondary [Conditions Review Tab]			
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]			
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*			
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]		**500 mL blank ID:** 4733/13 **200 mL blank ID:** —	
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]			
31. Correct ICV linked to each MB? [QC Links]			
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]			
33. Runs set to 1st level review?		Runs set to 2nd level review?	
34. QC checker run and items addressed?		4/29/16	
35. Checklist & Entech report scanned, attached & assigned properly?			

Analyst:	**Date:** 4/30/16 4/29/16	**2nd Level Reviewer :**	**Date:** 04/29/16
Comments:		**Comments:**	
1st Acc. J4832-1 NCM 4214			

Example Calculation: 4832-1 401.

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

1.2389 x 183.5 x 3.67 = 12.389 x 0.003768 = 0.0467

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 | Lab Sample ID: 140-4628-3

Matrix: Air | Lab File ID: LOT4628.D

Analysis Method: TO-15 | Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) | Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4520 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 | Lab Sample ID: 140-4628-3

Matrix: Air | Lab File ID: LOT4628.D

Analysis Method: TO-15 | Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) | Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4520 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 | Lab Sample ID: 140-4628-3

Matrix: Air | Lab File ID: LOT4628.D

Analysis Method: TO-15 | Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) | Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4520 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 Lab Sample ID: 140-4628-3

Matrix: Air Lab File ID: LOT4628.D

Analysis Method: TO-15 Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4520 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160321-2673.b\LOT4628.D
Lims ID: 140-4628-A-3 Lab Sample ID: 140-4628-3
Client ID: 09735
Sample Type: Client
Inject. Date: 23-Mar-2016 02:05:30 ALS Bottle#: 11 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 09735
Misc. Info.: J032216,TO5,,140-0002673-021
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160321-2673.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 23-Mar-2016 10:41:40 Calib Date: 28-Jan-2016 00:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160127-2524.b\JA27ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 23-Mar-2016 10:41:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.436	9.442	-0.006	97	249247	4.00	
* 2 1,4-Difluorobenzene	114	11.599	11.605	-0.006	96	1174463	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.273	16.274	-0.001	89	905476	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.898	17.899	-0.001	95	505744	3.30	
13 Butane	43	4.492	4.498	-0.006	91	4858	0.0471	
19 2-Methylbutane	43	5.401	5.402	-0.001	84	2117	0.0216	
31 Methylene Chloride	84	6.768	6.779	-0.011	98	6053	0.0755	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

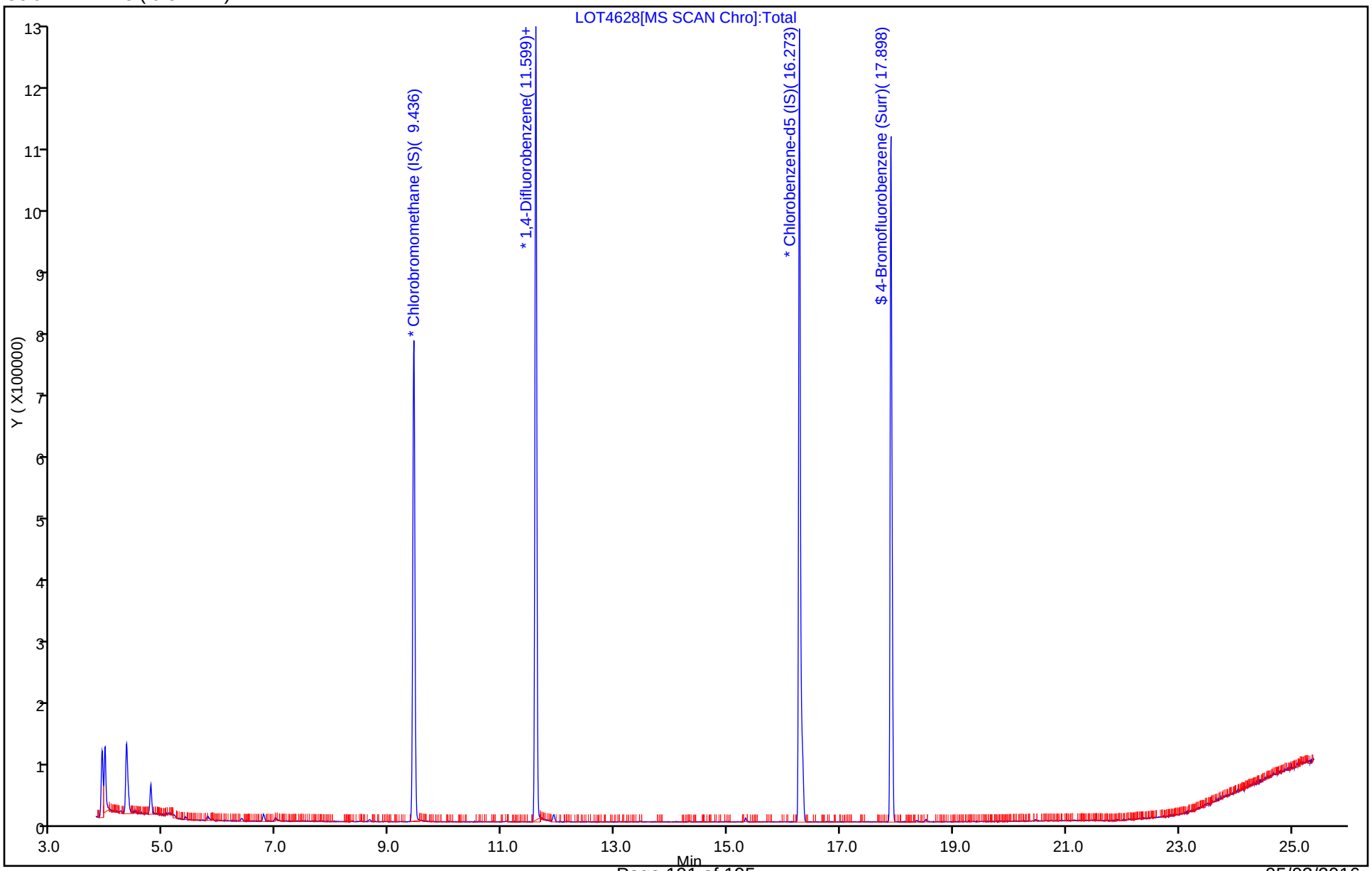
Report Date: 23-Mar-2016 10:42:00 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160321-2673.b\LOT4628.D

Injection Date:	23-Mar-2016 02:05:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-4628-A-3	Lab Sample ID:	140-4628-3	Worklist Smp#:	21
Client ID:	09735				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: Dawn Monico	1 of 1 COCs
Company: TetraTech	Phone: 410-990-4607		
Address: 51 Franklin St. Suite 400	Site Contact: Dawn Monico		
City/State/Zip Annapolis, MD 21401	TAL Contact: Terry Wasmund		
Phone: 410-990-4607			
FAX: 410-990-4749			
Project Name: SSD Oem	Analysis Turnaround Time		
Site/location: Middle River Complex	Standard (Specify)		
PO # 117-0512124	Rush (Specify) X		

140-4836 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, "Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
A-INFLUENT	4/27/16	1119	N/A	-10	0	N/A	09581	X											
A-MID-GAC	↓	1117	↓	-20	0	↓	11164	X											
A-EFFLUENT	↓	1115	↓	-10	0	↓	11269	X											

Sampled by :

Temperature (Fahrenheit)			
	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)			
	Interior	Ambient	
Start			
Stop			

180325

BALTIMORE

Received @ ambient, 1 cooler
Fedex SO, Tr K# 7762 0700 2772

Special Instructions/QC Requirements & Comments:

Custody seal intact, KW 4/28/16
ambient temp = 20.0°C

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by:	Date/Time: 4/27/16 / 1350	Received by: 4/28/16 0930
Relinquished by:	Date/Time:	Received by:

3 canv
3 gauge

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 7/28/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
HMT	140-4836-a-1	09581	4628	B	1	+1.6	12:15	
HMT	140-4836-a-2	11164	4628	B	1	+0.8	12:16	
HMT	140-4836-a-3	11269	4628	B	1	+0.5	12:17	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 140-4836-1

Login Number: 4836
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

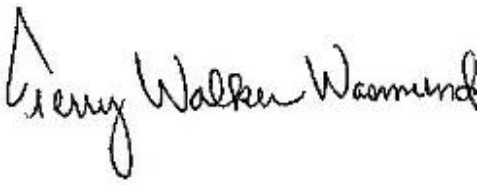
ANALYTICAL REPORT

Job Number: 140-4944-1

Job Description: SSD OEM - MRC

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
5/26/2016 1:22 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
05/26/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-4944-1

Receipt
The samples were received on 5/13/2016 at 9:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-4987 exhibited % difference of > 30% for the following analyte(s) 4-methyl-2-pentanone (MIBK), chlorodifluoromethane, butanol, 2-methylnaphthalene, dichlorodifluoromethane and/or ethanol; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-4944-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	5.2		1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.41	J	1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	28		1.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.71	J	1.0	0.34	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.3		1.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	31		1.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.6		2.5	1.6	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		1.5	1.5	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110	B	1.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	170		0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	19		3.5	0.66	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.0	J	4.9	0.92	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	110		4.0	1.2	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.5	J	4.9	1.7	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		4.0	0.51	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		4.0	0.69	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	9.0		8.7	5.6	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.5		5.7	5.7	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	600	B	5.5	0.82	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	910		2.7	0.94	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID-GAC — Lab Sample ID: 140-4944-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	4.1		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.6		2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.90	J	2.0	0.38	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	49		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.2		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	33		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.9	J	5.0	3.3	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.96	J	2.0	0.50	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	130	B	2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	3.8		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	13		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	13		7.1	1.3	ug/m3	1		TO 15 LL	Total/NA
Chloroform	4.4	J	9.8	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	190		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	130		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	17	J	17	11	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.8	J	7.9	2.0	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	690	B	11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	20		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-4944-3

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-EFFLUENT (Continued) — Lab Sample ID: 140-4944-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47	J	0.80	0.23	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	5.1		0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	1.5		0.80	0.15	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	36		0.80	0.24	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.74	J	0.80	0.27	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		0.80	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	52		0.80	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.8		2.0	1.3	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		1.2	1.2	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	140	B	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.5	J	2.6	0.73	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	18		2.8	0.53	ug/m3	1		TO 15 LL	Total/NA
Chloroform	7.5		3.9	0.73	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	140		3.2	0.95	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.7	J	4.0	1.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	44		3.2	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	210		3.2	0.56	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	17		6.9	4.5	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.3		4.5	4.5	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	780	B	4.4	0.65	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-INFLUENT — Lab Sample ID: 140-4944-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.91		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.079	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.21	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.41		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.59		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.11	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.12	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.26	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.79	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.11	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	19		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.0	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	5.8		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.32	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.2		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.50	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.0	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.6		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.9		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.44	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.48	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-INFLUENT (Continued) — Lab Sample ID: 140-4944-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Ethylbenzene	1.1	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.8	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.72	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	73		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	5.4	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	31		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.6	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	5.2		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-MID-GAC — Lab Sample ID: 140-4944-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.090	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.31	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.70		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.11	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.13	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.080	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.0		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.1	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.16	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.6		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.44	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.2	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.46	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.51	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	0.54	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	6.0	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.81	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-EFFLUENT — Lab Sample ID: 140-4944-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.2		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.9		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.094	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.12	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.70		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.13	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	2.2		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	1.3	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.58		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.22	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-EFFLUENT (Continued)

Lab Sample ID: 140-4944-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.9		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	6.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.46	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.49	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.5		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.51	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.0		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	8.3		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	7.2	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	2.9		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.1	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-4944-1

Date Collected: 05/12/16 14:20

Matrix: Air

Date Received: 05/13/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		1.0	0.29	ppb v/v			05/20/16 01:14	1
Carbon tetrachloride	ND		1.0	0.19	ppb v/v			05/20/16 01:14	1
Chlorodifluoromethane	**5.2**		1.0	0.19	ppb v/v			05/20/16 01:14	1
Chloroform	**0.41**	**J**	1.0	0.19	ppb v/v			05/20/16 01:14	1
cis-1,2-Dichloroethene	**28**		1.0	0.30	ppb v/v			05/20/16 01:14	1
Dichlorodifluoromethane	**0.71**	**J**	1.0	0.34	ppb v/v			05/20/16 01:14	1
1,1-Dichloroethane	**4.3**		1.0	0.13	ppb v/v			05/20/16 01:14	1
1,2-Dichloroethane	ND		1.0	0.24	ppb v/v			05/20/16 01:14	1
1,1-Dichloroethene	**31**		1.0	0.18	ppb v/v			05/20/16 01:14	1
Ethylbenzene	ND		1.0	0.34	ppb v/v			05/20/16 01:14	1
Methylene Chloride	**2.6**		2.5	1.6	ppb v/v			05/20/16 01:14	1
Methyl tert-butyl ether	ND		5.0	0.85	ppb v/v			05/20/16 01:14	1
Naphthalene	ND		0.50	0.50	ppb v/v			05/20/16 01:14	1
Tetrachloroethene	ND		1.0	0.20	ppb v/v			05/20/16 01:14	1
Toluene	**1.7**		1.5	1.5	ppb v/v			05/20/16 01:14	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ppb v/v			05/20/16 01:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.49	ppb v/v			05/20/16 01:14	1
1,1,1-Trichloroethane	**110**	**B**	1.0	0.15	ppb v/v			05/20/16 01:14	1
1,1,2-Trichloroethane	ND		1.0	0.26	ppb v/v			05/20/16 01:14	1
Trichloroethene	**170**		0.50	0.18	ppb v/v			05/20/16 01:14	1
1,2,3-Trimethylbenzene	ND		1.0	0.43	ppb v/v			05/20/16 01:14	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ppb v/v			05/20/16 01:14	1
1,3,5-Trimethylbenzene	ND		1.0	0.33	ppb v/v			05/20/16 01:14	1
Vinyl chloride	ND		0.50	0.36	ppb v/v			05/20/16 01:14	1
Xylenes, Total	ND		2.0	0.30	ppb v/v			05/20/16 01:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		3.2	0.92	ug/m3			05/20/16 01:14	1
Carbon tetrachloride	ND		6.3	1.2	ug/m3			05/20/16 01:14	1
Chlorodifluoromethane	**19**		3.5	0.66	ug/m3			05/20/16 01:14	1
Chloroform	**2.0**	**J**	4.9	0.92	ug/m3			05/20/16 01:14	1
cis-1,2-Dichloroethene	**110**		4.0	1.2	ug/m3			05/20/16 01:14	1
Dichlorodifluoromethane	**3.5**	**J**	4.9	1.7	ug/m3			05/20/16 01:14	1
1,1-Dichloroethane	**18**		4.0	0.51	ug/m3			05/20/16 01:14	1
1,2-Dichloroethane	ND		4.0	0.96	ug/m3			05/20/16 01:14	1
1,1-Dichloroethene	**120**		4.0	0.69	ug/m3			05/20/16 01:14	1
Ethylbenzene	ND		4.3	1.5	ug/m3			05/20/16 01:14	1
Methylene Chloride	**9.0**		8.7	5.6	ug/m3			05/20/16 01:14	1
Methyl tert-butyl ether	ND		18	3.1	ug/m3			05/20/16 01:14	1
Naphthalene	ND		2.6	2.6	ug/m3			05/20/16 01:14	1
Tetrachloroethene	ND		6.8	1.4	ug/m3			05/20/16 01:14	1
Toluene	**6.5**		5.7	5.7	ug/m3			05/20/16 01:14	1
trans-1,2-Dichloroethene	ND		4.0	0.99	ug/m3			05/20/16 01:14	1
1,2,4-Trichlorobenzene	ND		7.4	3.6	ug/m3			05/20/16 01:14	1
1,1,1-Trichloroethane	**600**	**B**	5.5	0.82	ug/m3			05/20/16 01:14	1
1,1,2-Trichloroethane	ND		5.5	1.4	ug/m3			05/20/16 01:14	1
Trichloroethene	**910**		2.7	0.94	ug/m3			05/20/16 01:14	1
1,2,3-Trimethylbenzene	ND		4.9	2.1	ug/m3			05/20/16 01:14	1
1,2,4-Trimethylbenzene	ND		4.9	1.5	ug/m3			05/20/16 01:14	1

Client Sample ID: A-INFLUENT
Date Collected: 05/12/16 14:20
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4944-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		4.9	1.6	ug/m3			05/20/16 01:14	1
Vinyl chloride	ND		1.3	0.93	ug/m3			05/20/16 01:14	1
Xylenes, Total	ND		8.7	1.3	ug/m3			05/20/16 01:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*05/20/16 01:14*	*1*

Client Sample ID: A-MID-GAC

Date Collected: 05/12/16 14:15
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4944-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**4.1**		2.0	0.58	ppb v/v			05/20/16 02:00	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			05/20/16 02:00	1
Chlorodifluoromethane	**3.6**		2.0	0.38	ppb v/v			05/20/16 02:00	1
Chloroform	**0.90**	**J**	2.0	0.38	ppb v/v			05/20/16 02:00	1
cis-1,2-Dichloroethene	**49**		2.0	0.60	ppb v/v			05/20/16 02:00	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			05/20/16 02:00	1
1,1-Dichloroethane	**4.2**		2.0	0.25	ppb v/v			05/20/16 02:00	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			05/20/16 02:00	1
1,1-Dichloroethene	**33**		2.0	0.35	ppb v/v			05/20/16 02:00	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			05/20/16 02:00	1
Methylene Chloride	**4.9**	**J**	5.0	3.3	ppb v/v			05/20/16 02:00	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			05/20/16 02:00	1
Naphthalene	ND		1.0	1.0	ppb v/v			05/20/16 02:00	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			05/20/16 02:00	1
Toluene	ND		3.0	3.0	ppb v/v			05/20/16 02:00	1
trans-1,2-Dichloroethene	**0.96**	**J**	2.0	0.50	ppb v/v			05/20/16 02:00	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			05/20/16 02:00	1
1,1,1-Trichloroethane	**130**	**B**	2.0	0.30	ppb v/v			05/20/16 02:00	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			05/20/16 02:00	1
Trichloroethene	**3.8**		1.0	0.35	ppb v/v			05/20/16 02:00	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			05/20/16 02:00	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			05/20/16 02:00	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			05/20/16 02:00	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			05/20/16 02:00	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			05/20/16 02:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**13**		6.4	1.8	ug/m3			05/20/16 02:00	1
Carbon tetrachloride	ND		13	2.4	ug/m3			05/20/16 02:00	1
Chlorodifluoromethane	**13**		7.1	1.3	ug/m3			05/20/16 02:00	1
Chloroform	**4.4**	**J**	9.8	1.8	ug/m3			05/20/16 02:00	1
cis-1,2-Dichloroethene	**190**		7.9	2.4	ug/m3			05/20/16 02:00	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			05/20/16 02:00	1
1,1-Dichloroethane	**17**		8.1	1.0	ug/m3			05/20/16 02:00	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			05/20/16 02:00	1
1,1-Dichloroethene	**130**		7.9	1.4	ug/m3			05/20/16 02:00	1
Ethylbenzene	ND		8.7	2.9	ug/m3			05/20/16 02:00	1
Methylene Chloride	**17**	**J**	17	11	ug/m3			05/20/16 02:00	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			05/20/16 02:00	1
Naphthalene	ND		5.2	5.2	ug/m3			05/20/16 02:00	1
Tetrachloroethene	ND		14	2.7	ug/m3			05/20/16 02:00	1
Toluene	ND		11	11	ug/m3			05/20/16 02:00	1
trans-1,2-Dichloroethene	**3.8**	**J**	7.9	2.0	ug/m3			05/20/16 02:00	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			05/20/16 02:00	1
1,1,1-Trichloroethane	**690**	**B**	11	1.6	ug/m3			05/20/16 02:00	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			05/20/16 02:00	1
Trichloroethene	**20**		5.4	1.9	ug/m3			05/20/16 02:00	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			05/20/16 02:00	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			05/20/16 02:00	1

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Client Sample ID: A-MID-GAC
Date Collected: 05/12/16 14:15
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4944-2
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			05/20/16 02:00	1
Vinyl chloride	ND		2.6	1.9	ug/m3			05/20/16 02:00	1
Xylenes, Total	ND		17	2.6	ug/m3			05/20/16 02:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*05/20/16 02:00*	*1*

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-4944-3

Date Collected: 05/12/16 14:10

Matrix: Air

Date Received: 05/13/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.47**	**J**	0.80	0.23	ppb v/v			05/20/16 02:46	1
Carbon tetrachloride	ND		0.80	0.15	ppb v/v			05/20/16 02:46	1
Chlorodifluoromethane	**5.1**		0.80	0.15	ppb v/v			05/20/16 02:46	1
Chloroform	**1.5**		0.80	0.15	ppb v/v			05/20/16 02:46	1
cis-1,2-Dichloroethene	**36**		0.80	0.24	ppb v/v			05/20/16 02:46	1
Dichlorodifluoromethane	**0.74**	**J**	0.80	0.27	ppb v/v			05/20/16 02:46	1
1,1-Dichloroethane	**11**		0.80	0.10	ppb v/v			05/20/16 02:46	1
1,2-Dichloroethane	ND		0.80	0.19	ppb v/v			05/20/16 02:46	1
1,1-Dichloroethene	**52**		0.80	0.14	ppb v/v			05/20/16 02:46	1
Ethylbenzene	ND		0.80	0.27	ppb v/v			05/20/16 02:46	1
Methylene Chloride	**4.8**		2.0	1.3	ppb v/v			05/20/16 02:46	1
Methyl tert-butyl ether	ND		4.0	0.68	ppb v/v			05/20/16 02:46	1
Naphthalene	ND		0.40	0.40	ppb v/v			05/20/16 02:46	1
Tetrachloroethene	ND		0.80	0.16	ppb v/v			05/20/16 02:46	1
Toluene	**1.7**		1.2	1.2	ppb v/v			05/20/16 02:46	1
trans-1,2-Dichloroethene	ND		0.80	0.20	ppb v/v			05/20/16 02:46	1
1,2,4-Trichlorobenzene	ND		0.80	0.39	ppb v/v			05/20/16 02:46	1
1,1,1-Trichloroethane	**140**	**B**	0.80	0.12	ppb v/v			05/20/16 02:46	1
1,1,2-Trichloroethane	ND		0.80	0.21	ppb v/v			05/20/16 02:46	1
Trichloroethene	ND		0.40	0.14	ppb v/v			05/20/16 02:46	1
1,2,3-Trimethylbenzene	ND		0.80	0.34	ppb v/v			05/20/16 02:46	1
1,2,4-Trimethylbenzene	ND		0.80	0.25	ppb v/v			05/20/16 02:46	1
1,3,5-Trimethylbenzene	ND		0.80	0.26	ppb v/v			05/20/16 02:46	1
Vinyl chloride	ND		0.40	0.29	ppb v/v			05/20/16 02:46	1
Xylenes, Total	ND		1.6	0.24	ppb v/v			05/20/16 02:46	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.5**	**J**	2.6	0.73	ug/m3			05/20/16 02:46	1
Carbon tetrachloride	ND		5.0	0.94	ug/m3			05/20/16 02:46	1
Chlorodifluoromethane	**18**		2.8	0.53	ug/m3			05/20/16 02:46	1
Chloroform	**7.5**		3.9	0.73	ug/m3			05/20/16 02:46	1
cis-1,2-Dichloroethene	**140**		3.2	0.95	ug/m3			05/20/16 02:46	1
Dichlorodifluoromethane	**3.7**	**J**	4.0	1.3	ug/m3			05/20/16 02:46	1
1,1-Dichloroethane	**44**		3.2	0.40	ug/m3			05/20/16 02:46	1
1,2-Dichloroethane	ND		3.2	0.77	ug/m3			05/20/16 02:46	1
1,1-Dichloroethene	**210**		3.2	0.56	ug/m3			05/20/16 02:46	1
Ethylbenzene	ND		3.5	1.2	ug/m3			05/20/16 02:46	1
Methylene Chloride	**17**		6.9	4.5	ug/m3			05/20/16 02:46	1
Methyl tert-butyl ether	ND		14	2.5	ug/m3			05/20/16 02:46	1
Naphthalene	ND		2.1	2.1	ug/m3			05/20/16 02:46	1
Tetrachloroethene	ND		5.4	1.1	ug/m3			05/20/16 02:46	1
Toluene	**6.3**		4.5	4.5	ug/m3			05/20/16 02:46	1
trans-1,2-Dichloroethene	ND		3.2	0.79	ug/m3			05/20/16 02:46	1
1,2,4-Trichlorobenzene	ND		5.9	2.9	ug/m3			05/20/16 02:46	1
1,1,1-Trichloroethane	**780**	**B**	4.4	0.65	ug/m3			05/20/16 02:46	1
1,1,2-Trichloroethane	ND		4.4	1.1	ug/m3			05/20/16 02:46	1
Trichloroethene	ND		2.1	0.75	ug/m3			05/20/16 02:46	1
1,2,3-Trimethylbenzene	ND		3.9	1.7	ug/m3			05/20/16 02:46	1
1,2,4-Trimethylbenzene	ND		3.9	1.2	ug/m3			05/20/16 02:46	1

Client Sample ID: A-EFFLUENT

Date Collected: 05/12/16 14:10
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4944-3

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		3.9	1.3	ug/m3			05/20/16 02:46	1
Vinyl chloride	ND		1.0	0.74	ug/m3			05/20/16 02:46	1
Xylenes, Total	ND		6.9	1.0	ug/m3			05/20/16 02:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*60 - 140*		*05/20/16 02:46*	*1*

Client Sample ID: C-INFLUENT

Lab Sample ID: 140-4944-4

Date Collected: 05/12/16 13:55

Matrix: Air

Date Received: 05/13/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.91**		0.40	0.12	ppb v/v			05/20/16 03:33	1
Carbon tetrachloride	**0.079**	**J**	0.40	0.075	ppb v/v			05/20/16 03:33	1
Chlorodifluoromethane	**1.9**		0.40	0.075	ppb v/v			05/20/16 03:33	1
Chloroform	**0.21**	**J**	0.40	0.075	ppb v/v			05/20/16 03:33	1
cis-1,2-Dichloroethene	**0.41**		0.40	0.12	ppb v/v			05/20/16 03:33	1
Dichlorodifluoromethane	**0.59**		0.40	0.14	ppb v/v			05/20/16 03:33	1
1,1-Dichloroethane	**0.11**	**J**	0.40	0.050	ppb v/v			05/20/16 03:33	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			05/20/16 03:33	1
1,1-Dichloroethene	**0.12**	**J**	0.40	0.070	ppb v/v			05/20/16 03:33	1
Ethylbenzene	**0.26**	**J**	0.40	0.14	ppb v/v			05/20/16 03:33	1
Methylene Chloride	**0.79**	**J**	1.0	0.65	ppb v/v			05/20/16 03:33	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			05/20/16 03:33	1
Naphthalene	ND		0.20	0.20	ppb v/v			05/20/16 03:33	1
Tetrachloroethene	**0.11**	**J**	0.40	0.080	ppb v/v			05/20/16 03:33	1
Toluene	**19**		0.60	0.60	ppb v/v			05/20/16 03:33	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			05/20/16 03:33	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			05/20/16 03:33	1
1,1,1-Trichloroethane	**1.0**	**B**	0.40	0.060	ppb v/v			05/20/16 03:33	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			05/20/16 03:33	1
Trichloroethene	**5.8**		0.20	0.070	ppb v/v			05/20/16 03:33	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			05/20/16 03:33	1
1,2,4-Trimethylbenzene	**0.32**	**J**	0.40	0.13	ppb v/v			05/20/16 03:33	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			05/20/16 03:33	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			05/20/16 03:33	1
Xylenes, Total	**1.2**		0.80	0.12	ppb v/v			05/20/16 03:33	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.9**		1.3	0.37	ug/m3			05/20/16 03:33	1
Carbon tetrachloride	**0.50**	**J**	2.5	0.47	ug/m3			05/20/16 03:33	1
Chlorodifluoromethane	**6.6**		1.4	0.27	ug/m3			05/20/16 03:33	1
Chloroform	**1.0**	**J**	2.0	0.37	ug/m3			05/20/16 03:33	1
cis-1,2-Dichloroethene	**1.6**		1.6	0.48	ug/m3			05/20/16 03:33	1
Dichlorodifluoromethane	**2.9**		2.0	0.67	ug/m3			05/20/16 03:33	1
1,1-Dichloroethane	**0.44**	**J**	1.6	0.20	ug/m3			05/20/16 03:33	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			05/20/16 03:33	1
1,1-Dichloroethene	**0.48**	**J**	1.6	0.28	ug/m3			05/20/16 03:33	1
Ethylbenzene	**1.1**	**J**	1.7	0.59	ug/m3			05/20/16 03:33	1
Methylene Chloride	**2.8**	**J**	3.5	2.3	ug/m3			05/20/16 03:33	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			05/20/16 03:33	1
Naphthalene	ND		1.0	1.0	ug/m3			05/20/16 03:33	1
Tetrachloroethene	**0.72**	**J**	2.7	0.54	ug/m3			05/20/16 03:33	1
Toluene	**73**		2.3	2.3	ug/m3			05/20/16 03:33	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			05/20/16 03:33	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			05/20/16 03:33	1
1,1,1-Trichloroethane	**5.4**	**B**	2.2	0.33	ug/m3			05/20/16 03:33	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			05/20/16 03:33	1
Trichloroethene	**31**		1.1	0.38	ug/m3			05/20/16 03:33	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			05/20/16 03:33	1
1,2,4-Trimethylbenzene	**1.6**	**J**	2.0	0.61	ug/m3			05/20/16 03:33	1

Client Sample ID: C-INFLUENT
Date Collected: 05/12/16 13:55
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-4944-4
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			05/20/16 03:33	1
Vinyl chloride	ND		0.51	0.37	ug/m3			05/20/16 03:33	1
Xylenes, Total	**5.2**		3.5	0.52	ug/m3			05/20/16 03:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*107*		*60 - 140*		*05/20/16 03:33*	*1*

Client Sample ID: C-MID-GAC

Lab Sample ID: 140-4944-5

Date Collected: 05/12/16 13:50

Matrix: Air

Date Received: 05/13/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**		0.40	0.12	ppb v/v			05/20/16 04:18	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			05/20/16 04:18	1
Chlorodifluoromethane	**1.9**		0.40	0.075	ppb v/v			05/20/16 04:18	1
Chloroform	**0.090**	**J**	0.40	0.075	ppb v/v			05/20/16 04:18	1
cis-1,2-Dichloroethene	**0.31**	**J**	0.40	0.12	ppb v/v			05/20/16 04:18	1
Dichlorodifluoromethane	**0.70**		0.40	0.14	ppb v/v			05/20/16 04:18	1
1,1-Dichloroethane	**0.11**	**J**	0.40	0.050	ppb v/v			05/20/16 04:18	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			05/20/16 04:18	1
1,1-Dichloroethene	**0.13**	**J**	0.40	0.070	ppb v/v			05/20/16 04:18	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			05/20/16 04:18	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			05/20/16 04:18	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			05/20/16 04:18	1
Naphthalene	ND		0.20	0.20	ppb v/v			05/20/16 04:18	1
Tetrachloroethene	**0.080**	**J**	0.40	0.080	ppb v/v			05/20/16 04:18	1
Toluene	**1.0**		0.60	0.60	ppb v/v			05/20/16 04:18	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			05/20/16 04:18	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			05/20/16 04:18	1
1,1,1-Trichloroethane	**1.1**	**B**	0.40	0.060	ppb v/v			05/20/16 04:18	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			05/20/16 04:18	1
Trichloroethene	ND		0.20	0.070	ppb v/v			05/20/16 04:18	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			05/20/16 04:18	1
1,2,4-Trimethylbenzene	**0.16**	**J**	0.40	0.13	ppb v/v			05/20/16 04:18	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			05/20/16 04:18	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			05/20/16 04:18	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			05/20/16 04:18	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.6**		1.3	0.37	ug/m3			05/20/16 04:18	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			05/20/16 04:18	1
Chlorodifluoromethane	**6.8**		1.4	0.27	ug/m3			05/20/16 04:18	1
Chloroform	**0.44**	**J**	2.0	0.37	ug/m3			05/20/16 04:18	1
cis-1,2-Dichloroethene	**1.2**	**J**	1.6	0.48	ug/m3			05/20/16 04:18	1
Dichlorodifluoromethane	**3.5**		2.0	0.67	ug/m3			05/20/16 04:18	1
1,1-Dichloroethane	**0.46**	**J**	1.6	0.20	ug/m3			05/20/16 04:18	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			05/20/16 04:18	1
1,1-Dichloroethene	**0.51**	**J**	1.6	0.28	ug/m3			05/20/16 04:18	1
Ethylbenzene	ND		1.7	0.59	ug/m3			05/20/16 04:18	1
Methylene Chloride	ND		3.5	2.3	ug/m3			05/20/16 04:18	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			05/20/16 04:18	1
Naphthalene	ND		1.0	1.0	ug/m3			05/20/16 04:18	1
Tetrachloroethene	**0.54**	**J**	2.7	0.54	ug/m3			05/20/16 04:18	1
Toluene	**3.9**		2.3	2.3	ug/m3			05/20/16 04:18	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			05/20/16 04:18	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			05/20/16 04:18	1
1,1,1-Trichloroethane	**6.0**	**B**	2.2	0.33	ug/m3			05/20/16 04:18	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			05/20/16 04:18	1
Trichloroethene	ND		1.1	0.38	ug/m3			05/20/16 04:18	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			05/20/16 04:18	1
1,2,4-Trimethylbenzene	**0.81**	**J**	2.0	0.61	ug/m3			05/20/16 04:18	1

Client Sample ID: C-MID-GAC
Lab Sample ID: 140-4944-5
Date Collected: 05/12/16 13:50
Matrix: Air
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			05/20/16 04:18	1
Vinyl chloride	ND		0.51	0.37	ug/m3			05/20/16 04:18	1
Xylenes, Total	ND		3.5	0.52	ug/m3			05/20/16 04:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*05/20/16 04:18*	*1*

Client Sample ID: C-EFFLUENT

Lab Sample ID: 140-4944-6

Date Collected: 05/12/16 13:45

Matrix: Air

Date Received: 05/13/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.2**		0.40	0.12	ppb v/v			05/20/16 05:50	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			05/20/16 05:50	1
Chlorodifluoromethane	**1.9**		0.40	0.075	ppb v/v			05/20/16 05:50	1
Chloroform	**0.094**	**J**	0.40	0.075	ppb v/v			05/20/16 05:50	1
cis-1,2-Dichloroethene	**0.12**	**J**	0.40	0.12	ppb v/v			05/20/16 05:50	1
Dichlorodifluoromethane	**0.70**		0.40	0.14	ppb v/v			05/20/16 05:50	1
1,1-Dichloroethane	**0.13**	**J**	0.40	0.050	ppb v/v			05/20/16 05:50	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			05/20/16 05:50	1
1,1-Dichloroethene	ND		0.40	0.070	ppb v/v			05/20/16 05:50	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			05/20/16 05:50	1
Methylene Chloride	**1.2**		1.0	0.65	ppb v/v			05/20/16 05:50	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			05/20/16 05:50	1
Naphthalene	ND		0.20	0.20	ppb v/v			05/20/16 05:50	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			05/20/16 05:50	1
Toluene	**2.2**		0.60	0.60	ppb v/v			05/20/16 05:50	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			05/20/16 05:50	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			05/20/16 05:50	1
1,1,1-Trichloroethane	**1.3**	**B**	0.40	0.060	ppb v/v			05/20/16 05:50	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			05/20/16 05:50	1
Trichloroethene	ND		0.20	0.070	ppb v/v			05/20/16 05:50	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			05/20/16 05:50	1
1,2,4-Trimethylbenzene	**0.58**		0.40	0.13	ppb v/v			05/20/16 05:50	1
1,3,5-Trimethylbenzene	**0.22**	**J**	0.40	0.13	ppb v/v			05/20/16 05:50	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			05/20/16 05:50	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			05/20/16 05:50	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.9**		1.3	0.37	ug/m3			05/20/16 05:50	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			05/20/16 05:50	1
Chlorodifluoromethane	**6.8**		1.4	0.27	ug/m3			05/20/16 05:50	1
Chloroform	**0.46**	**J**	2.0	0.37	ug/m3			05/20/16 05:50	1
cis-1,2-Dichloroethene	**0.49**	**J**	1.6	0.48	ug/m3			05/20/16 05:50	1
Dichlorodifluoromethane	**3.5**		2.0	0.67	ug/m3			05/20/16 05:50	1
1,1-Dichloroethane	**0.51**	**J**	1.6	0.20	ug/m3			05/20/16 05:50	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			05/20/16 05:50	1
1,1-Dichloroethene	ND		1.6	0.28	ug/m3			05/20/16 05:50	1
Ethylbenzene	ND		1.7	0.59	ug/m3			05/20/16 05:50	1
Methylene Chloride	**4.0**		3.5	2.3	ug/m3			05/20/16 05:50	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			05/20/16 05:50	1
Naphthalene	ND		1.0	1.0	ug/m3			05/20/16 05:50	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			05/20/16 05:50	1
Toluene	**8.3**		2.3	2.3	ug/m3			05/20/16 05:50	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			05/20/16 05:50	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			05/20/16 05:50	1
1,1,1-Trichloroethane	**7.2**	**B**	2.2	0.33	ug/m3			05/20/16 05:50	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			05/20/16 05:50	1
Trichloroethene	ND		1.1	0.38	ug/m3			05/20/16 05:50	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			05/20/16 05:50	1
1,2,4-Trimethylbenzene	**2.9**		2.0	0.61	ug/m3			05/20/16 05:50	1

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-4944-6
Date Collected: 05/12/16 13:45
Matrix: Air
Date Received: 05/13/16 09:30
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.1**	**J**	2.0	0.64	ug/m3			05/20/16 05:50	1
Vinyl chloride	ND		0.51	0.37	ug/m3			05/20/16 05:50	1
Xylenes, Total	ND		3.5	0.52	ug/m3			05/20/16 05:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*05/20/16 05:50*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-4944-1	A-INFLUENT	107
140-4944-2	A-MID-GAC	99
140-4944-3	A-EFFLUENT	109
140-4944-4	C-INFLUENT	107
140-4944-5	C-MID-GAC	100
140-4944-6	C-EFFLUENT	102
LCS 140-4987/1006	Lab Control Sample	106
MB 140-4987/8	Method Blank	106

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-4987/8
Matrix: Air
Analysis Batch: 4987

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			05/19/16 15:37	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			05/19/16 15:37	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			05/19/16 15:37	1
Chloroform	ND		0.080	0.015	ppb v/v			05/19/16 15:37	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			05/19/16 15:37	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			05/19/16 15:37	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			05/19/16 15:37	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			05/19/16 15:37	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			05/19/16 15:37	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			05/19/16 15:37	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			05/19/16 15:37	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			05/19/16 15:37	1
Naphthalene	ND		0.040	0.040	ppb v/v			05/19/16 15:37	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			05/19/16 15:37	1
Toluene	ND		0.12	0.12	ppb v/v			05/19/16 15:37	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			05/19/16 15:37	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			05/19/16 15:37	1
1,1,1-Trichloroethane	0.0139	J	0.080	0.012	ppb v/v			05/19/16 15:37	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			05/19/16 15:37	1
Trichloroethene	ND		0.040	0.014	ppb v/v			05/19/16 15:37	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			05/19/16 15:37	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			05/19/16 15:37	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			05/19/16 15:37	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			05/19/16 15:37	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			05/19/16 15:37	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			05/19/16 15:37	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			05/19/16 15:37	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			05/19/16 15:37	1
Chloroform	ND		0.39	0.073	ug/m3			05/19/16 15:37	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			05/19/16 15:37	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			05/19/16 15:37	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			05/19/16 15:37	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			05/19/16 15:37	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			05/19/16 15:37	1
Ethylbenzene	ND		0.35	0.12	ug/m3			05/19/16 15:37	1
Methylene Chloride	ND		0.69	0.45	ug/m3			05/19/16 15:37	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			05/19/16 15:37	1
Naphthalene	ND		0.21	0.21	ug/m3			05/19/16 15:37	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			05/19/16 15:37	1
Toluene	ND		0.45	0.45	ug/m3			05/19/16 15:37	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			05/19/16 15:37	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			05/19/16 15:37	1
1,1,1-Trichloroethane	0.0756	J	0.44	0.065	ug/m3			05/19/16 15:37	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			05/19/16 15:37	1
Trichloroethene	ND		0.21	0.075	ug/m3			05/19/16 15:37	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			05/19/16 15:37	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-4987/8
Matrix: Air
Analysis Batch: 4987

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			05/19/16 15:37	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			05/19/16 15:37	1
Vinyl chloride	ND		0.10	0.074	ug/m3			05/19/16 15:37	1
Xylenes, Total	ND		0.69	0.10	ug/m3			05/19/16 15:37	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*05/19/16 15:37*	*1*

Lab Sample ID: LCS 140-4987/1006
Matrix: Air
Analysis Batch: 4987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	1.99	1.74		ppb v/v		88	70 - 130
Carbon tetrachloride	1.99	2.27		ppb v/v		114	70 - 130
Chlorodifluoromethane	1.99	2.64		ppb v/v		133	60 - 140
Chloroform	1.99	2.05		ppb v/v		103	70 - 130
cis-1,2-Dichloroethene	1.99	1.85		ppb v/v		93	70 - 130
Dichlorodifluoromethane	1.99	2.73		ppb v/v		137	60 - 140
1,1-Dichloroethane	1.99	1.75		ppb v/v		88	70 - 130
1,2-Dichloroethane	1.99	1.98		ppb v/v		100	70 - 130
1,1-Dichloroethene	1.99	2.14		ppb v/v		108	70 - 130
Ethylbenzene	1.99	1.90		ppb v/v		95	70 - 130
Methylene Chloride	1.99	1.75		ppb v/v		88	70 - 130
Methyl tert-butyl ether	1.99	2.10		ppb v/v		105	60 - 140
Naphthalene	1.99	1.43		ppb v/v		72	60 - 140
Tetrachloroethene	1.99	1.81		ppb v/v		91	70 - 130
Toluene	1.99	1.75		ppb v/v		88	70 - 130
trans-1,2-Dichloroethene	1.99	1.89		ppb v/v		95	70 - 130
1,2,4-Trichlorobenzene	1.99	1.41		ppb v/v		71	60 - 140
1,1,1-Trichloroethane	1.99	2.31		ppb v/v		116	70 - 130
1,1,2-Trichloroethane	1.99	1.71		ppb v/v		86	70 - 130
Trichloroethene	1.99	1.81		ppb v/v		91	70 - 130
1,2,3-Trimethylbenzene	1.99	1.90		ppb v/v		95	70 - 130
1,2,4-Trimethylbenzene	1.99	1.96		ppb v/v		98	70 - 130
1,3,5-Trimethylbenzene	1.99	1.85		ppb v/v		93	70 - 130
Vinyl chloride	1.99	1.77		ppb v/v		89	70 - 130
Xylenes, Total	5.97	5.81		ppb v/v		97	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.57		ug/m3		88	70 - 130
Carbon tetrachloride	13	14.3		ug/m3		114	70 - 130
Chlorodifluoromethane	7.0	9.33		ug/m3		133	60 - 140
Chloroform	9.7	10.0		ug/m3		103	70 - 130
cis-1,2-Dichloroethene	7.9	7.34		ug/m3		93	70 - 130
Dichlorodifluoromethane	9.8	13.5		ug/m3		137	60 - 140
1,1-Dichloroethane	8.1	7.10		ug/m3		88	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-4987/1006
Matrix: Air
Analysis Batch: 4987

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.03		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.49		ug/m3		108	70 - 130
Ethylbenzene	8.6	8.25		ug/m3		95	70 - 130
Methylene Chloride	6.9	6.07		ug/m3		88	70 - 130
Methyl tert-butyl ether	7.2	7.57		ug/m3		105	60 - 140
Naphthalene	10	7.51		ug/m3		72	60 - 140
Tetrachloroethene	14	12.3		ug/m3		91	70 - 130
Toluene	7.5	6.61		ug/m3		88	70 - 130
trans-1,2-Dichloroethene	7.9	7.50		ug/m3		95	70 - 130
1,2,4-Trichlorobenzene	15	10.5		ug/m3		71	60 - 140
1,1,1-Trichloroethane	11	12.6		ug/m3		116	70 - 130
1,1,2-Trichloroethane	11	9.35		ug/m3		86	70 - 130
Trichloroethene	11	9.72		ug/m3		91	70 - 130
1,2,3-Trimethylbenzene	9.8	9.33		ug/m3		95	70 - 130
1,2,4-Trimethylbenzene	9.8	9.64		ug/m3		98	70 - 130
1,3,5-Trimethylbenzene	9.8	9.10		ug/m3		93	70 - 130
Vinyl chloride	5.1	4.51		ug/m3		89	70 - 130
Xylenes, Total	26	25.2		ug/m3		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Air - GC/MS VOA

Analysis Batch: 4987

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-4944-1	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-4944-2	A-MID-GAC	Total/NA	Air	TO 15 LL	
140-4944-3	A-EFFLUENT	Total/NA	Air	TO 15 LL	
140-4944-4	C-INFLUENT	Total/NA	Air	TO 15 LL	
140-4944-5	C-MID-GAC	Total/NA	Air	TO 15 LL	
140-4944-6	C-EFFLUENT	Total/NA	Air	TO 15 LL	
LCS 140-4987/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-4987/8	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-4944-1
Date Collected: 05/12/16 14:20
Matrix: Air
Date Received: 05/13/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	40 mL	500 mL	4987	05/20/16 01:14	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: A-MID-GAC
Lab Sample ID: 140-4944-2
Date Collected: 05/12/16 14:15
Matrix: Air
Date Received: 05/13/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	4987	05/20/16 02:00	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-4944-3
Date Collected: 05/12/16 14:10
Matrix: Air
Date Received: 05/13/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	50 mL	500 mL	4987	05/20/16 02:46	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-4944-4
Date Collected: 05/12/16 13:55
Matrix: Air
Date Received: 05/13/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	4987	05/20/16 03:33	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-MID-GAC
Lab Sample ID: 140-4944-5
Date Collected: 05/12/16 13:50
Matrix: Air
Date Received: 05/13/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	4987	05/20/16 04:18	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-4944-6
Date Collected: 05/12/16 13:45
Matrix: Air
Date Received: 05/13/16 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	4987	05/20/16 05:50	HMT	TAL KNX
	Instrument ID: ME									

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Client Sample ID: Lab Control Sample

Lab Sample ID: LCS 140-4987/1006

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	4987	05/19/16 12:47	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Method Blank

Lab Sample ID: MB 140-4987/8

Date Collected: N/A

Matrix: Air

Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	4987	05/19/16 15:37	HMT	TAL KNX
	Instrument ID: ME									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM - MRC

TestAmerica Job ID: 140-4944-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-4944-1	A-INFLUENT	Air	05/12/16 14:20	05/13/16 09:30
140-4944-2	A-MID-GAC	Air	05/12/16 14:15	05/13/16 09:30
140-4944-3	A-EFFLUENT	Air	05/12/16 14:10	05/13/16 09:30
140-4944-4	C-INFLUENT	Air	05/12/16 13:55	05/13/16 09:30
140-4944-5	C-MID-GAC	Air	05/12/16 13:50	05/13/16 09:30
140-4944-6	C-EFFLUENT	Air	05/12/16 13:45	05/13/16 09:30

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
A-INFLUENT	140-4944-1	107
A-MID-GAC	140-4944-2	99
A-EFFLUENT	140-4944-3	109
C-INFLUENT	140-4944-4	107
C-MID-GAC	140-4944-5	100
C-EFFLUENT	140-4944-6	102
	MB 140-4987/8	106
	LCS 140-4987/1006	106

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVE19A-LCS.d

Lab ID: LCS 140-4987/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	1.99	1.74	88	70-130	
Carbon tetrachloride	1.99	2.27	114	70-130	
Chlorodifluoromethane	1.99	2.64	133	60-140	
Chloroform	1.99	2.05	103	70-130	
cis-1,2-Dichloroethene	1.99	1.85	93	70-130	
Dichlorodifluoromethane	1.99	2.73	137	60-140	
1,1-Dichloroethane	1.99	1.75	88	70-130	
1,2-Dichloroethane	1.99	1.98	100	70-130	
1,1-Dichloroethene	1.99	2.14	108	70-130	
Ethylbenzene	1.99	1.90	95	70-130	
Methylene Chloride	1.99	1.75	88	70-130	
Methyl tert-butyl ether	1.99	2.10	105	60-140	
Naphthalene	1.99	1.43	72	60-140	
Tetrachloroethene	1.99	1.81	91	70-130	
Toluene	1.99	1.75	88	70-130	
trans-1,2-Dichloroethene	1.99	1.89	95	70-130	
1,2,4-Trichlorobenzene	1.99	1.41	71	60-140	
1,1,1-Trichloroethane	1.99	2.31	116	70-130	
1,1,2-Trichloroethane	1.99	1.71	86	70-130	
Trichloroethene	1.99	1.81	91	70-130	
1,2,3-Trimethylbenzene	1.99	1.90	95	70-130	
1,2,4-Trimethylbenzene	1.99	1.96	98	70-130	
1,3,5-Trimethylbenzene	1.99	1.85	93	70-130	
Vinyl chloride	1.99	1.77	89	70-130	
Xylenes, Total	5.97	5.81	97	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab File ID: EMB500E19.D Lab Sample ID: MB 140-4987/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 05/19/2016 15:37

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-4987/1006	ECCVE19A-LCS.d	05/19/2016 12:47
A-INFLUENT	140-4944-1	EE19P111.D	05/20/2016 01:14
A-MID-GAC	140-4944-2	EE19P112.D	05/20/2016 02:00
A-EFFLUENT	140-4944-3	EE19P113.D	05/20/2016 02:46
C-INFLUENT	140-4944-4	EE19P114.D	05/20/2016 03:33
C-MID-GAC	140-4944-5	EE19P115.D	05/20/2016 04:18
C-EFFLUENT	140-4944-6	EE19P116.D	05/20/2016 05:50

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab File ID: EBFBK02.D BFB Injection Date: 12/02/2015

Instrument ID: ME BFB Injection Time: 18:09

Analysis Batch No.: 3815

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.3	
75	30.0 - 60.0 % of mass 95	54.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	85.0	
175	5.0 - 9.0 % of mass 174	6.3	(7.4) 1
176	95.0 - 101.0 % of mass 174	83.5	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.7	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-3815/3	EK02IC01.D	12/02/2015	20:13
	IC 140-3815/4	EK02IC02.D	12/02/2015	20:59
	IC 140-3815/5	EK02IC03.D	12/02/2015	21:45
	IC 140-3815/6	EK02IC04.D	12/02/2015	22:31
	IC 140-3815/7	EK02IC05.D	12/02/2015	23:17
	ICIS 140-3815/8	EK02IC06.D	12/03/2015	00:02
	IC 140-3815/9	EK02IC07.D	12/03/2015	00:48
	IC 140-3815/11	EK02IC09.D	12/03/2015	02:20
	ICV 140-3815/13	EICVK02.D	12/03/2015	03:51
	IC 140-3815/19	EK02IC08R.D	12/03/2015	09:19

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab File ID: EBFBE19A.D BFB Injection Date: 05/19/2016

Instrument ID: ME BFB Injection Time: 12:15

Analysis Batch No.: 4987

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.4	
75	30.0 - 60.0 % of mass 95	58.1	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	69.7	
175	5.0 - 9.0 % of mass 174	5.1	(7.3) 1
176	95.0 - 101.0 % of mass 174	67.4	(96.6) 1
177	5.0 - 9.0 % of mass 176	4.7	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-4987/6	ECCVE19A.D	05/19/2016	12:47
	LCS 140-4987/1006	ECCVE19A-LCS .d	05/19/2016	12:47
	MB 140-4987/8	EMB500E19.D	05/19/2016	15:37
A-INFLUENT	140-4944-1	EE19P111.D	05/20/2016	01:14
A-MID-GAC	140-4944-2	EE19P112.D	05/20/2016	02:00
A-EFFLUENT	140-4944-3	EE19P113.D	05/20/2016	02:46
C-INFLUENT	140-4944-4	EE19P114.D	05/20/2016	03:33
C-MID-GAC	140-4944-5	EE19P115.D	05/20/2016	04:18
C-EFFLUENT	140-4944-6	EE19P116.D	05/20/2016	05:50

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Sample No.: ICIS 140-3815/8 Date Analyzed: 12/03/2015 00:02

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): EK02IC06.D Heated Purge: (Y/N) N

Calibration ID: 418

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		329174	8.08	1546721	10.31	1439198	15.21
UPPER LIMIT		460844	8.41	2165409	10.64	2014877	15.54
LOWER LIMIT		197504	7.75	928033	9.98	863519	14.88
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-3815/13		346404	8.07	1574130	10.31	1467549	15.22

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Sample No.: CCVIS 140-4987/6 Date Analyzed: 05/19/2016 12:47

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVE19A.D Heated Purge: (Y/N) N

Calibration ID: 418

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		359774	7.76	1660794	9.98	1603857	14.93
UPPER LIMIT		503684	8.09	2325112	10.31	2245400	15.26
LOWER LIMIT		215864	7.43	996476	9.65	962314	14.60
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-4987/1006		359774	7.76	1660794	9.98	1603857	14.93
MB 140-4987/8		290484	7.75	1207578	9.98	1166663	14.93
140-4944-1	A-INFLUENT	267206	7.75	1231149	9.98	1234176	14.93
140-4944-2	A-MID-GAC	307775	7.76	1401879	9.98	1259777	14.93
140-4944-3	A-EFFLUENT	268482	7.76	1239694	9.98	1282694	14.93
140-4944-4	C-INFLUENT	298425	7.76	1335558	9.98	1301686	14.93
140-4944-5	C-MID-GAC	289827	7.76	1299670	9.98	1218082	14.93
140-4944-6	C-EFFLUENT	271120	7.76	1174889	9.99	1053442	14.93

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-4944-1

Matrix: Air | Lab File ID: EE19P111.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 14:20

Sample wt/vol: 40(mL) | Date Analyzed: 05/20/2016 01:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	5.2		1.0	0.19
67-66-3	Chloroform	119.38	0.41	J	1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	28		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.71	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	4.3		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	31		1.0	0.18
100-41-4	Ethylbenzene	106.17	ND		1.0	0.34
75-09-2	Methylene Chloride	84.93	2.6		2.5	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	ND		0.50	0.50
127-18-4	Tetrachloroethene	165.83	ND		1.0	0.20
108-88-3	Toluene	92.14	1.7		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	110	B	1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	170		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	ND		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-4944-1

Matrix: Air | Lab File ID: EE19P111.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 14:20

Sample wt/vol: 40(mL) | Date Analyzed: 05/20/2016 01:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	19		3.5	0.66
67-66-3	Chloroform	119.38	2.0	J	4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	110		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	3.5	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	18		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	120		4.0	0.69
100-41-4	Ethylbenzene	106.17	ND		4.3	1.5
75-09-2	Methylene Chloride	84.93	9.0		8.7	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		2.6	2.6
127-18-4	Tetrachloroethene	165.83	ND		6.8	1.4
108-88-3	Toluene	92.14	6.5		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	ND		4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	600	B	5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	910		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	ND		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D				
Lims ID:	140-4944-A-1				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	20-May-2016 01:14:30	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-4944-a-1				
Misc. Info.:	E051916,TO155,,140-0002879-019				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-May-2016 08:25:46	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: tajh		Date:	20-May-2016 08:37:43		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.750	7.755	-0.005	78	267206	4.00	
* 2 1,4-Difluorobenzene	114	9.977	9.982	-0.005	95	1231149	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	90	1234176	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	89	987843	4.28	
6 Chlorodifluoromethane	67	3.048	3.037	0.011	96	14253	0.4188	
8 Dichlorodifluoromethane	85	3.102	3.091	0.011	100	17175	0.0567	
27 1,1-Dichloroethene	96	4.967	4.967	0.000	99	194298	2.49	
31 Methylene Chloride	84	5.302	5.296	0.006	91	16963	0.2078	
37 1,1-Dichloroethane	63	6.472	6.467	0.005	99	59389	0.3460	
42 cis-1,2-Dichloroethene	96	7.426	7.426	0.000	96	202439	2.26	
44 Chloroform	83	7.771	7.766	0.005	90	6905	0.0327	
47 1,1,1-Trichloroethane	97	8.769	8.774	-0.005	95	2015460	8.77	
59 Trichloroethene	130	10.737	10.743	-0.006	95	1768124	13.6	
68 Toluene	91	12.910	12.905	0.005	94	42112	0.1383	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

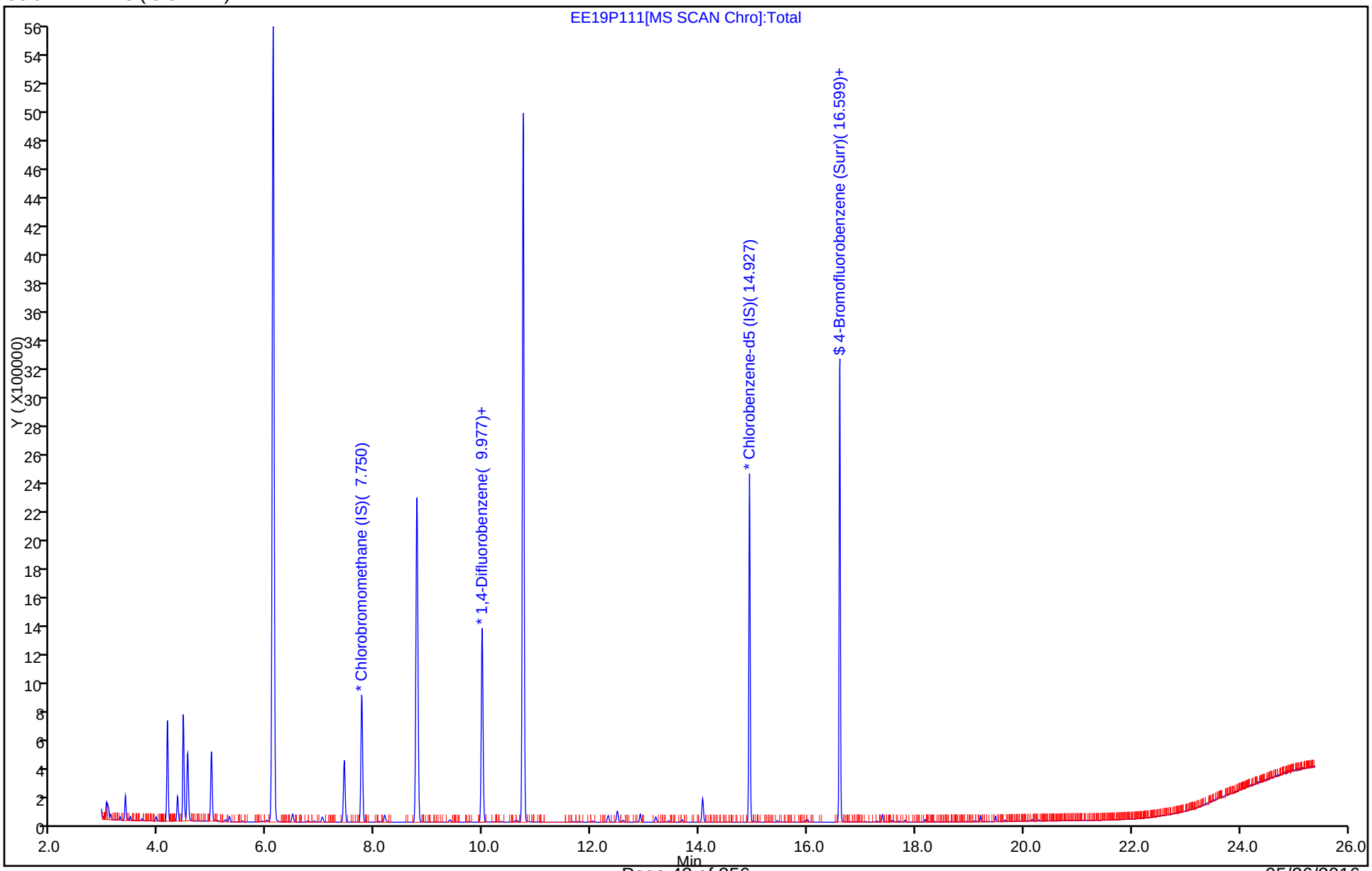
Report Date: 20-May-2016 10:34:03 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D

Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1	Worklist Smp#:	19
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



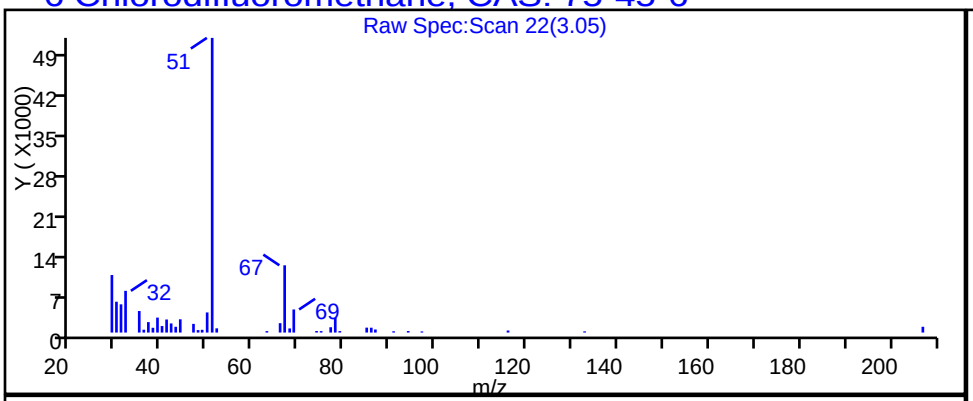
Report Date: 20-May-2016 10:34:03 Chrom Revision: 2.2 16-May-2016 16:09:38

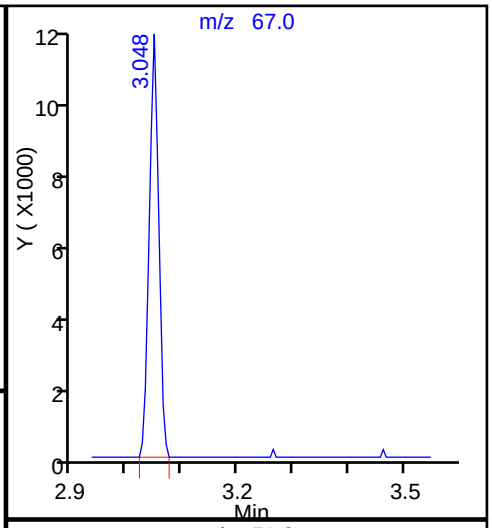
TestAmerica Knoxville

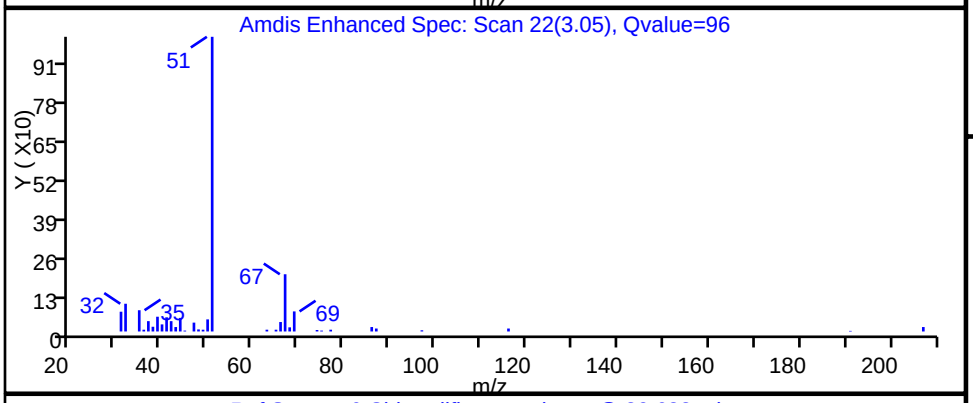
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D

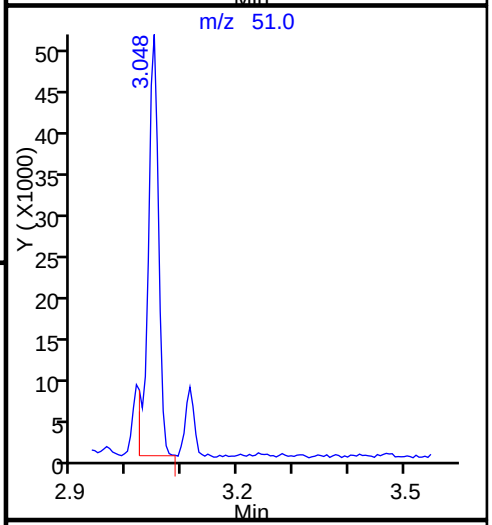
Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

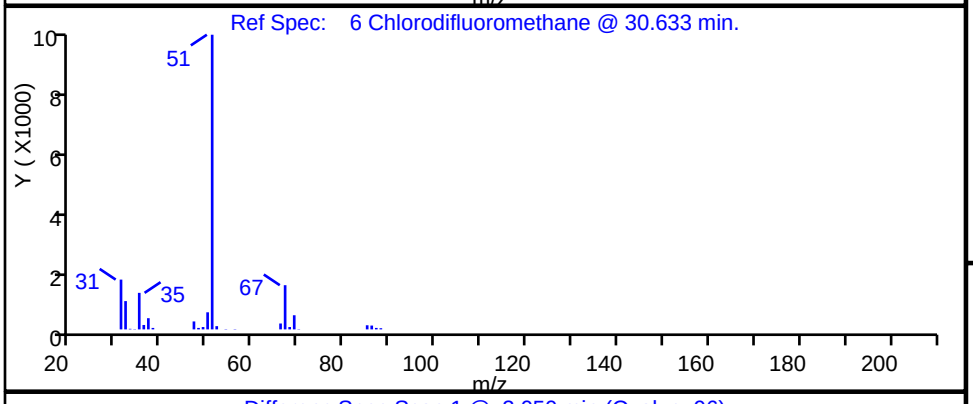
6 Chlorodifluoromethane, CAS: 75-45-6

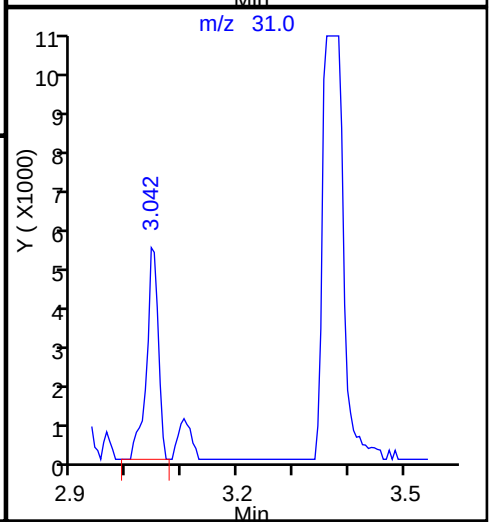


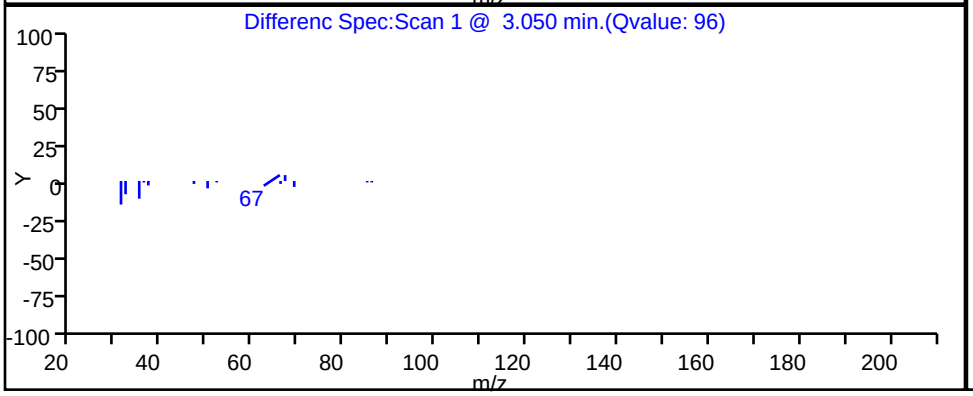








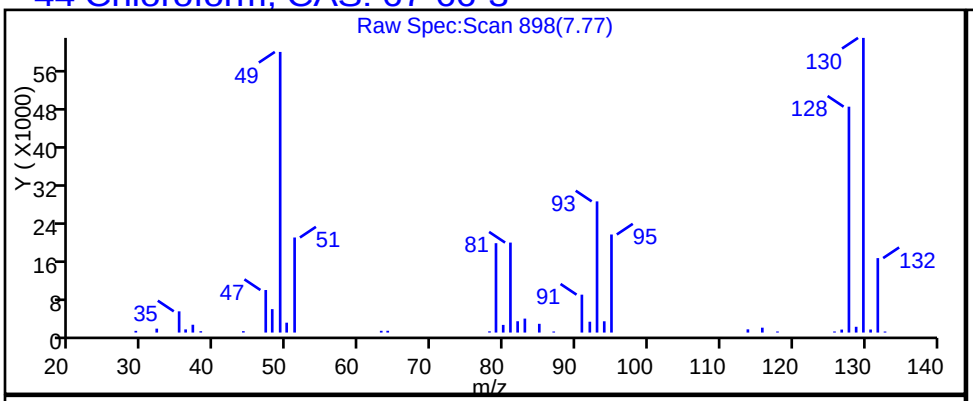


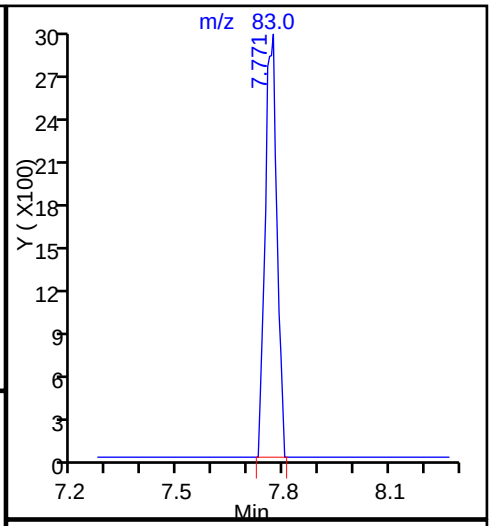


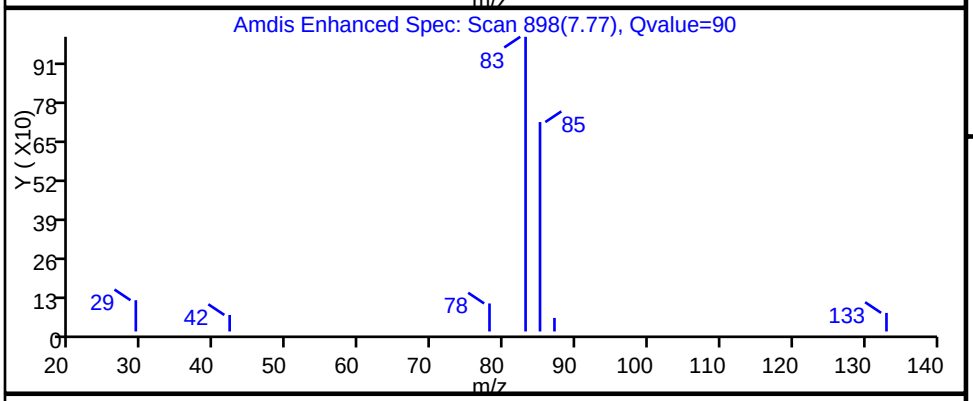
TestAmerica Knoxville

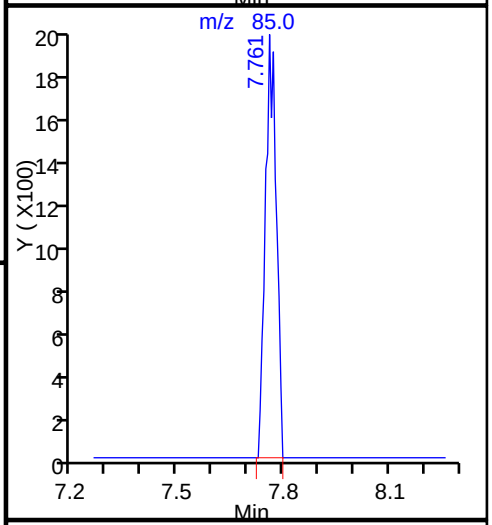
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D				
Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

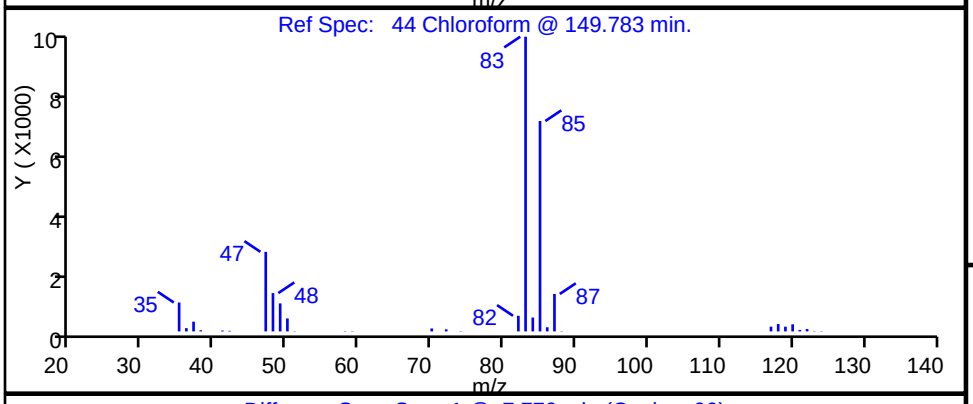
44 Chloroform, CAS: 67-66-3

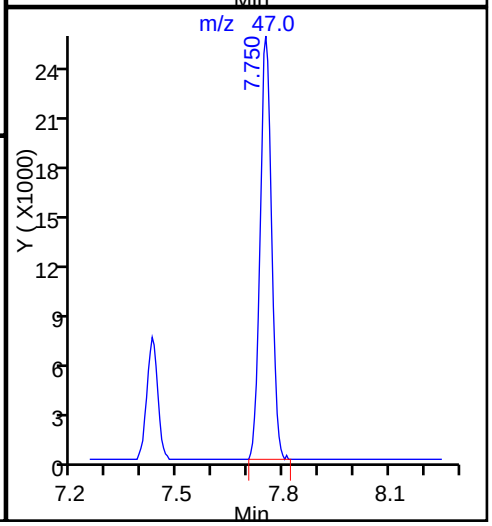


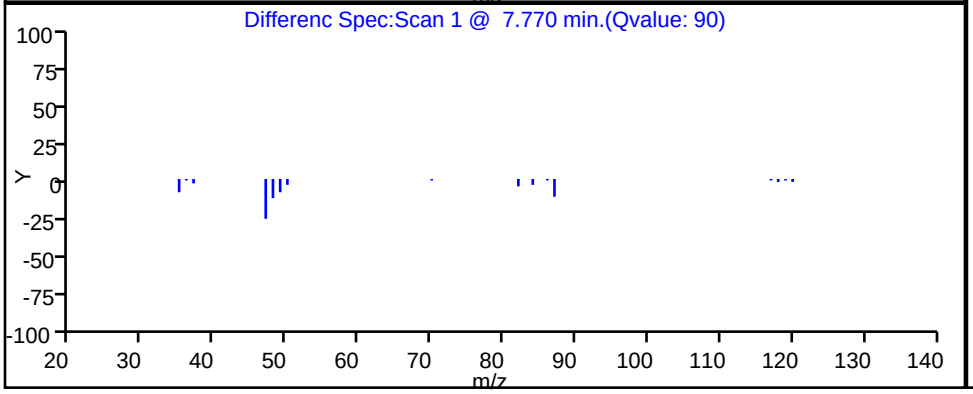












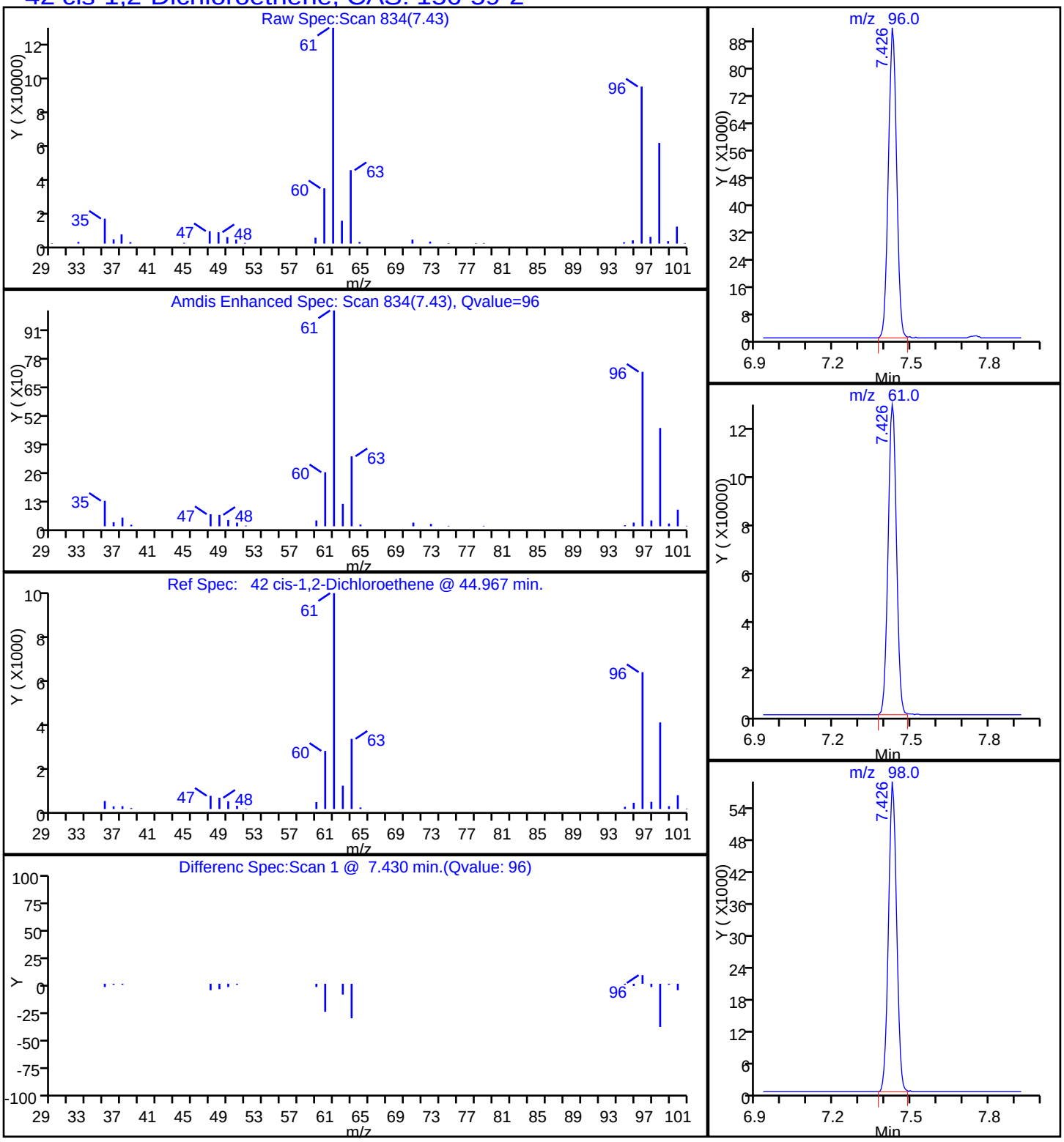
Report Date: 20-May-2016 10:34:05 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D

Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 cis-1,2-Dichloroethene, CAS: 156-59-2



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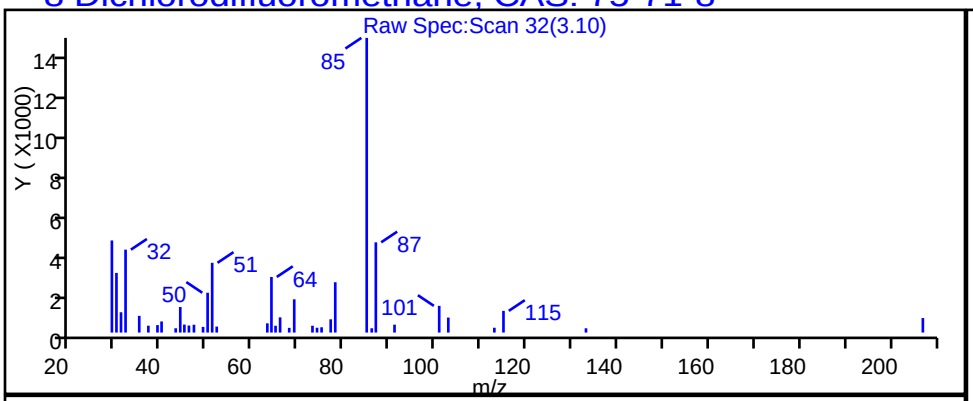
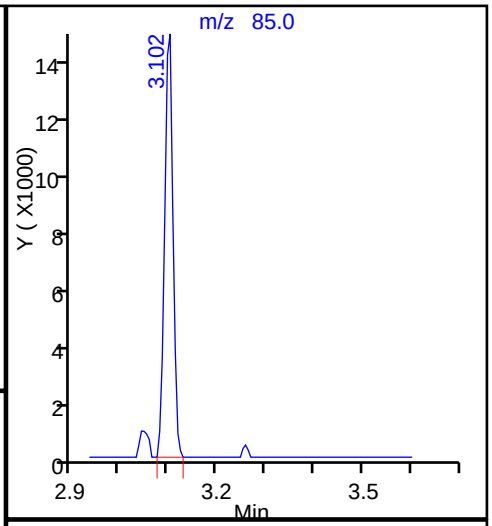
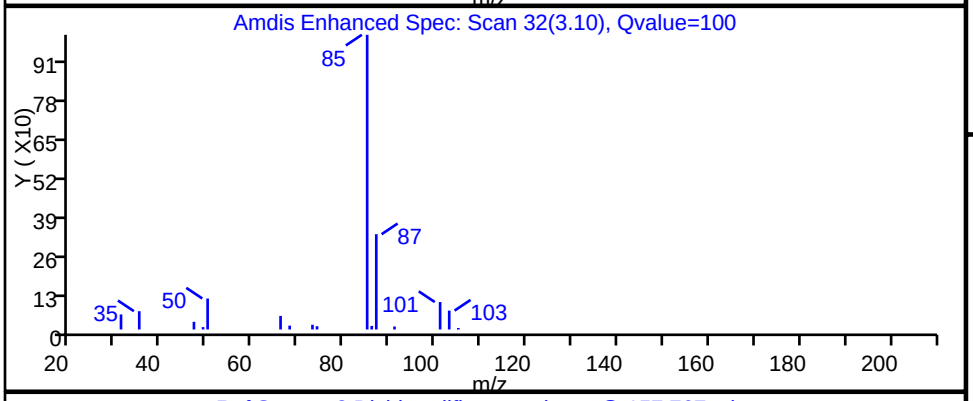
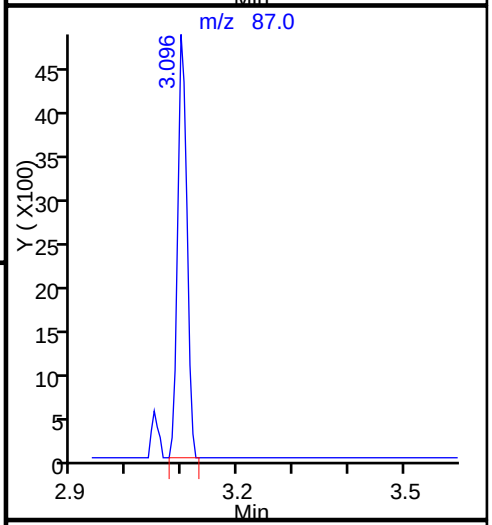
Lims ID: 140-4944-A-1 Lab Sample ID: 140-4944-1
Client ID: A-INFLUENT
Operator ID: 007126 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

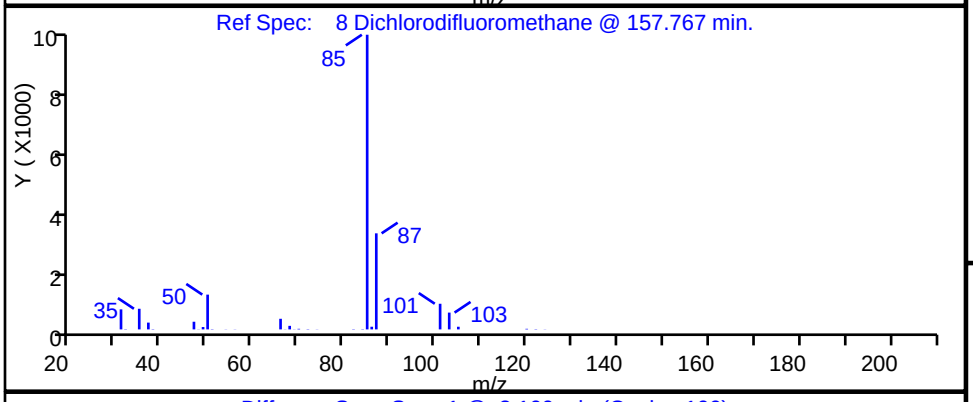
8 Dichlorodifluoromethane, CAS: 75-71-8

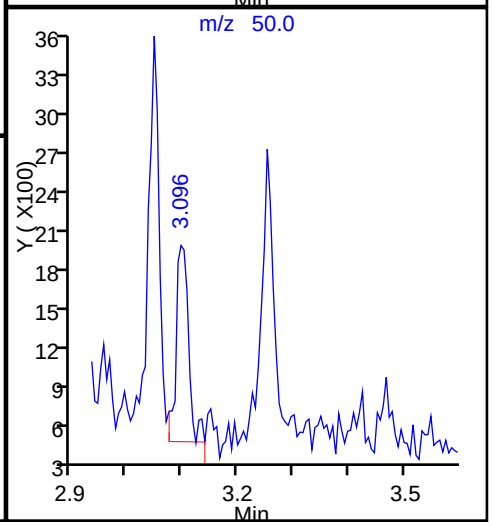


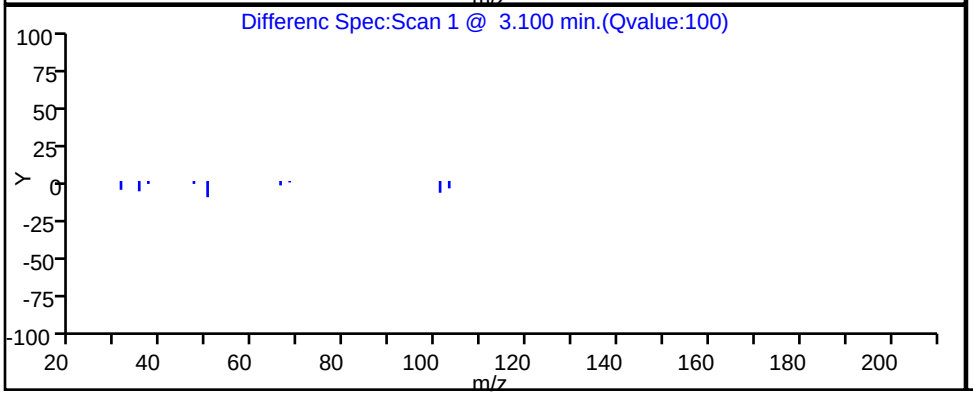








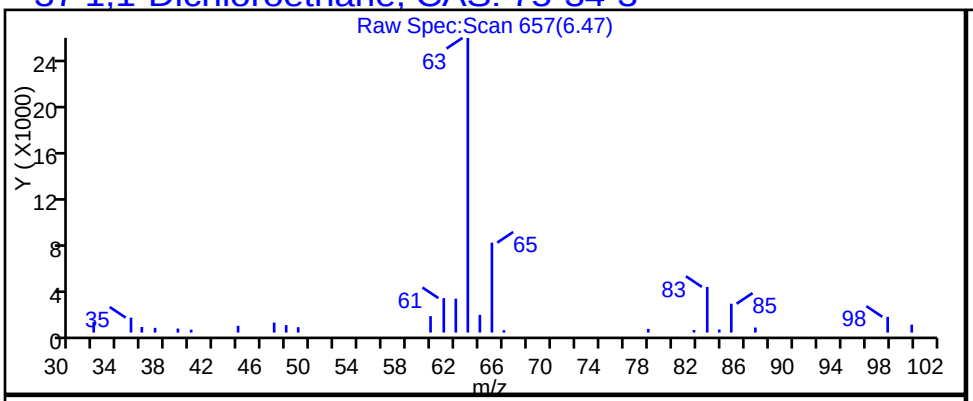


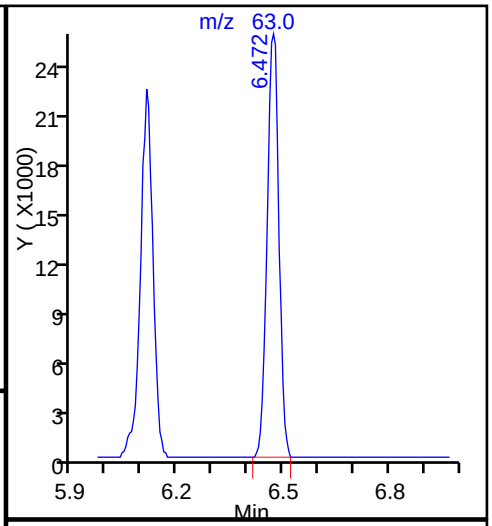


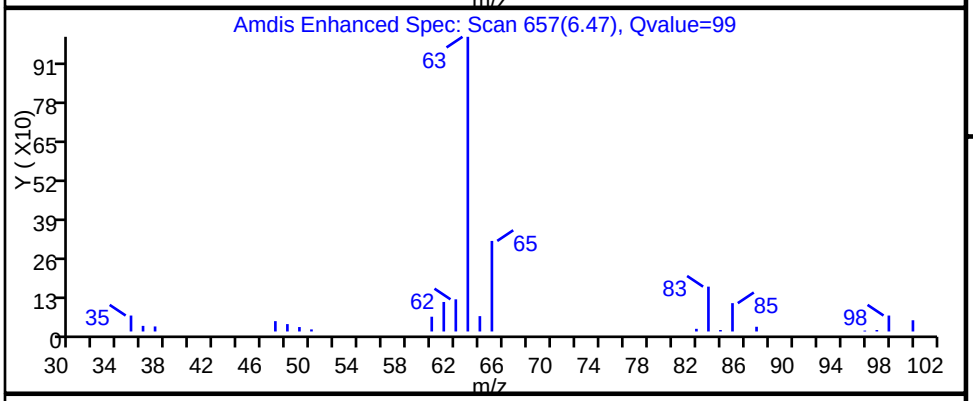
TestAmerica Knoxville

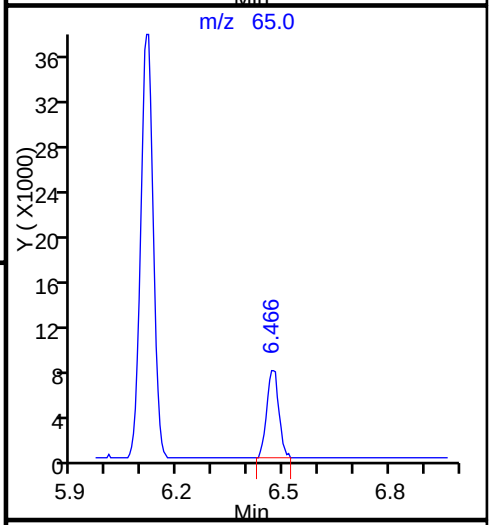
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D				
Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

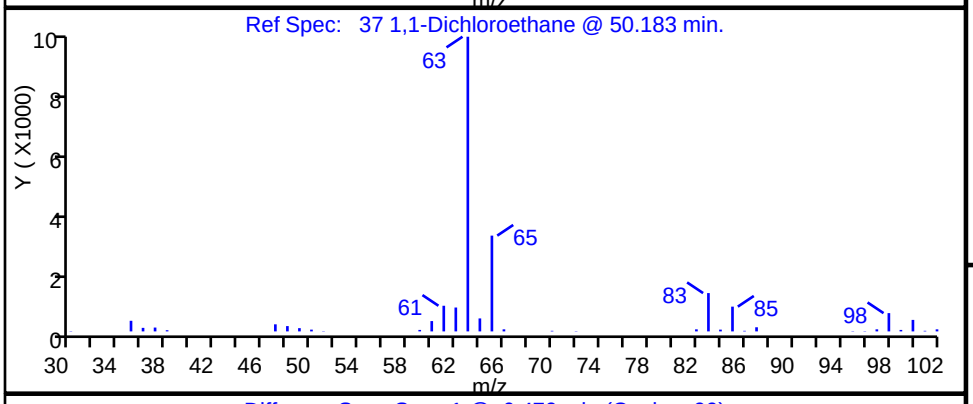
37 1,1-Dichloroethane, CAS: 75-34-3

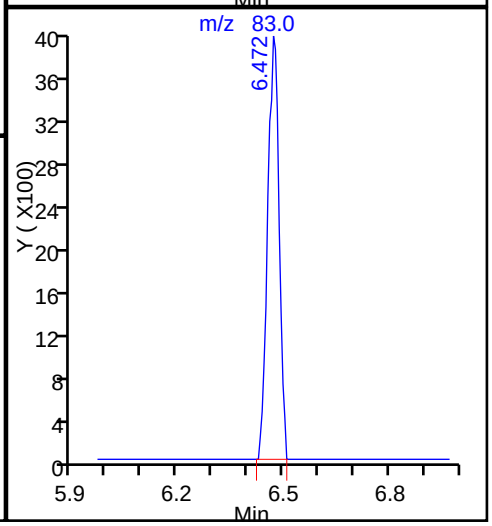


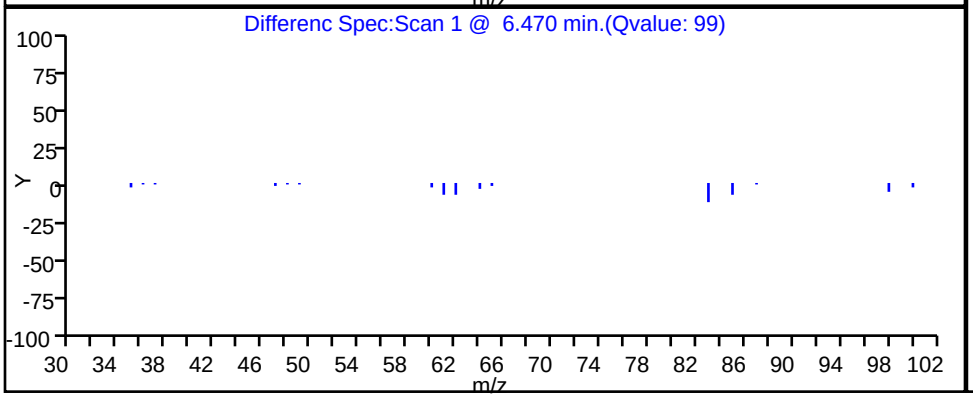












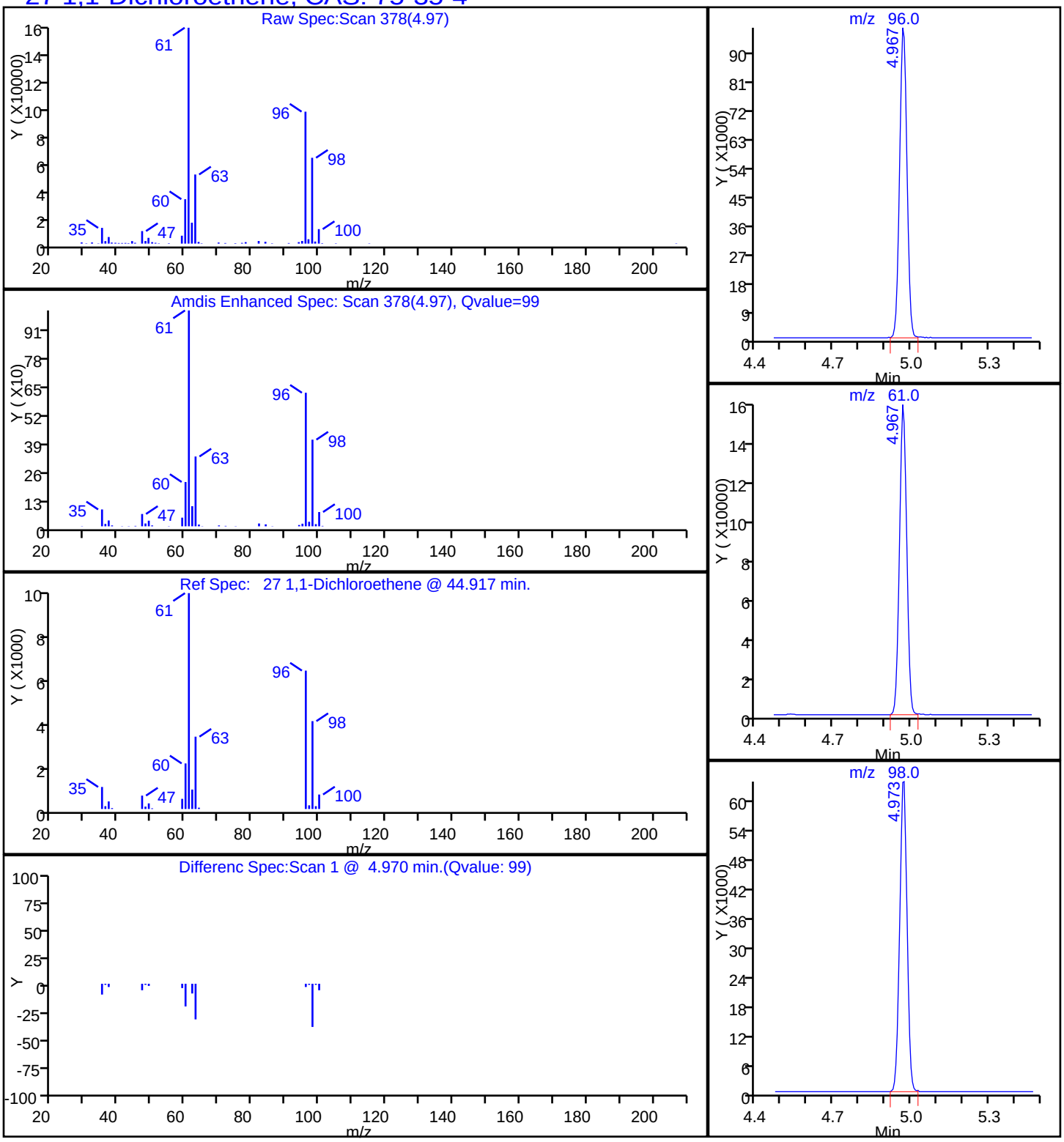
Report Date: 20-May-2016 10:34:04 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D

Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4



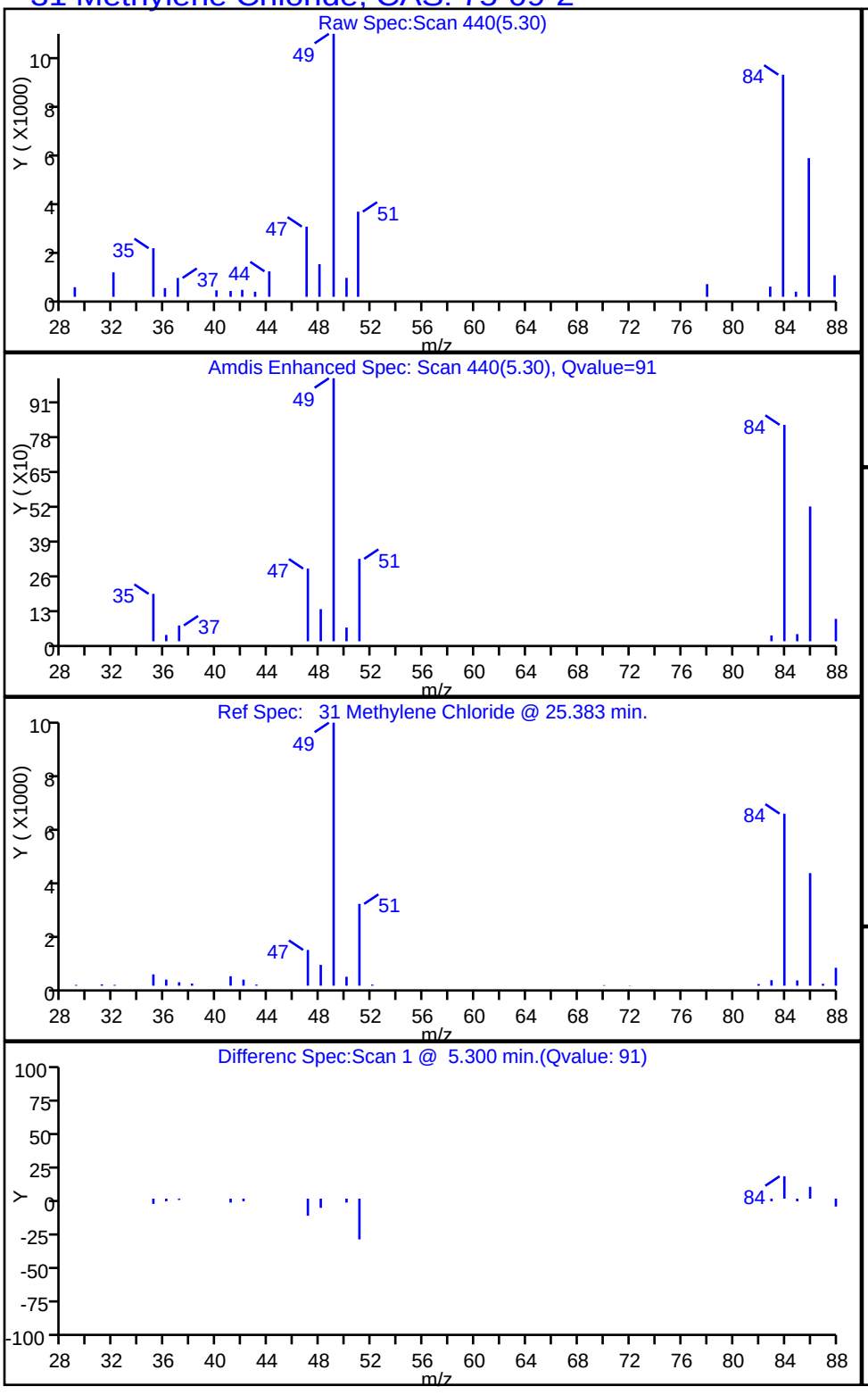
Report Date: 20-May-2016 10:34:05 Chrom Revision: 2.2 16-May-2016 16:09:38

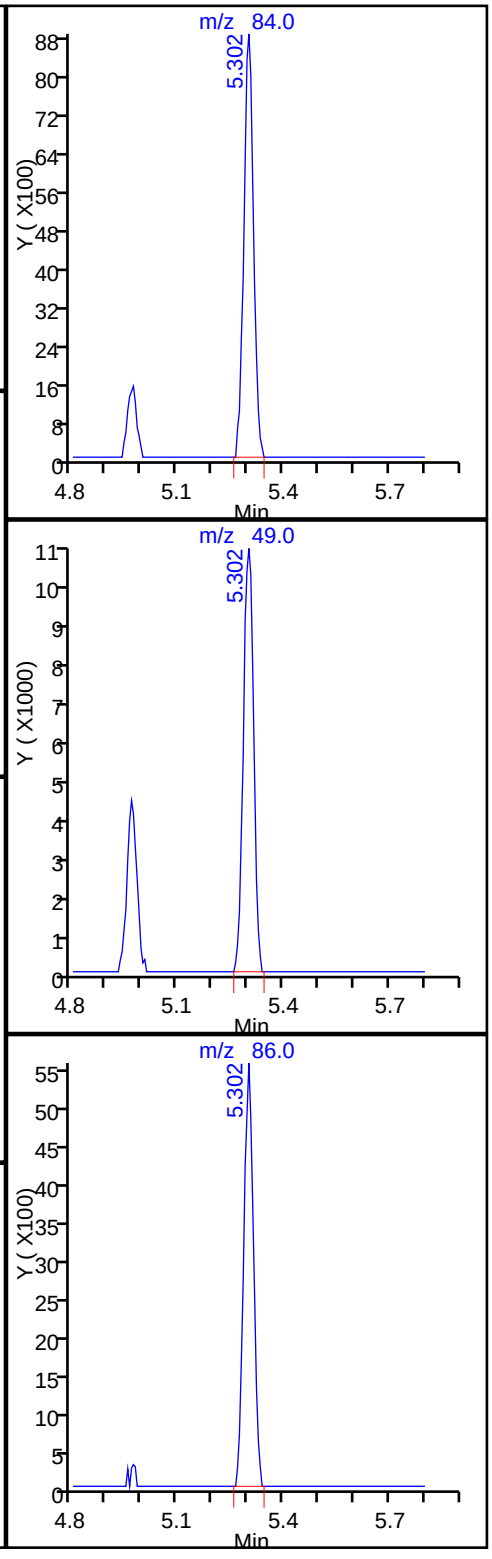
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D

Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

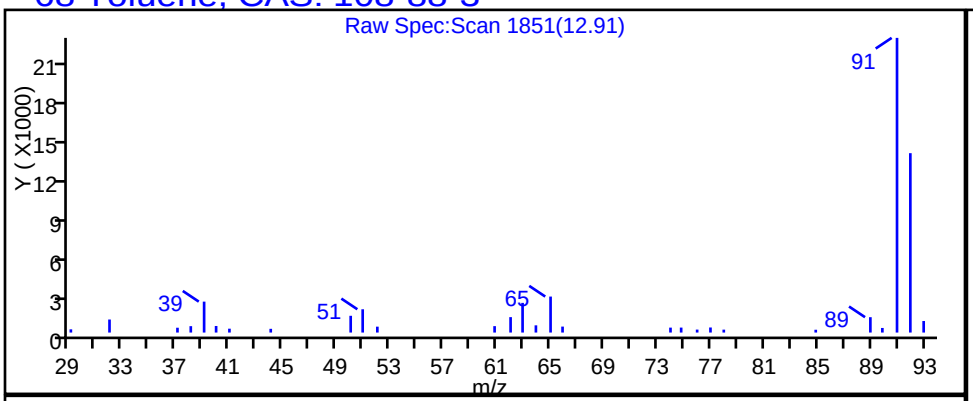


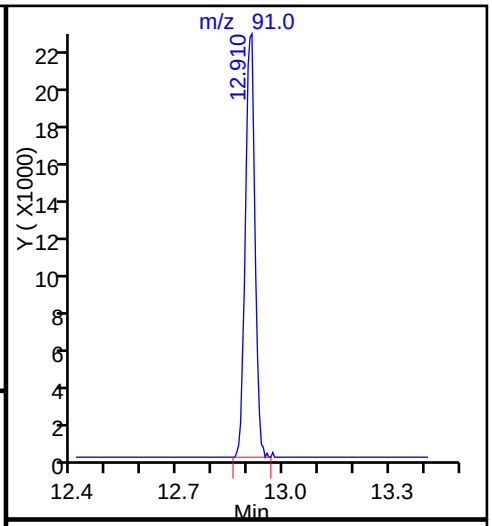


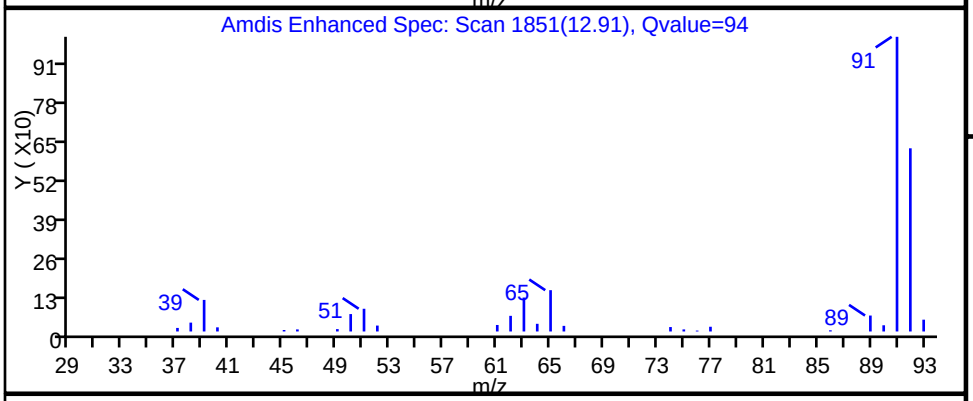
TestAmerica Knoxville

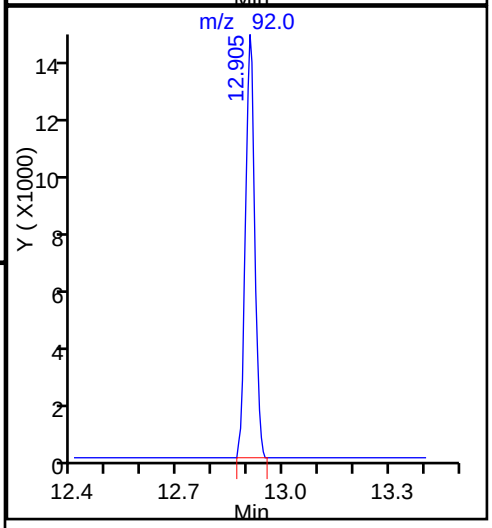
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D				
Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

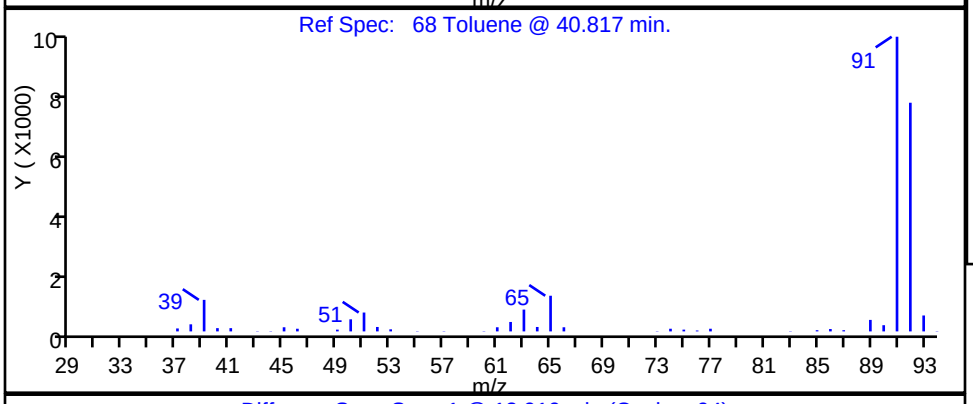
68 Toluene, CAS: 108-88-3

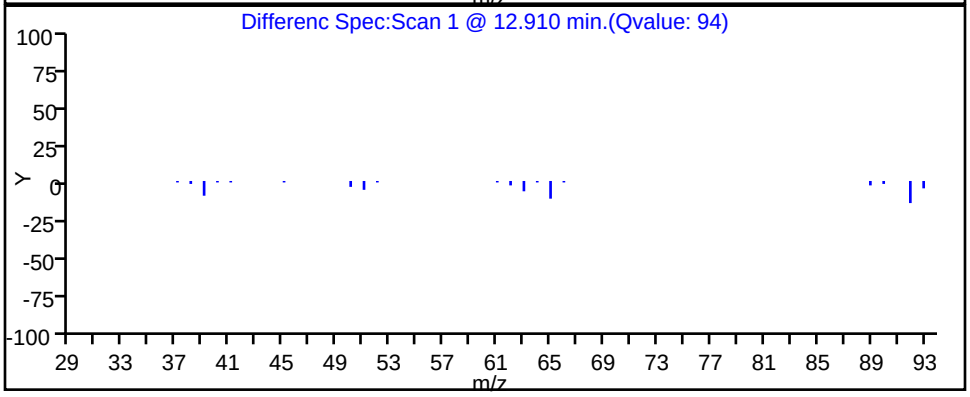






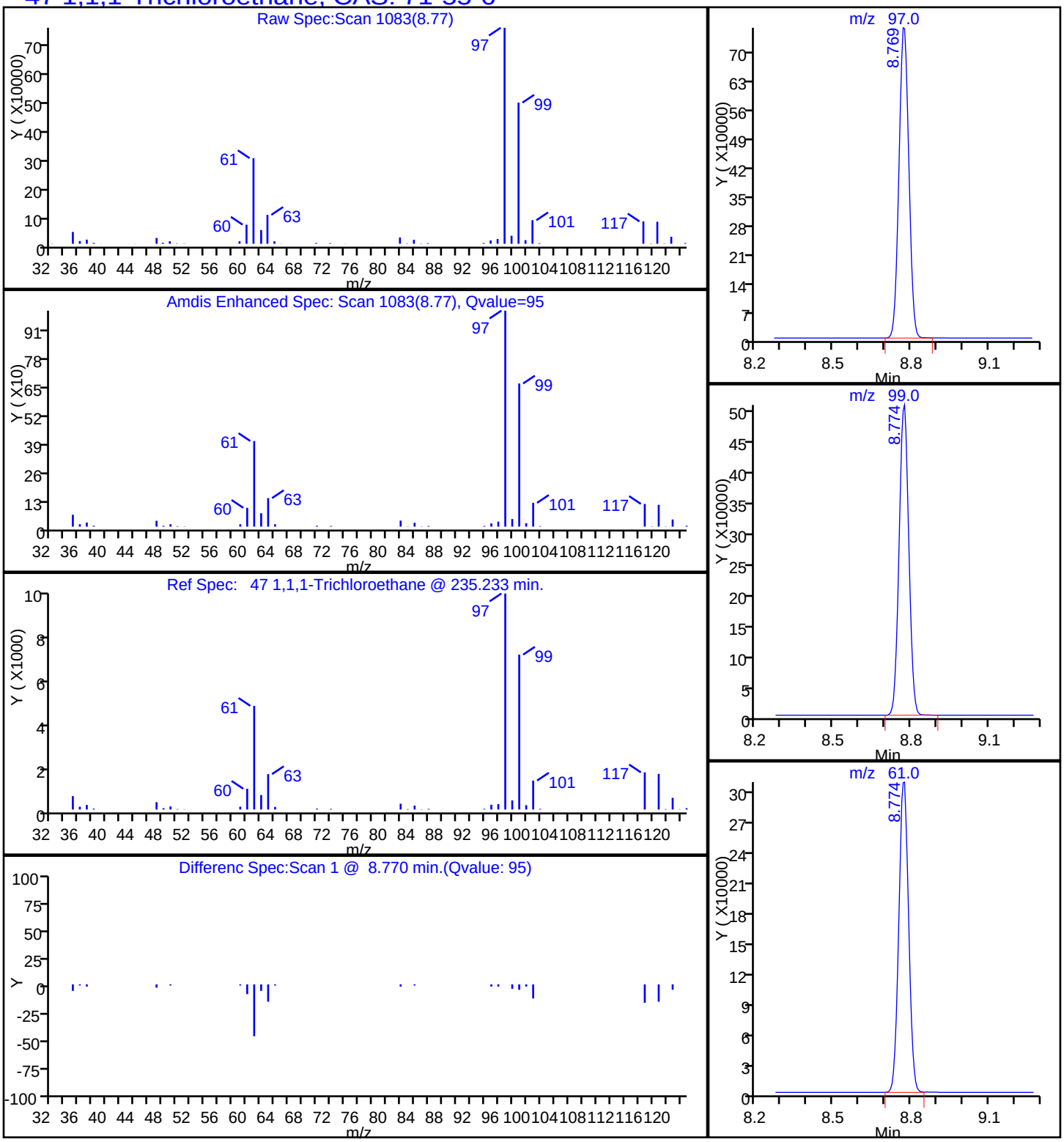






Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D
Injection Date: 20-May-2016 01:14:30 Instrument ID: ME
Lims ID: 140-4944-A-1 Lab Sample ID: 140-4944-1
Client ID: A-INFLUENT
Operator ID: 007126 ALS Bottle#: 11 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



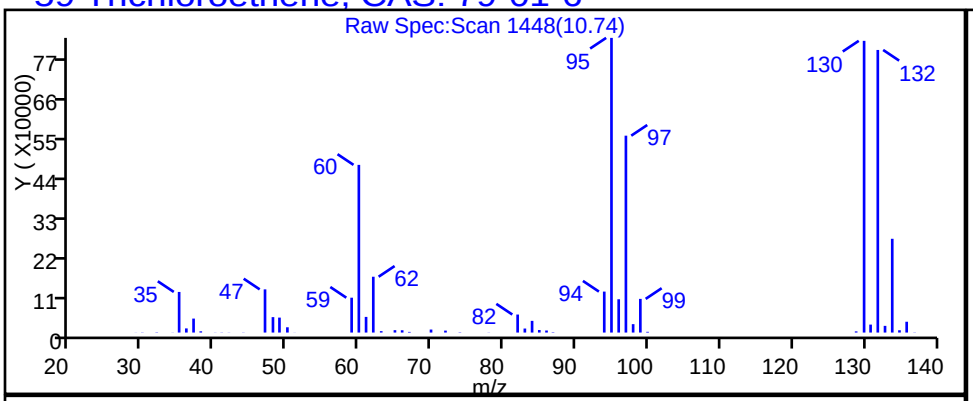
Report Date: 20-May-2016 10:34:05 Chrom Revision: 2.2 16-May-2016 16:09:38

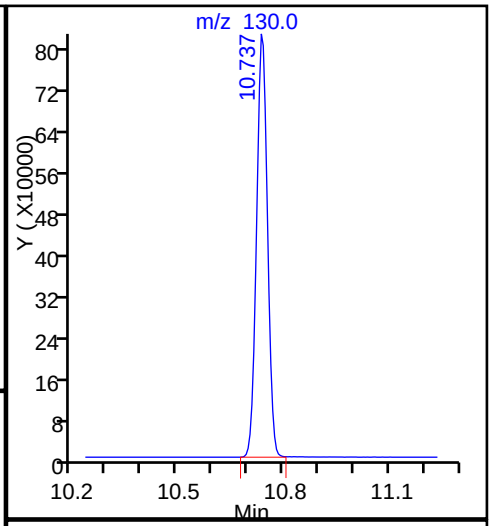
TestAmerica Knoxville

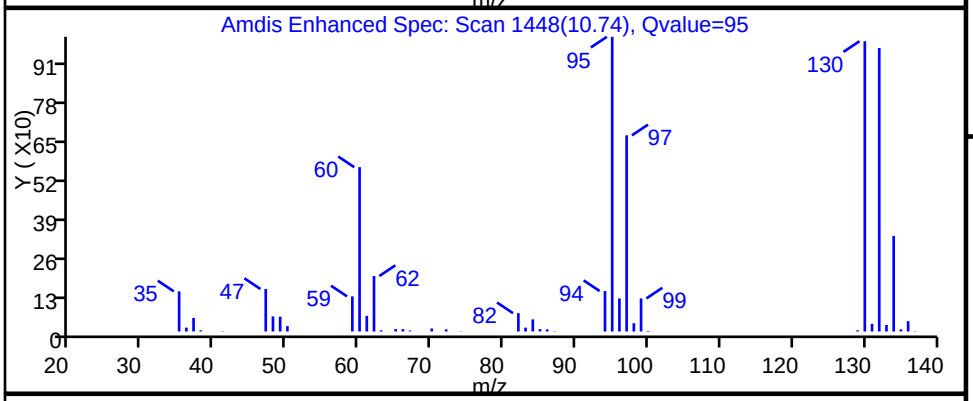
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P111.D

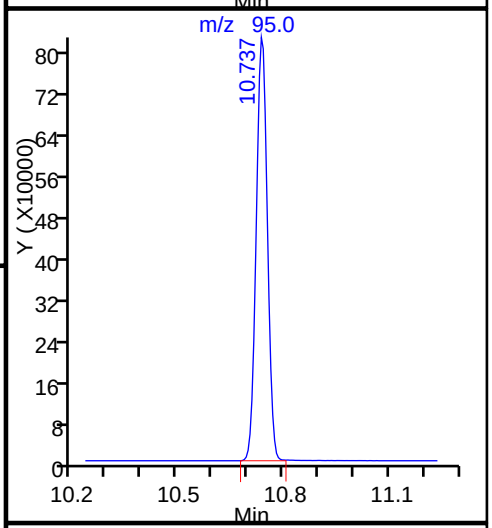
Injection Date:	20-May-2016 01:14:30	Instrument ID:	ME		
Lims ID:	140-4944-A-1	Lab Sample ID:	140-4944-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

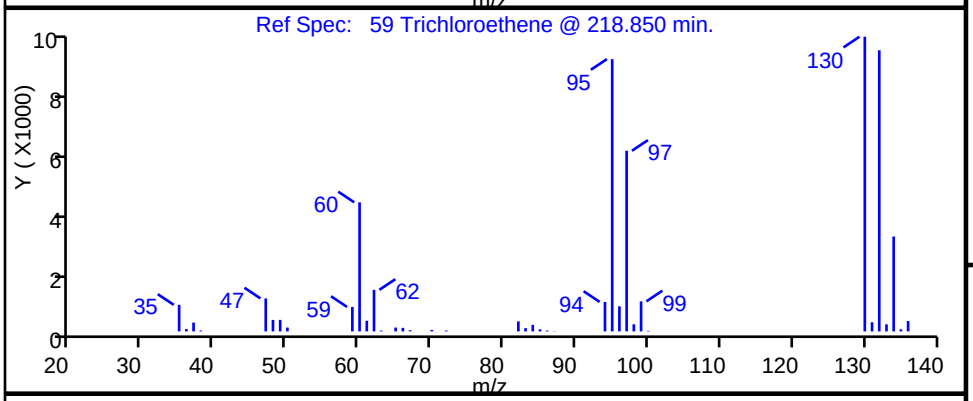
59 Trichloroethene, CAS: 79-01-6

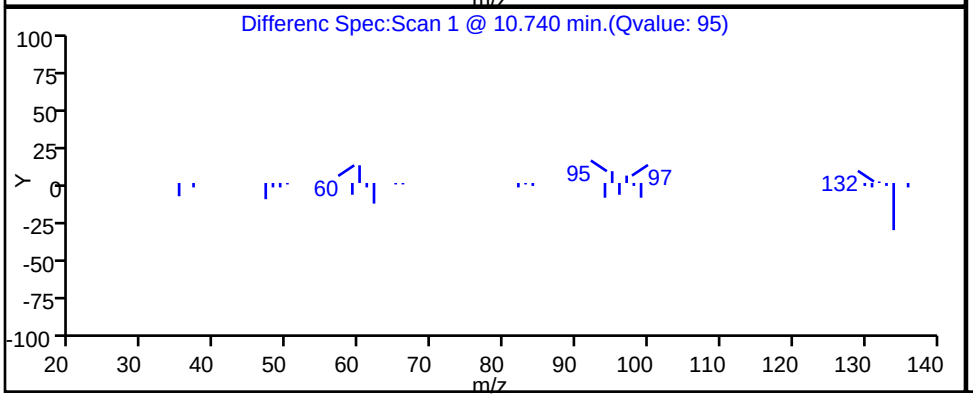


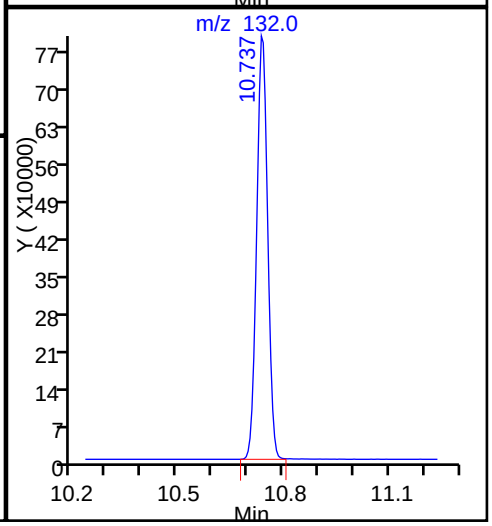












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: A-MID-GAC Lab Sample ID: 140-4944-2

Matrix: Air Lab File ID: EE19P112.D

Analysis Method: TO 15 LL Date Collected: 05/12/2016 14:15

Sample wt/vol: 20(mL) Date Analyzed: 05/20/2016 02:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	4.1		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	3.6		2.0	0.38
67-66-3	Chloroform	119.38	0.90	J	2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	49		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.2		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	33		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	4.9	J	5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	0.96	J	2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	130	B	2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	3.8		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: A-MID-GAC Lab Sample ID: 140-4944-2

Matrix: Air Lab File ID: EE19P112.D

Analysis Method: TO 15 LL Date Collected: 05/12/2016 14:15

Sample wt/vol: 20(mL) Date Analyzed: 05/20/2016 02:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	13		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	13		7.1	1.3
67-66-3	Chloroform	119.38	4.4	J	9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	190		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	17		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	130		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	17	J	17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	3.8	J	7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	690	B	11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	20		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D				
Lims ID:	140-4944-A-2				
Client ID:	A-MID-GAC				
Sample Type:	Client				
Inject. Date:	20-May-2016 02:00:30	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-4944-a-2				
Misc. Info.:	E051916,TO155,,140-0002879-020				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-May-2016 08:25:46	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: tajh		Date:	20-May-2016 08:37:59		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.756	7.755	0.001	78	307775	4.00	
* 2 1,4-Difluorobenzene	114	9.983	9.982	0.001	95	1401879	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	90	1259777	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	88	931682	3.95	
6 Chlorodifluoromethane	67	3.053	3.037	0.016	94	5640	0.1439	
27 1,1-Dichloroethene	96	4.973	4.967	0.006	98	117577	1.31	
31 Methylene Chloride	84	5.297	5.296	0.001	91	18593	0.1978	
34 trans-1,2-Dichloroethene	96	6.068	6.062	0.006	90	3908	0.0385	
37 1,1-Dichloroethane	63	6.472	6.467	0.005	99	32911	0.1665	
42 cis-1,2-Dichloroethene	96	7.432	7.426	0.006	96	200193	1.94	
44 Chloroform	83	7.772	7.766	0.006	89	8794	0.0362	
47 1,1,1-Trichloroethane	97	8.775	8.774	0.001	95	1342672	5.07	
51 Benzene	78	9.379	9.378	0.001	97	46804	0.1645	
59 Trichloroethene	130	10.738	10.743	-0.005	92	22510	0.1518	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

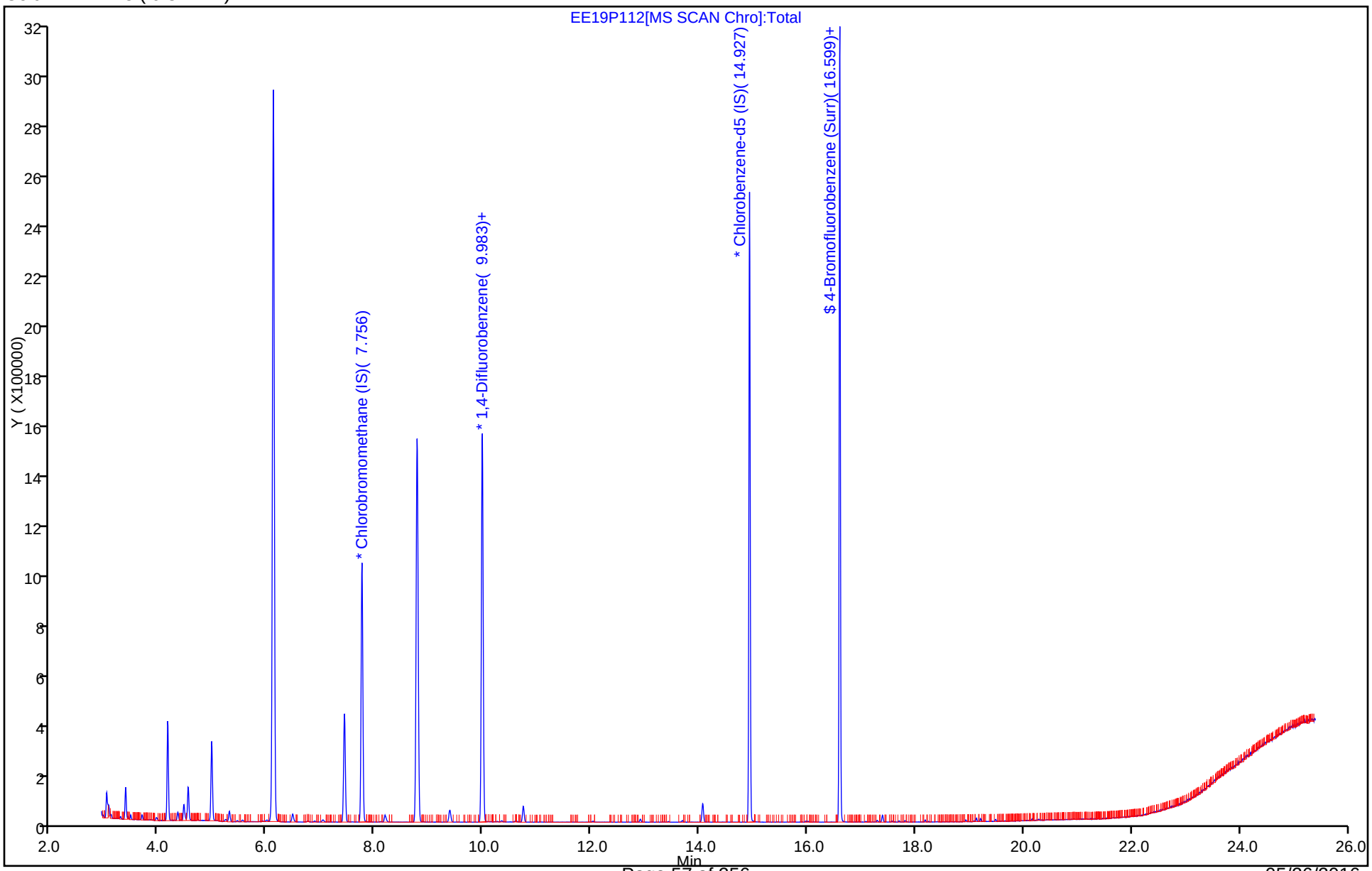
Report Date: 20-May-2016 10:34:10 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D

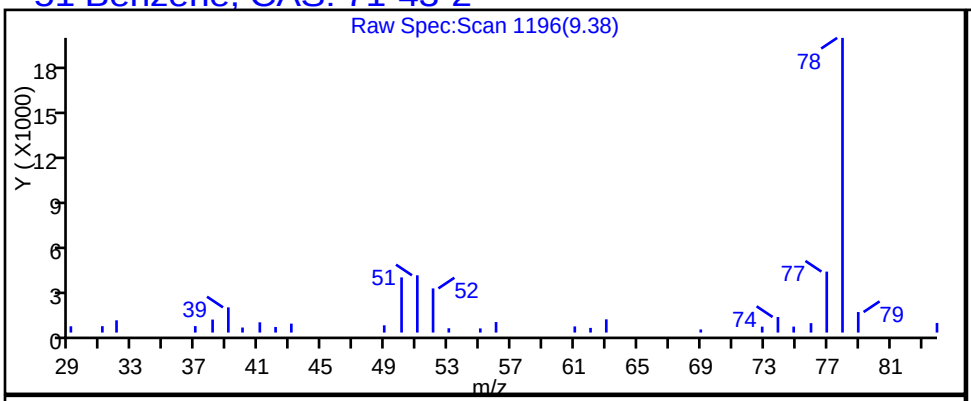
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2	Worklist Smp#:	20
Client ID:	A-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

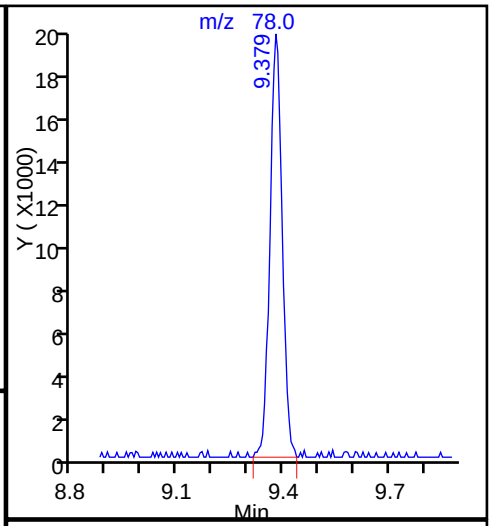
Column: RTX-5 (0.32 mm)

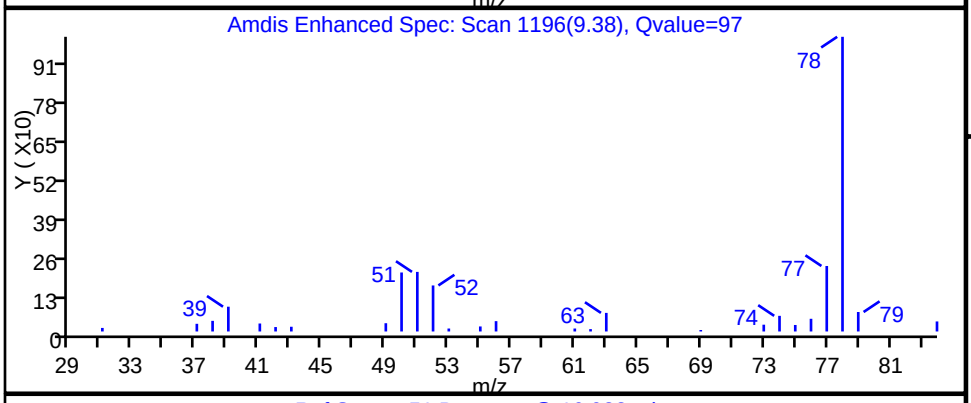


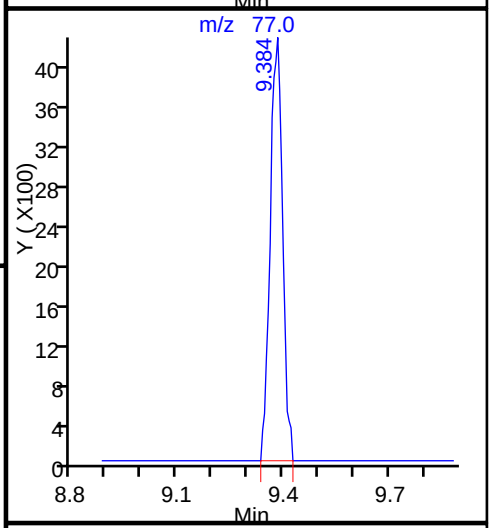
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D
Injection Date: 20-May-2016 02:00:30 Instrument ID: ME
Lims ID: 140-4944-A-2 Lab Sample ID: 140-4944-2
Client ID: A-MID-GAC
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

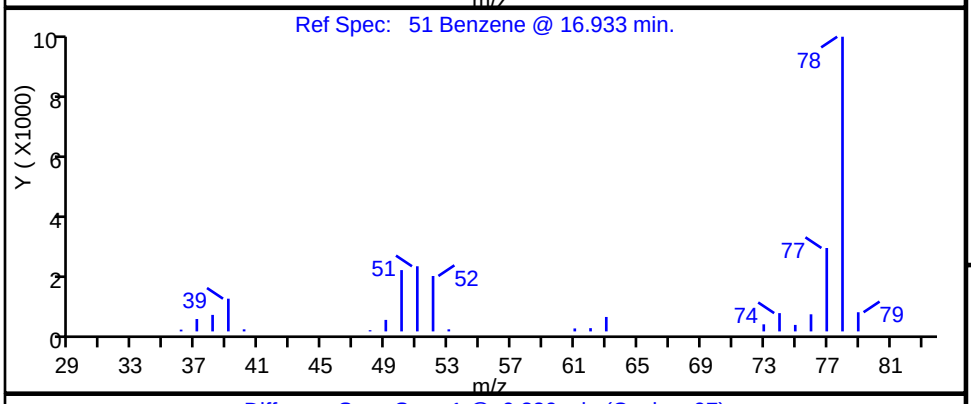
51 Benzene, CAS: 71-43-2

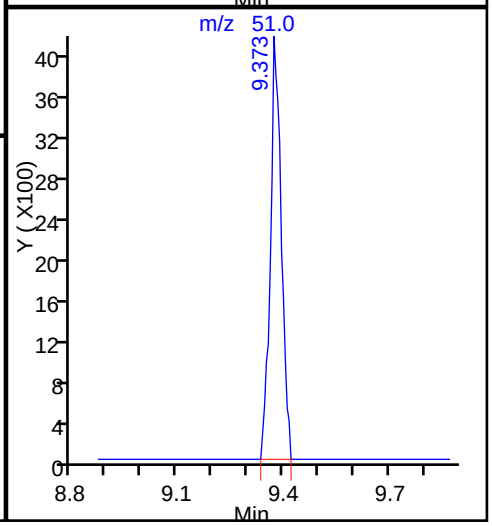


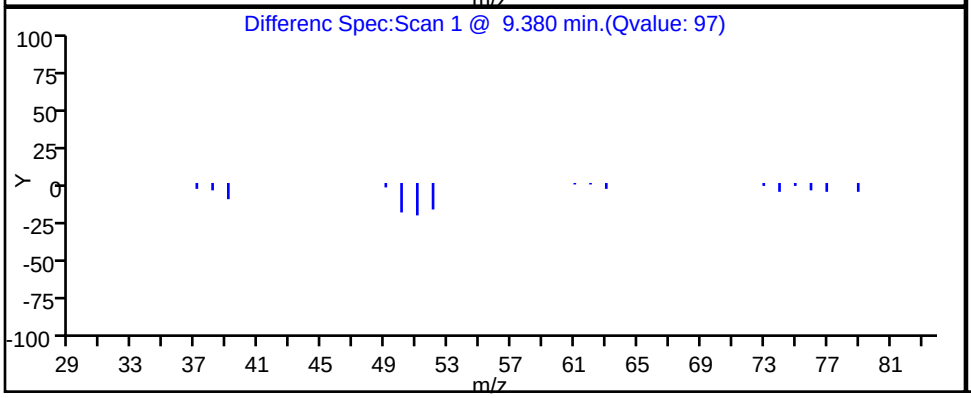








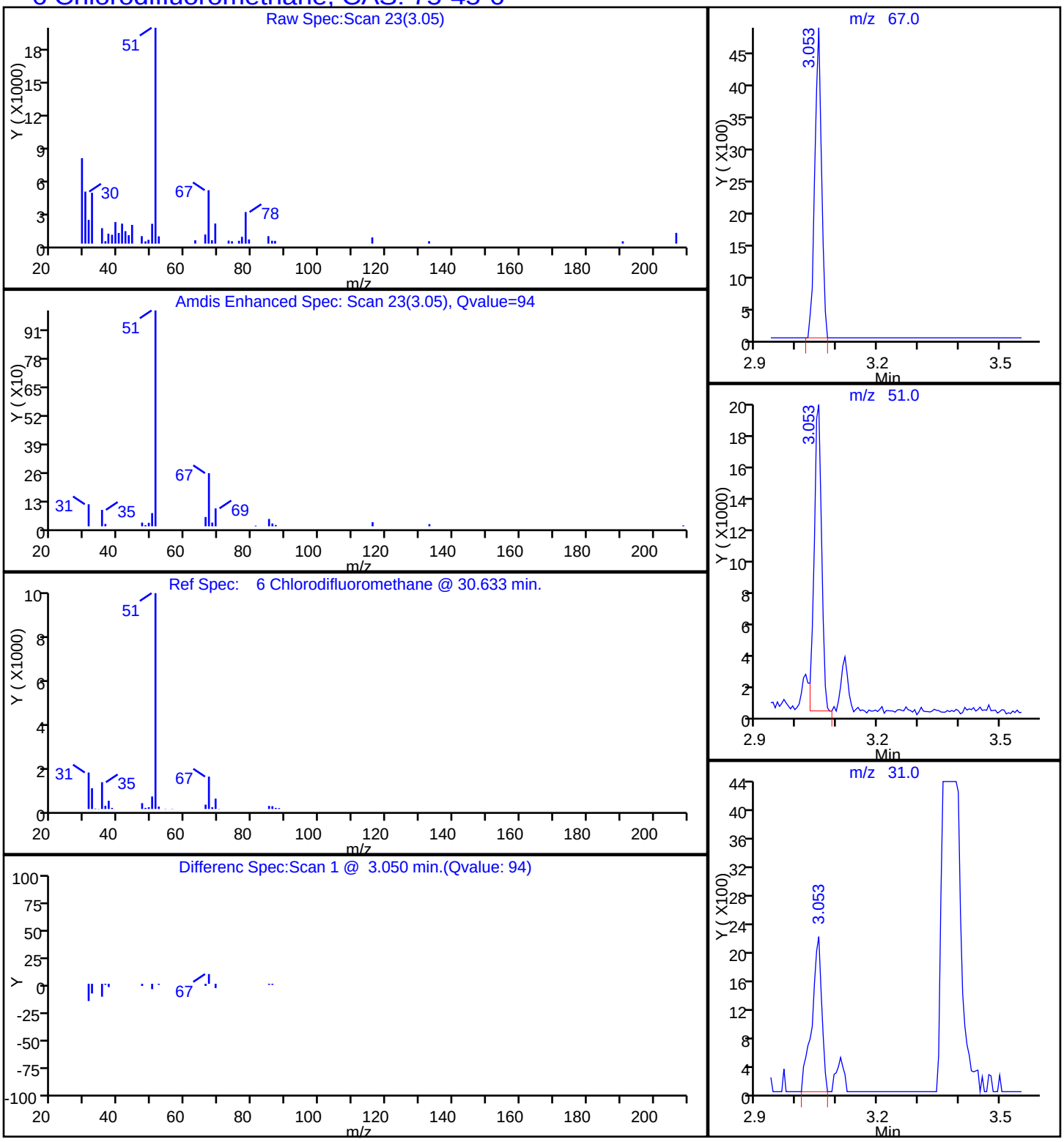




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D				
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



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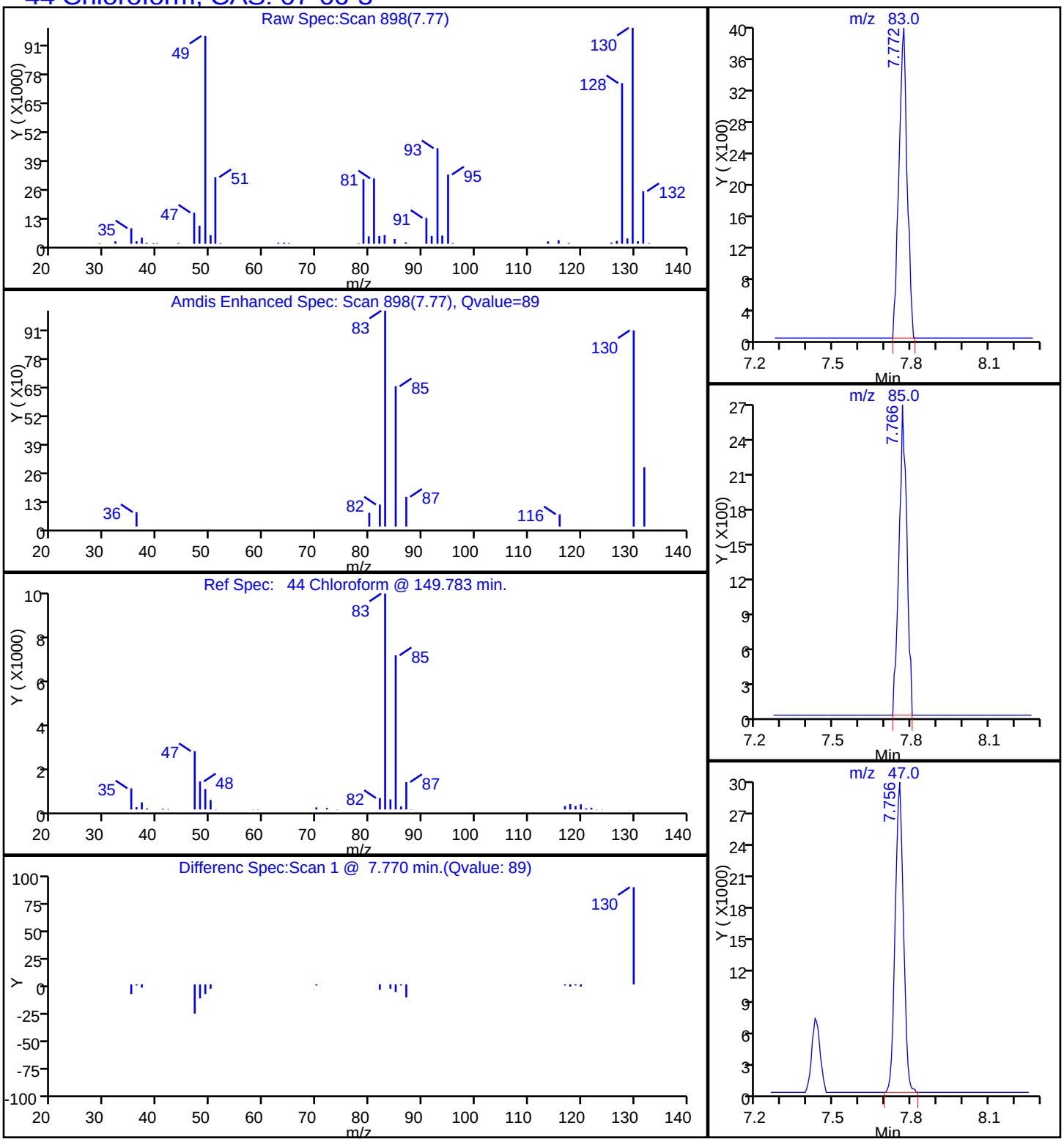
Injection Date: 20-May-2016 02:00:30 Instrument ID: ME
Lims ID: 140-4944-A-2 Lab Sample ID: 140-4944-2
Client ID: A-MID-GAC
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

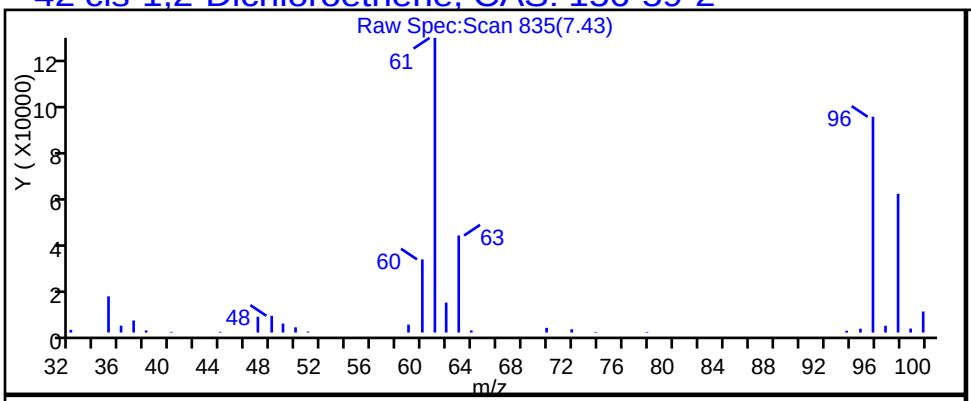
44 Chloroform, CAS: 67-66-3

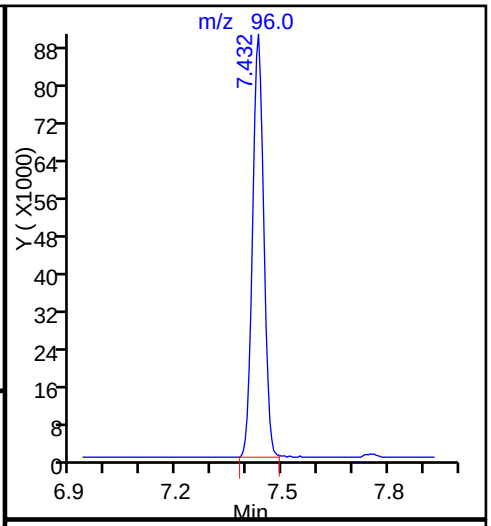


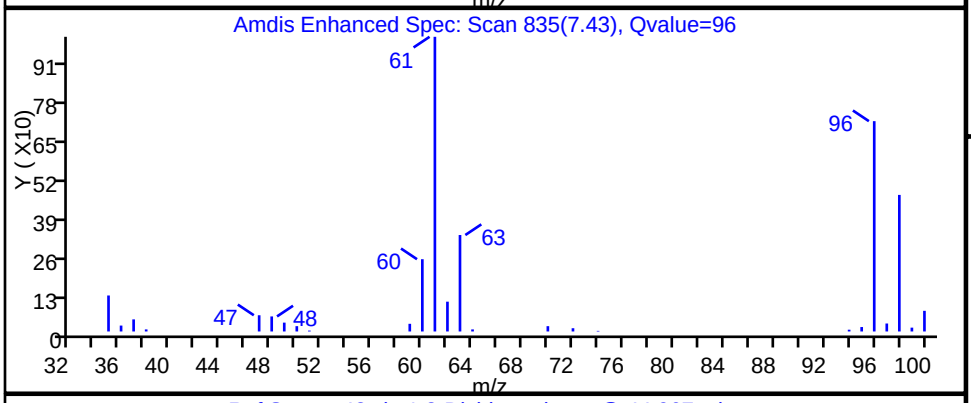
TestAmerica Knoxville

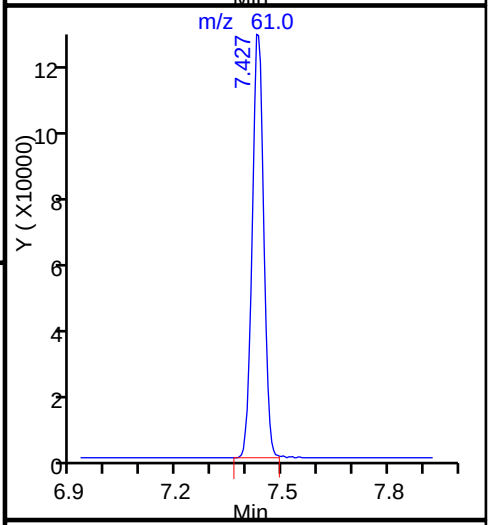
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D				
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

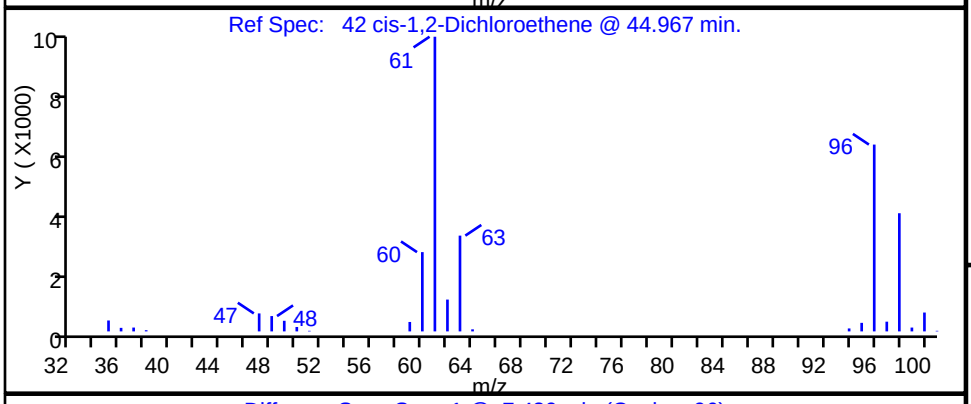
42 cis-1,2-Dichloroethene, CAS: 156-59-2

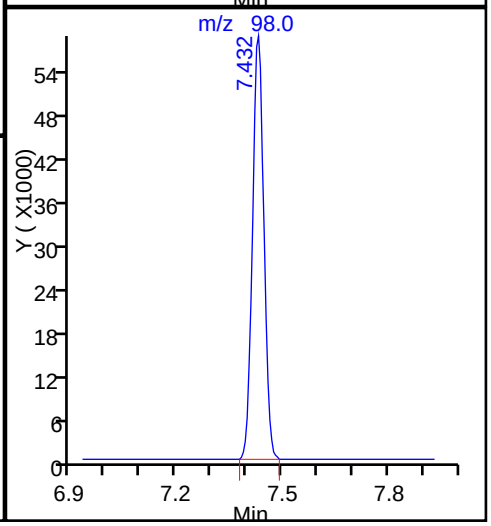


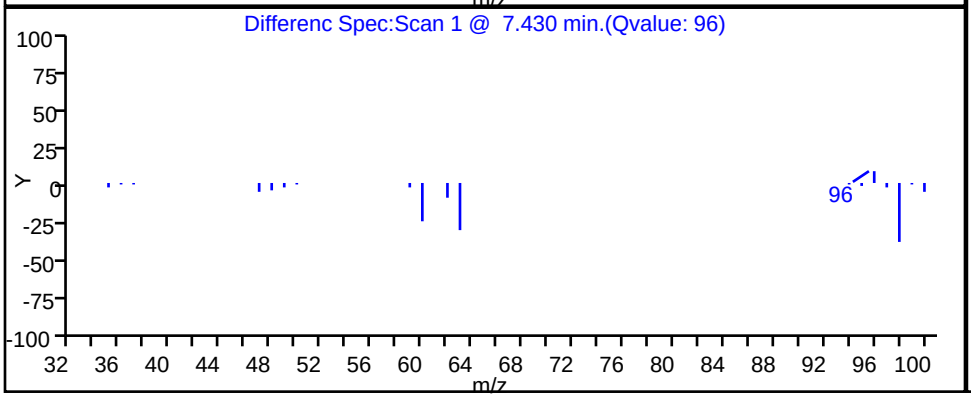








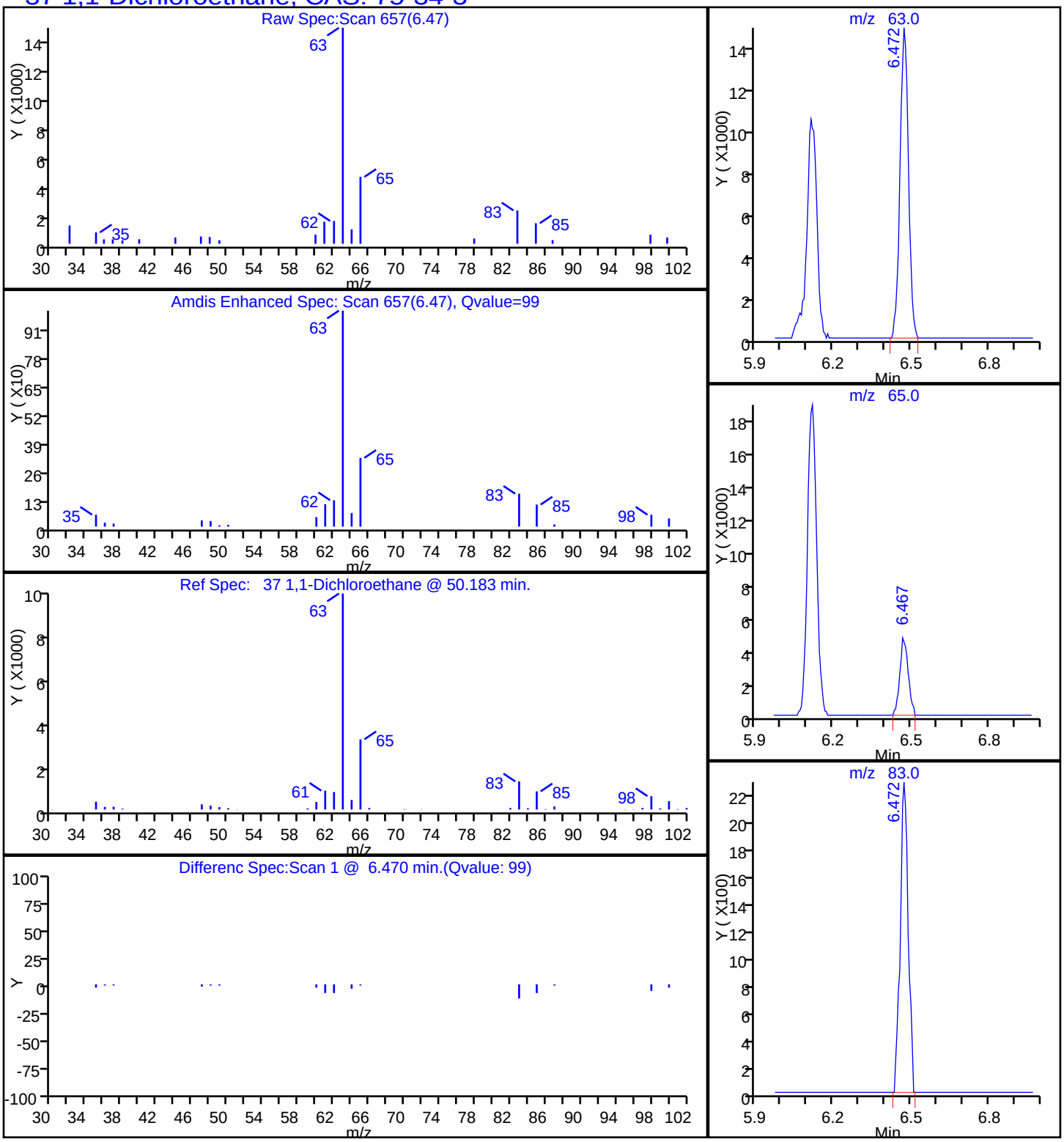




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D				
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 1,1-Dichloroethane, CAS: 75-34-3



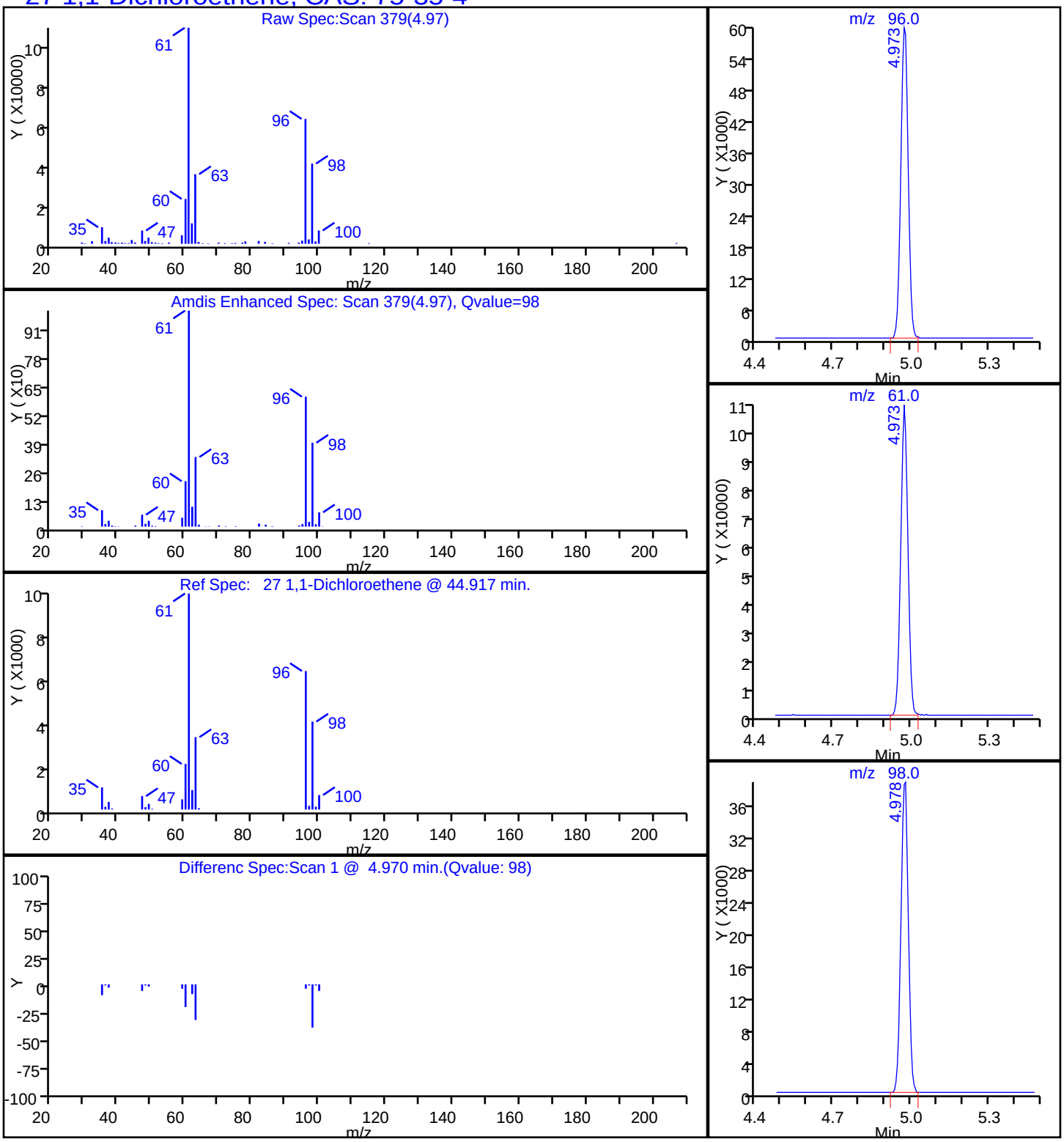
Report Date: 20-May-2016 10:34:10 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D

Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

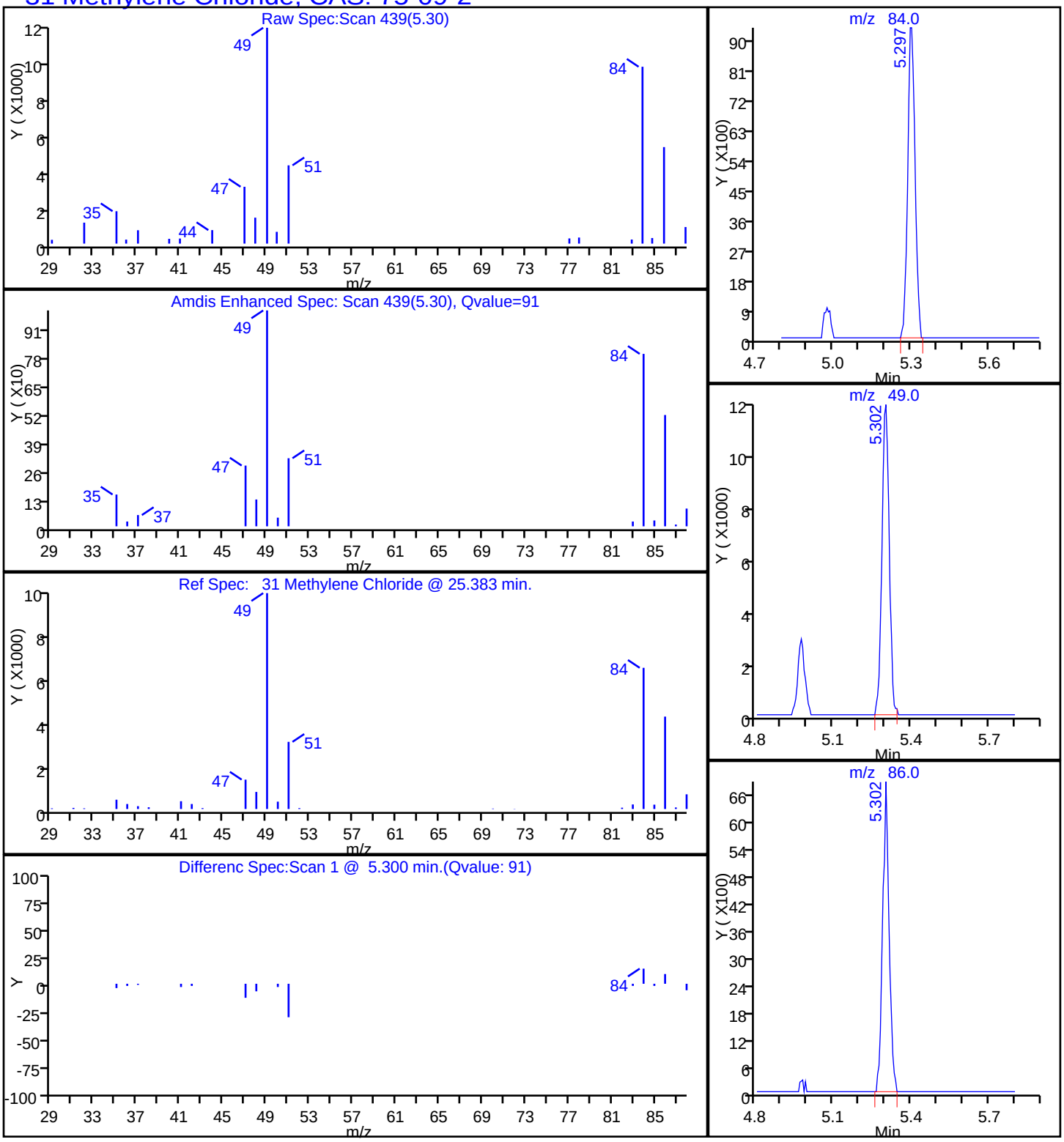
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

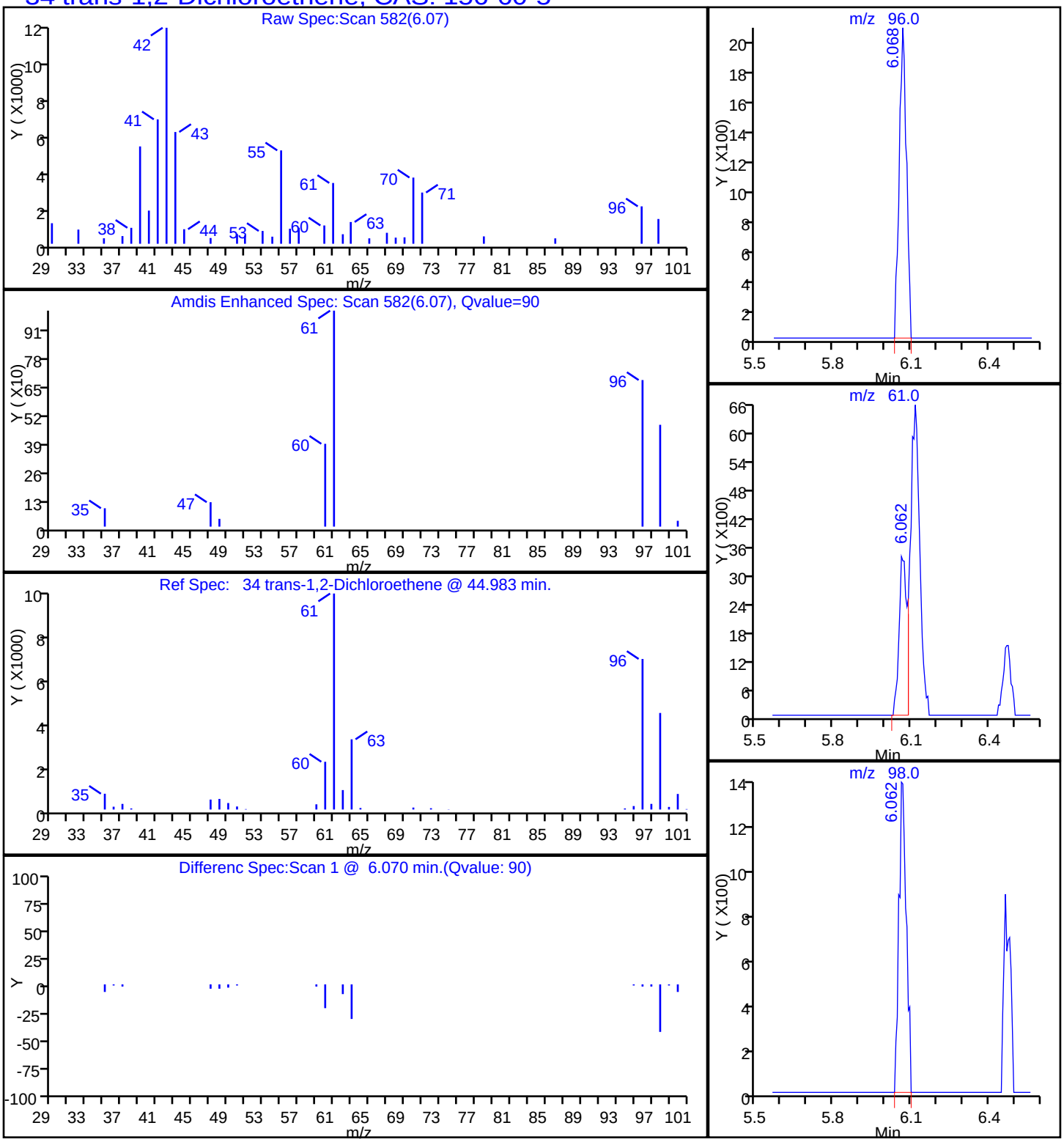
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D				
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2



Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D
Injection Date: 20-May-2016 02:00:30 Instrument ID: ME
Lims ID: 140-4944-A-2 Lab Sample ID: 140-4944-2
Client ID: A-MID-GAC
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



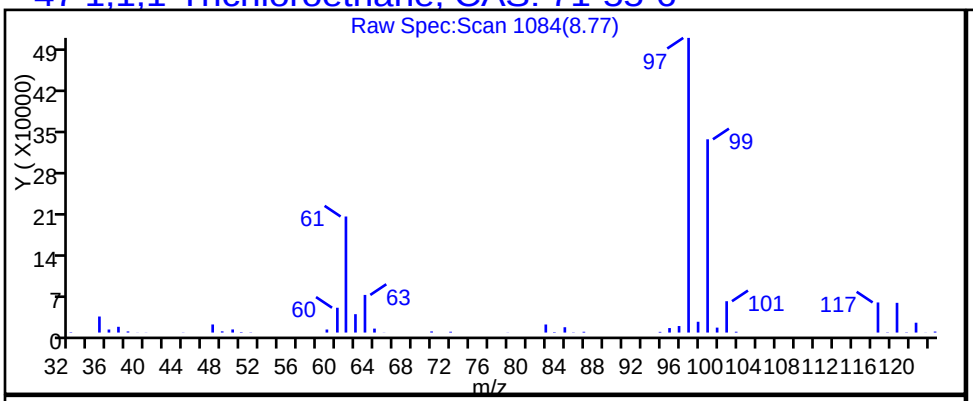
Report Date: 20-May-2016 10:34:11 Chrom Revision: 2.2 16-May-2016 16:09:38

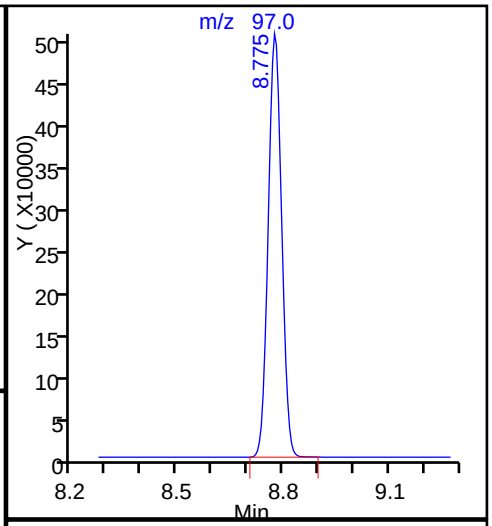
TestAmerica Knoxville

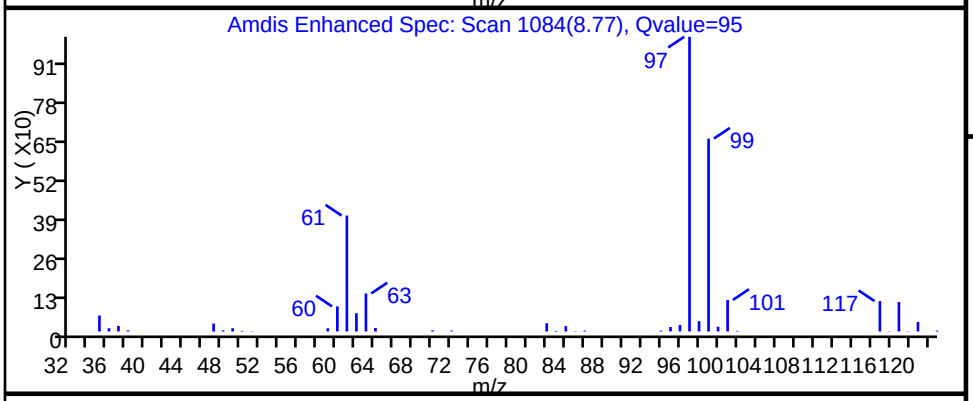
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D

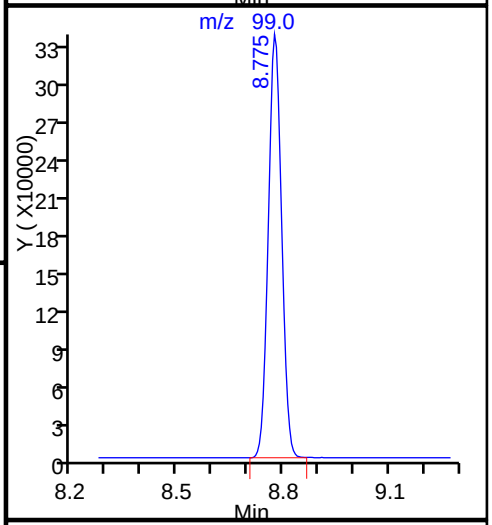
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

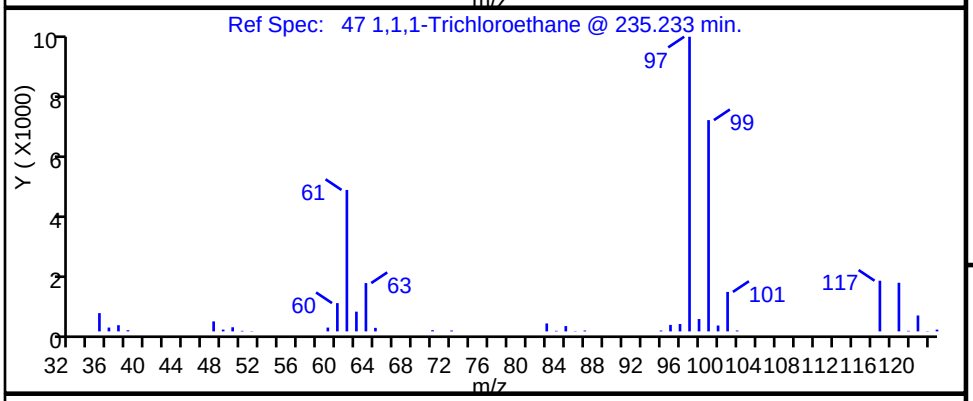
47 1,1,1-Trichloroethane, CAS: 71-55-6

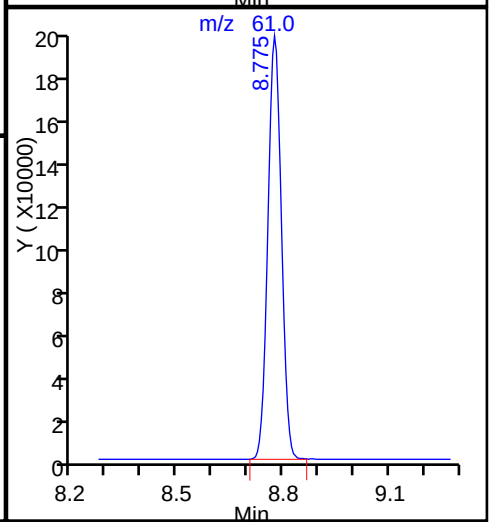


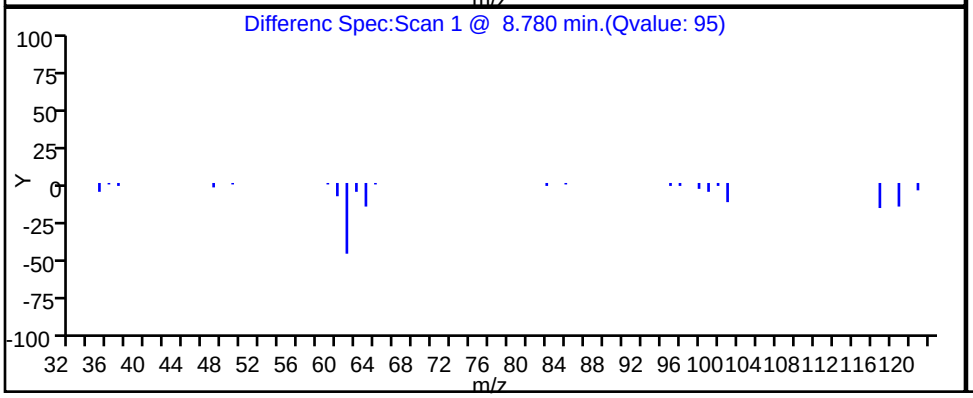








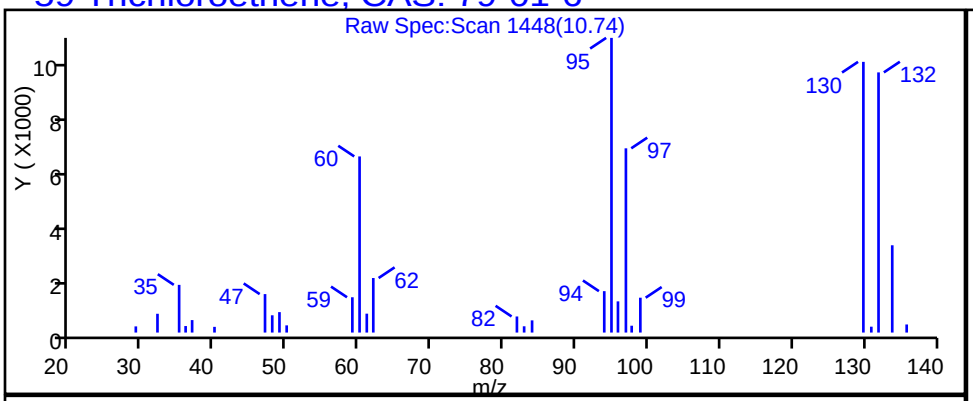


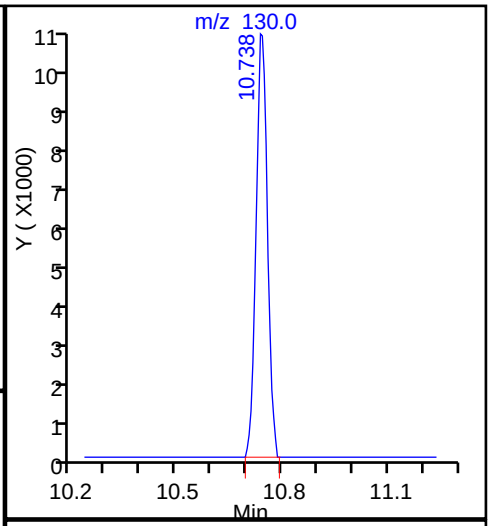


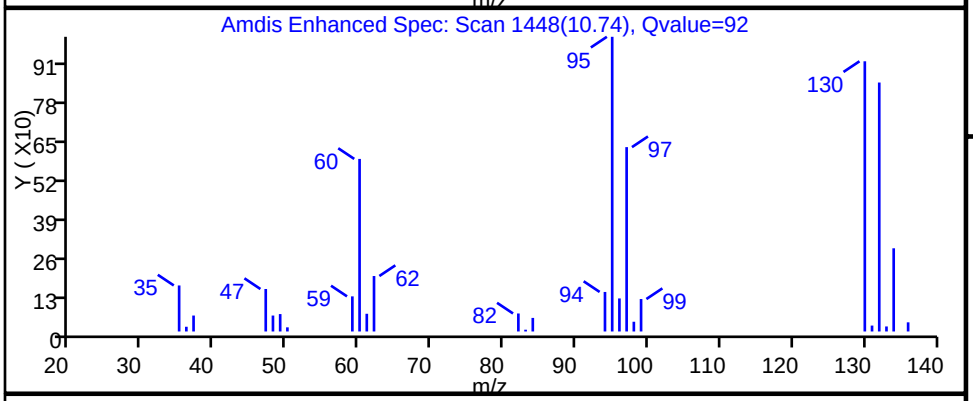
TestAmerica Knoxville

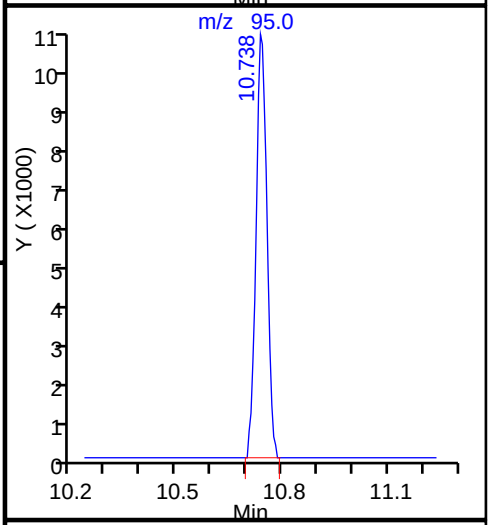
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P112.D				
Injection Date:	20-May-2016 02:00:30	Instrument ID:	ME		
Lims ID:	140-4944-A-2	Lab Sample ID:	140-4944-2		
Client ID:	A-MID-GAC				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

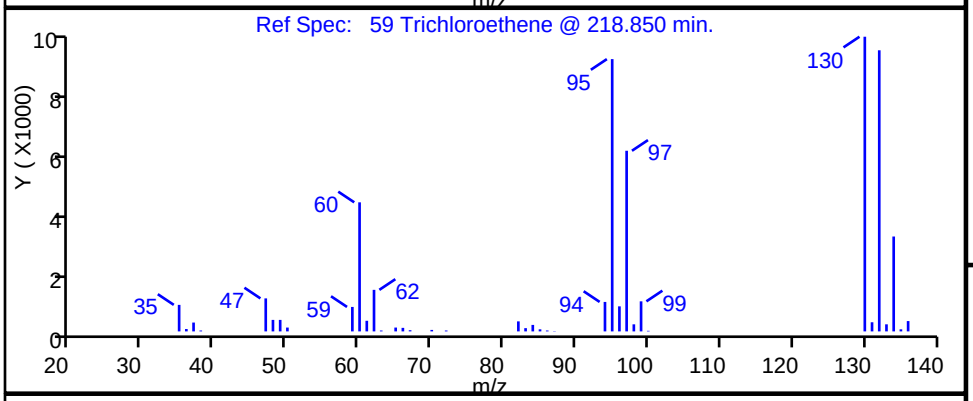
59 Trichloroethene, CAS: 79-01-6

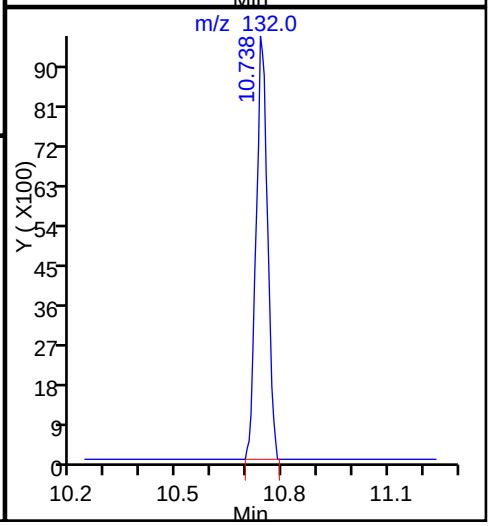


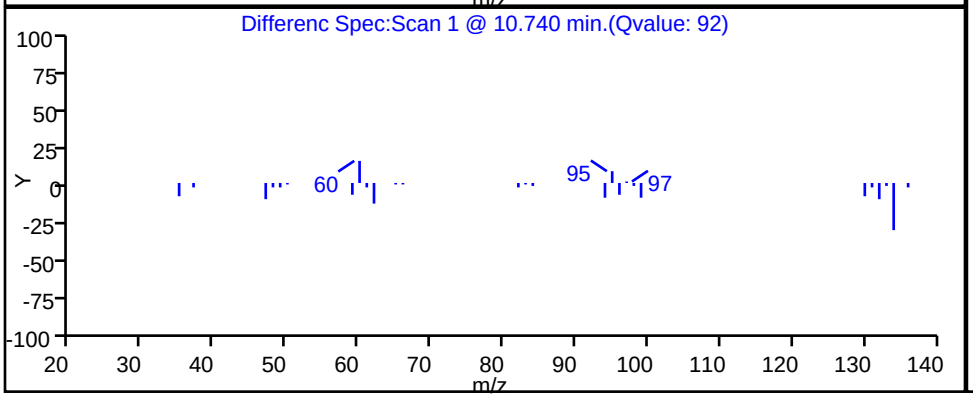












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-4944-3

Matrix: Air Lab File ID: EE19P113.D

Analysis Method: TO 15 LL Date Collected: 05/12/2016 14:10

Sample wt/vol: 50(mL) Date Analyzed: 05/20/2016 02:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	0.80	0.23
56-23-5	Carbon tetrachloride	153.81	ND		0.80	0.15
75-45-6	Chlorodifluoromethane	86.47	5.1		0.80	0.15
67-66-3	Chloroform	119.38	1.5		0.80	0.15
156-59-2	cis-1,2-Dichloroethene	96.94	36		0.80	0.24
75-71-8	Dichlorodifluoromethane	120.91	0.74	J	0.80	0.27
75-34-3	1,1-Dichloroethane	98.96	11		0.80	0.10
107-06-2	1,2-Dichloroethane	98.96	ND		0.80	0.19
75-35-4	1,1-Dichloroethene	96.94	52		0.80	0.14
100-41-4	Ethylbenzene	106.17	ND		0.80	0.27
75-09-2	Methylene Chloride	84.93	4.8		2.0	1.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		4.0	0.68
91-20-3	Naphthalene	128.17	ND		0.40	0.40
127-18-4	Tetrachloroethene	165.83	ND		0.80	0.16
108-88-3	Toluene	92.14	1.7		1.2	1.2
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.80	0.20
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.80	0.39
71-55-6	1,1,1-Trichloroethane	133.41	140	B	0.80	0.12
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.80	0.21
79-01-6	Trichloroethene	131.39	ND		0.40	0.14
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.80	0.34
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.80	0.25
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.80	0.26
75-01-4	Vinyl chloride	62.50	ND		0.40	0.29
1330-20-7	Xylenes, Total	106.17	ND		1.6	0.24

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-4944-3

Matrix: Air Lab File ID: EE19P113.D

Analysis Method: TO 15 LL Date Collected: 05/12/2016 14:10

Sample wt/vol: 50(mL) Date Analyzed: 05/20/2016 02:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.5	J	2.6	0.73
56-23-5	Carbon tetrachloride	153.81	ND		5.0	0.94
75-45-6	Chlorodifluoromethane	86.47	18		2.8	0.53
67-66-3	Chloroform	119.38	7.5		3.9	0.73
156-59-2	cis-1,2-Dichloroethene	96.94	140		3.2	0.95
75-71-8	Dichlorodifluoromethane	120.91	3.7	J	4.0	1.3
75-34-3	1,1-Dichloroethane	98.96	44		3.2	0.40
107-06-2	1,2-Dichloroethane	98.96	ND		3.2	0.77
75-35-4	1,1-Dichloroethene	96.94	210		3.2	0.56
100-41-4	Ethylbenzene	106.17	ND		3.5	1.2
75-09-2	Methylene Chloride	84.93	17		6.9	4.5
1634-04-4	Methyl tert-butyl ether	88.15	ND		14	2.5
91-20-3	Naphthalene	128.17	ND		2.1	2.1
127-18-4	Tetrachloroethene	165.83	ND		5.4	1.1
108-88-3	Toluene	92.14	6.3		4.5	4.5
156-60-5	trans-1,2-Dichloroethene	96.94	ND		3.2	0.79
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		5.9	2.9
71-55-6	1,1,1-Trichloroethane	133.41	780	B	4.4	0.65
79-00-5	1,1,2-Trichloroethane	133.41	ND		4.4	1.1
79-01-6	Trichloroethene	131.39	ND		2.1	0.75
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.9	1.7
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		3.9	1.2
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		3.9	1.3
75-01-4	Vinyl chloride	62.50	ND		1.0	0.74
1330-20-7	Xylenes, Total	106.17	ND		6.9	1.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	109		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Lims ID:	140-4944-A-3				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	20-May-2016 02:46:30	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-4944-a-3				
Misc. Info.:	E051916,TO155,,140-0002879-021				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-May-2016 08:25:46	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: tajh		Date:	20-May-2016 08:38:11		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.761	7.755	0.006	79	268482	4.00	
* 2 1,4-Difluorobenzene	114	9.983	9.982	0.001	95	1239694	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	90	1282694	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	88	1045095	4.35	
6 Chlorodifluoromethane	67	3.053	3.037	0.016	95	17440	0.5100	
8 Dichlorodifluoromethane	85	3.102	3.091	0.011	99	22598	0.0743	
27 1,1-Dichloroethene	96	4.978	4.967	0.011	99	406312	5.18	
31 Methylene Chloride	84	5.307	5.296	0.011	90	39316	0.4794	
37 1,1-Dichloroethane	63	6.477	6.467	0.010	99	188543	1.09	
42 cis-1,2-Dichloroethene	96	7.437	7.426	0.011	96	327727	3.65	
44 Chloroform	83	7.772	7.766	0.006	93	32443	0.1530	
47 1,1,1-Trichloroethane	97	8.780	8.774	0.006	95	3306156	14.3	
51 Benzene	78	9.384	9.378	0.006	96	11758	0.0467	
68 Toluene	91	12.905	12.905	0.000	93	53148	0.1680	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

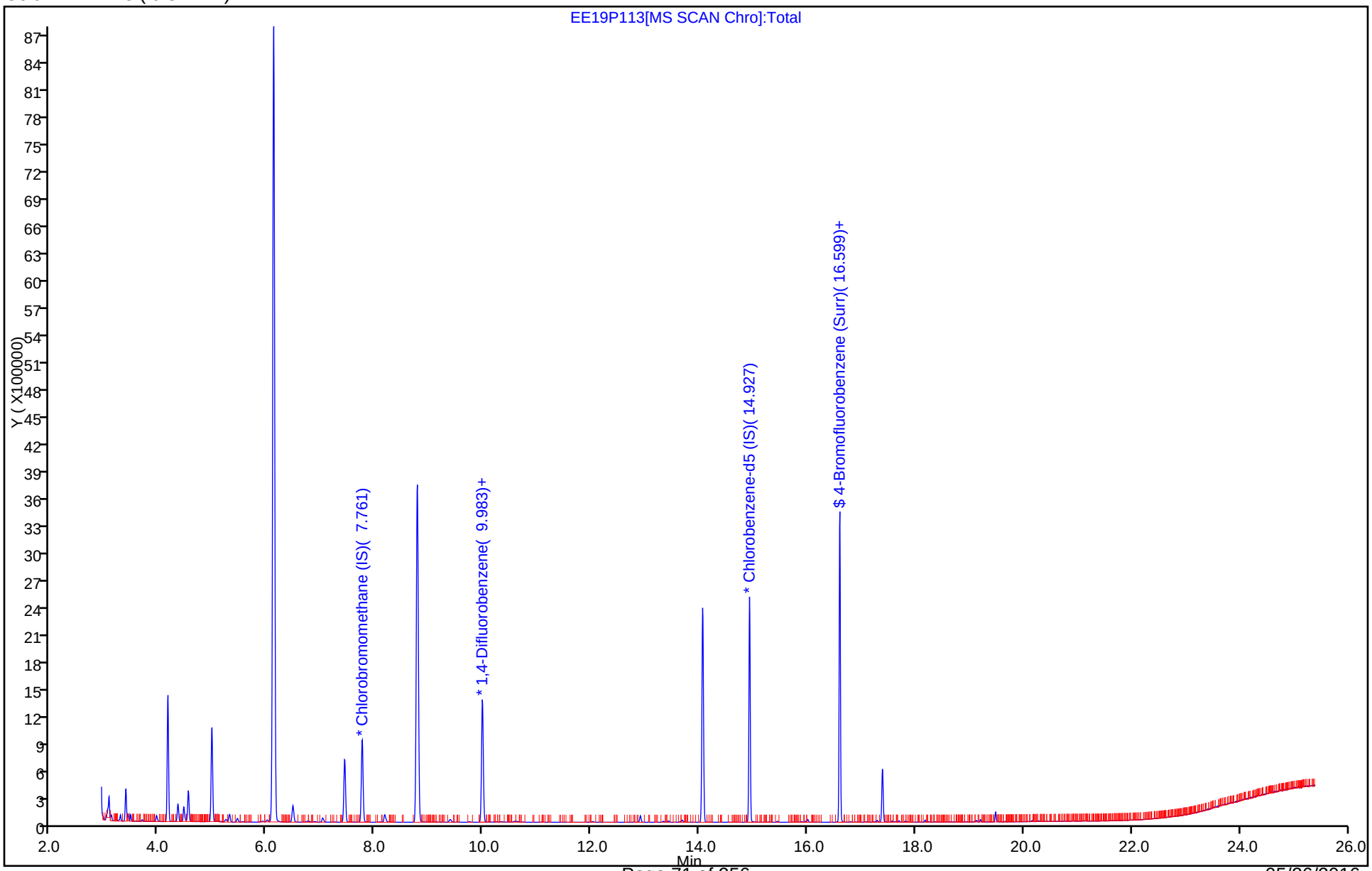
Report Date: 20-May-2016 10:34:15 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D

Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3	Worklist Smp#:	21
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

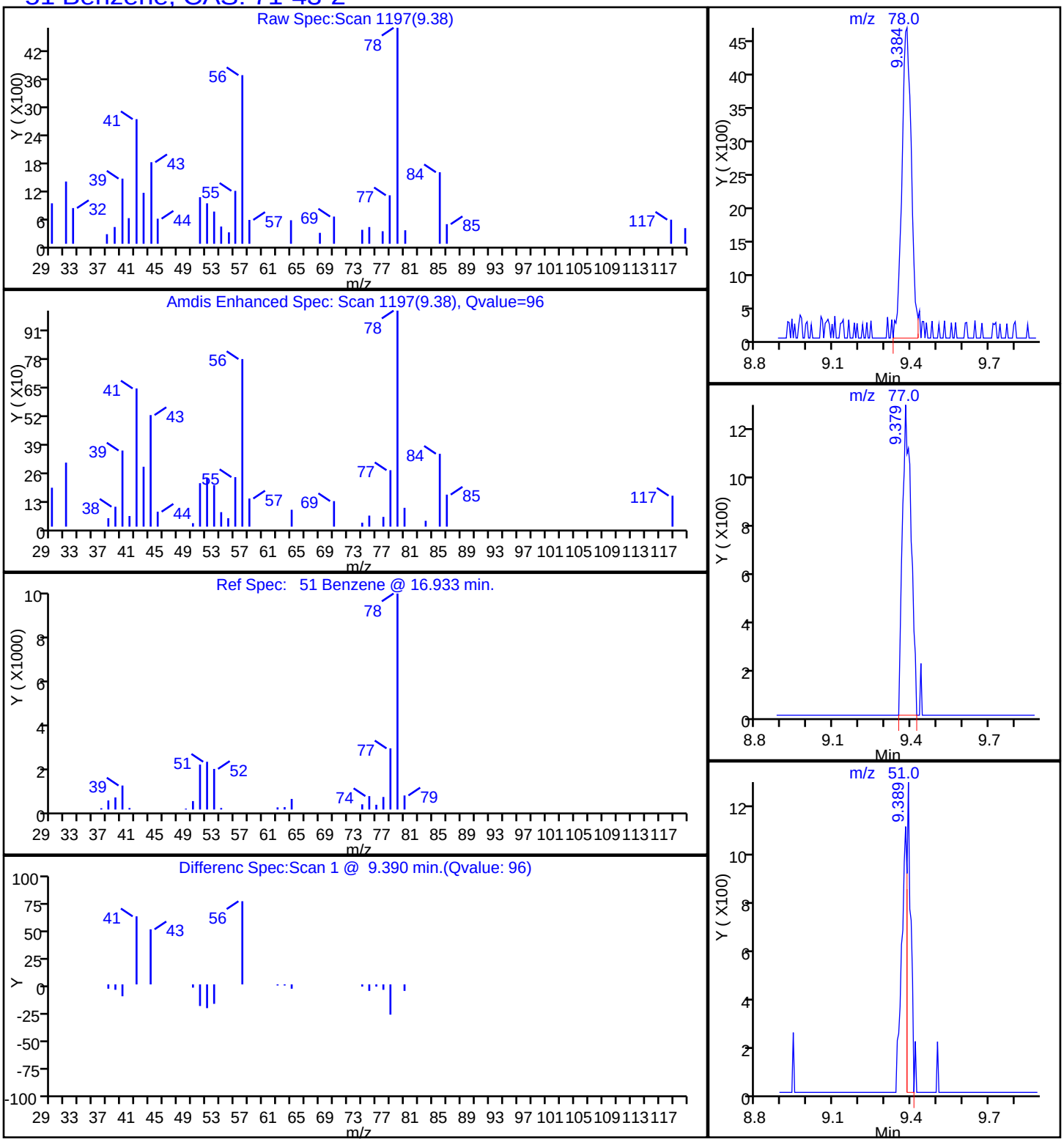
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

51 Benzene, CAS: 71-43-2



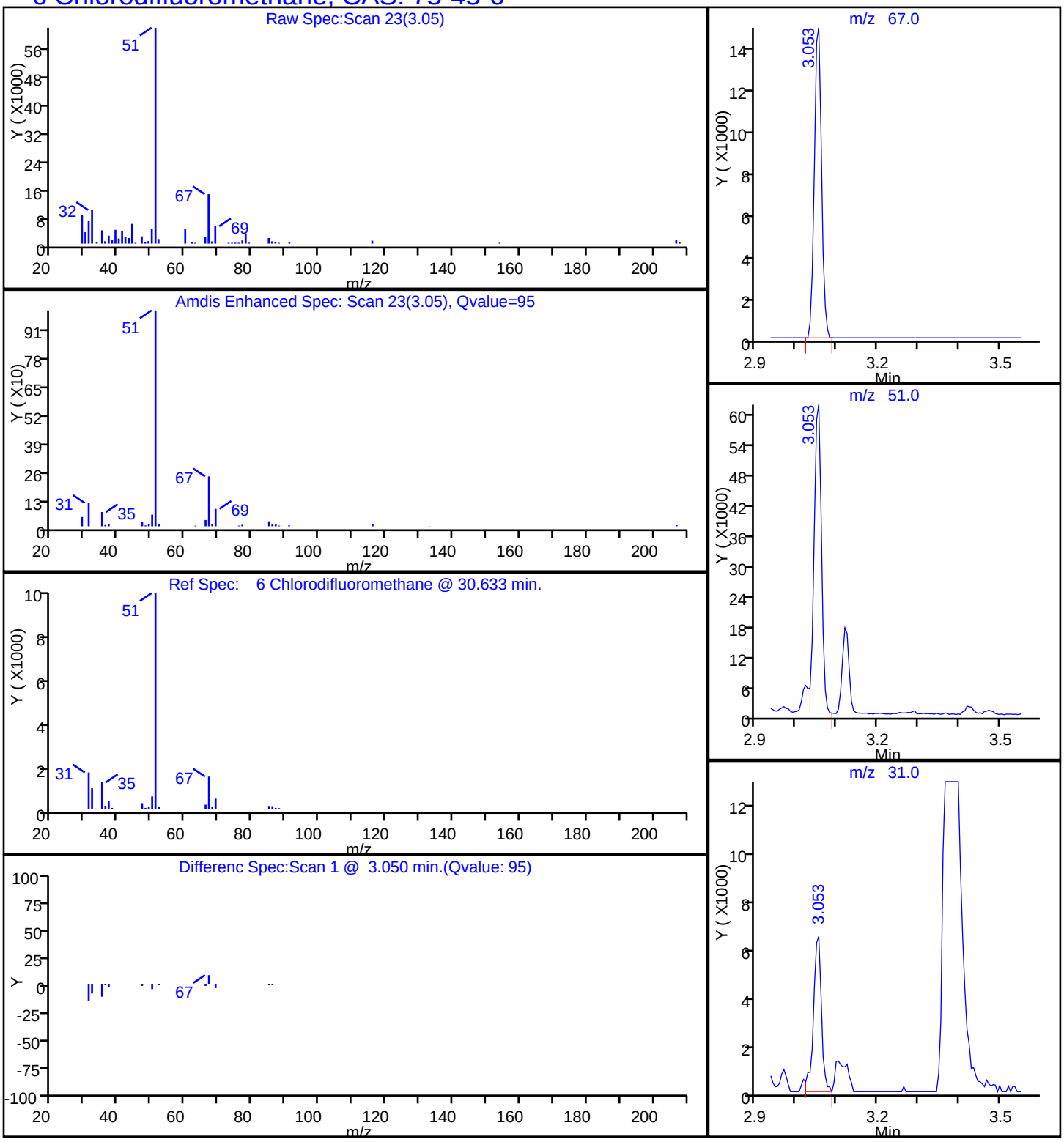
Report Date: 20-May-2016 10:34:15 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D

Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

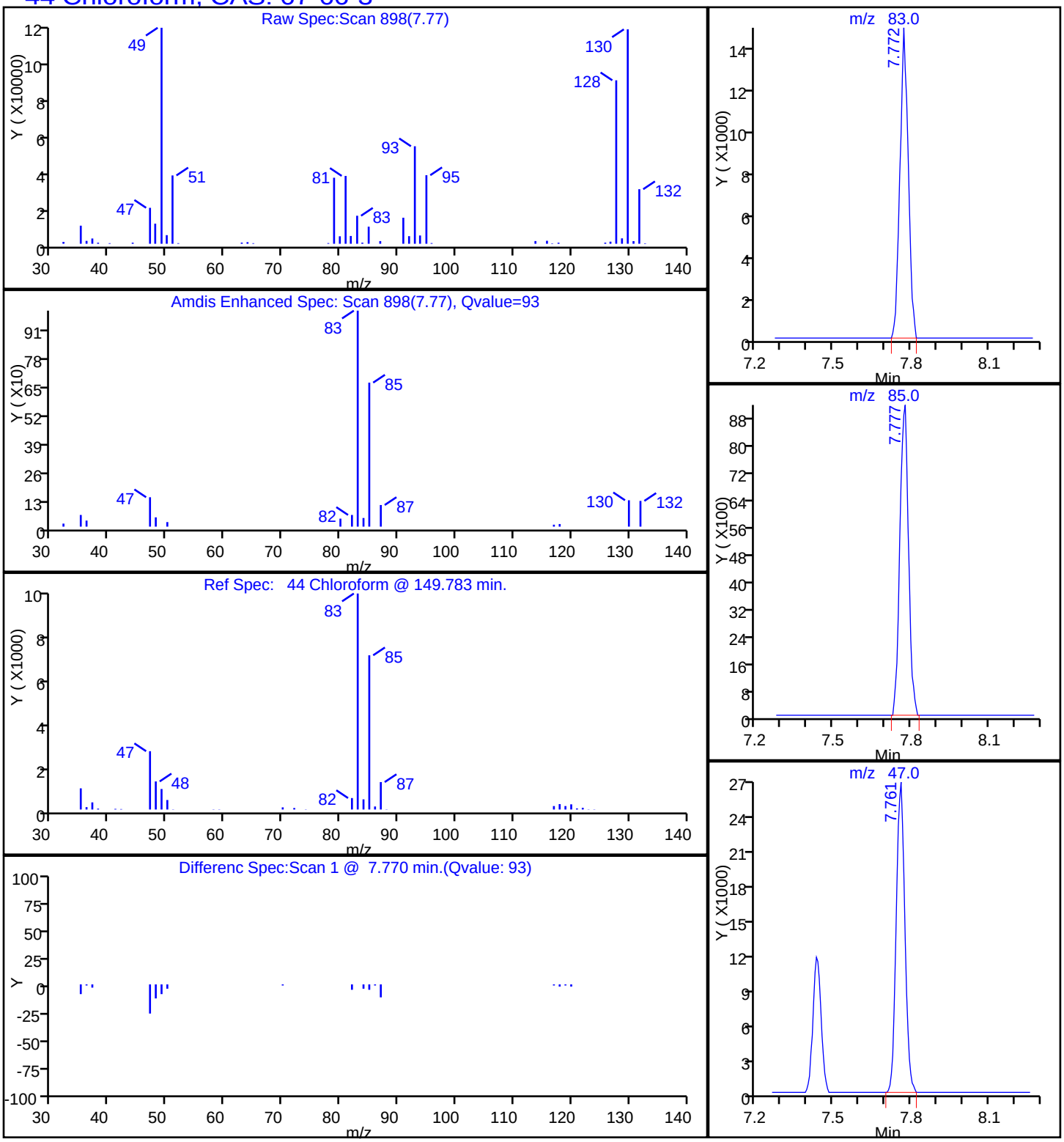
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 Chloroform, CAS: 67-66-3



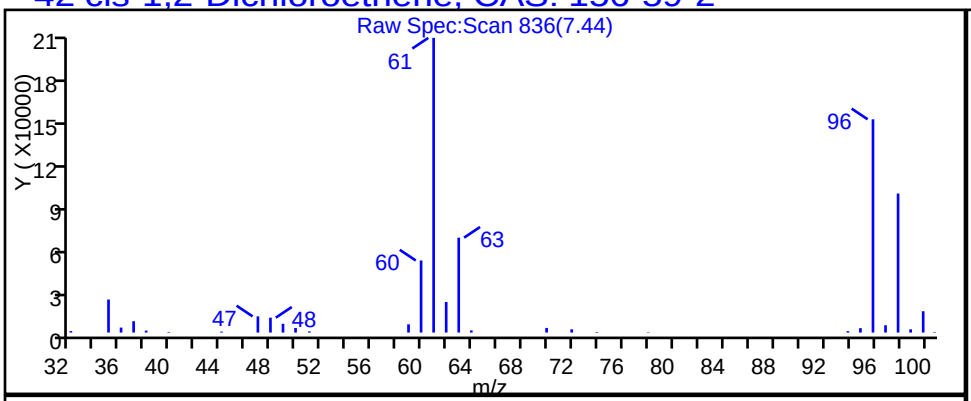
Report Date: 20-May-2016 10:34:16 Chrom Revision: 2.2 16-May-2016 16:09:38

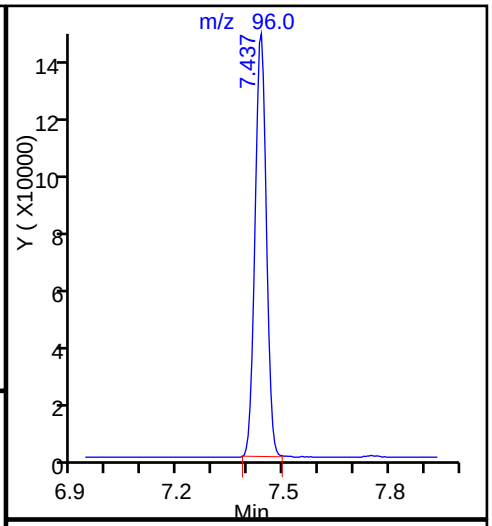
TestAmerica Knoxville

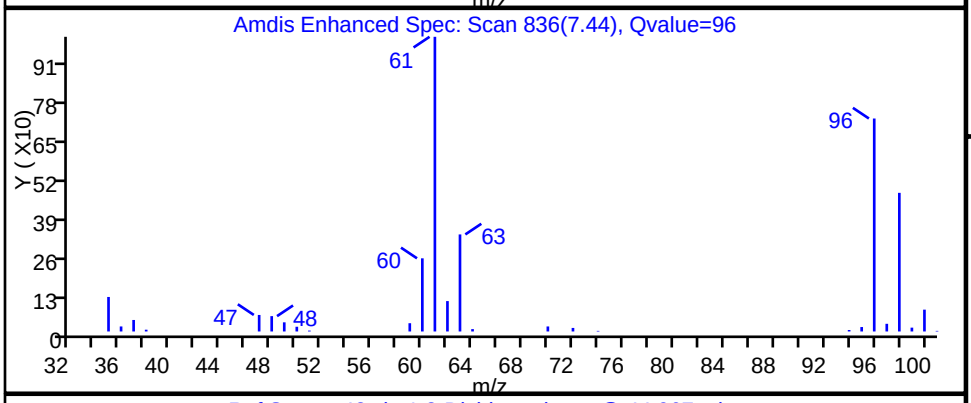
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D

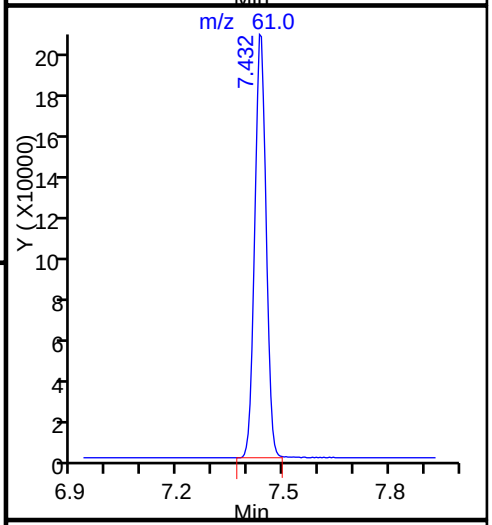
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

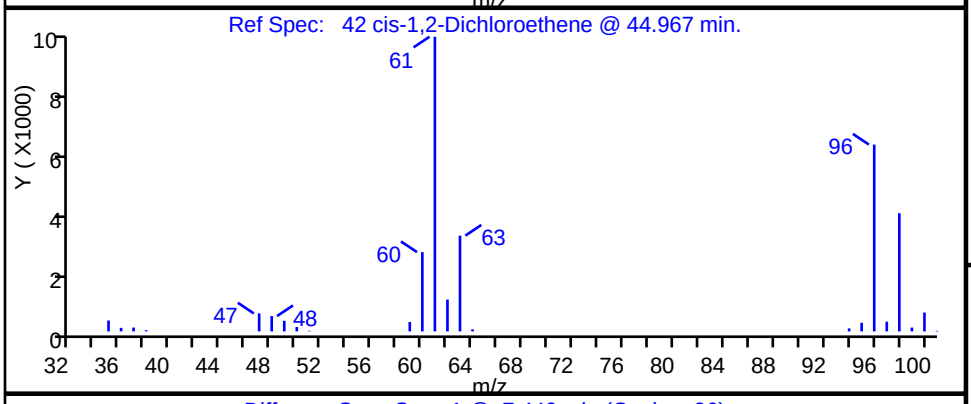
42 cis-1,2-Dichloroethene, CAS: 156-59-2

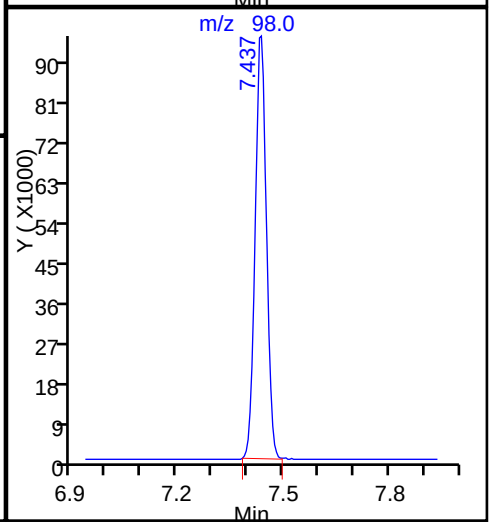


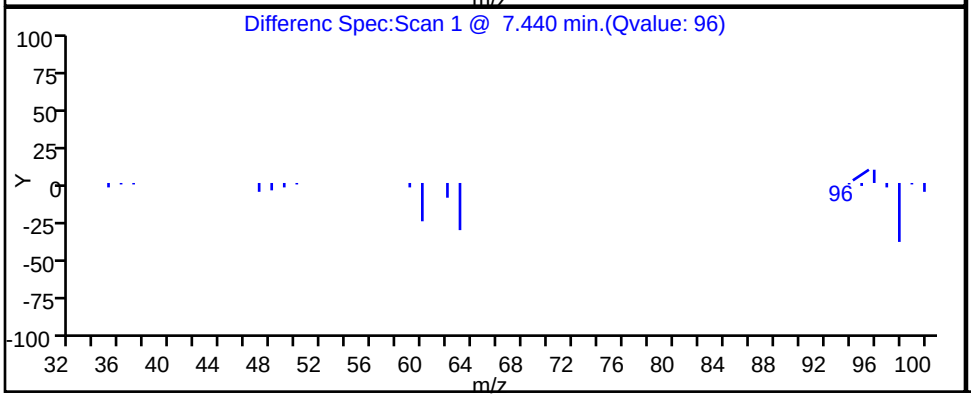








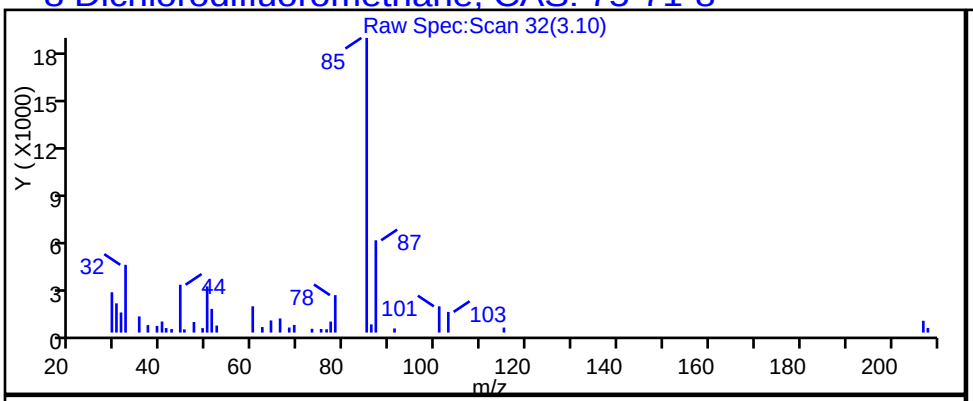


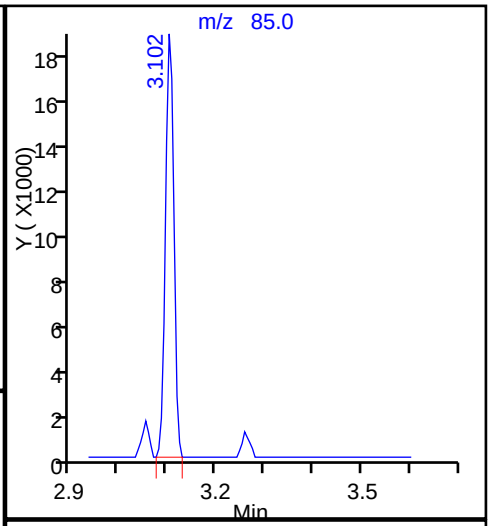


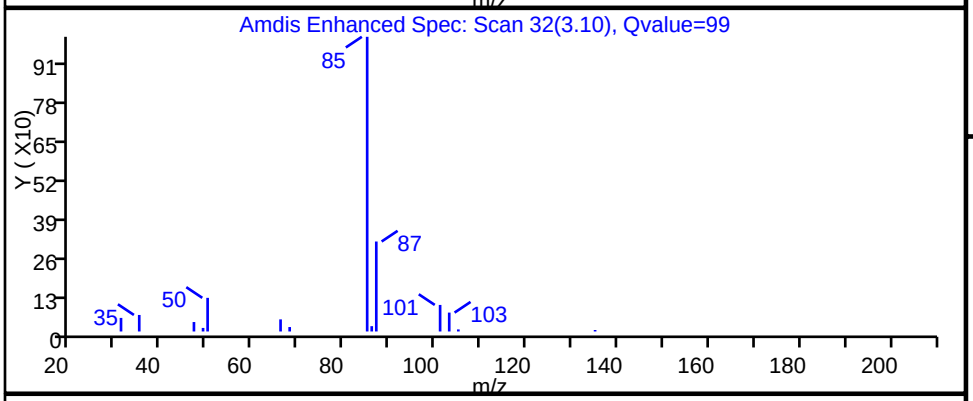
TestAmerica Knoxville

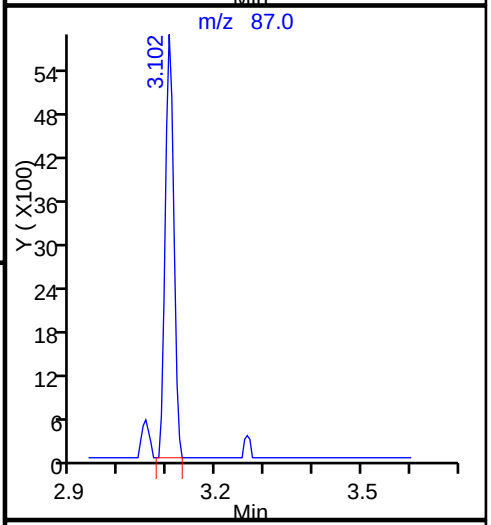
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

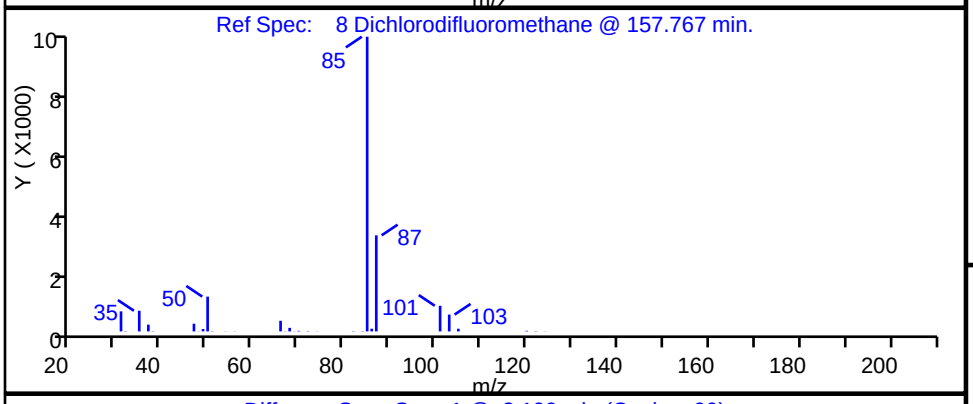
8 Dichlorodifluoromethane, CAS: 75-71-8

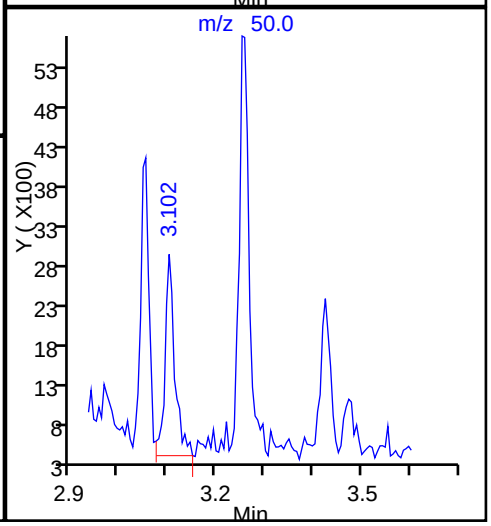


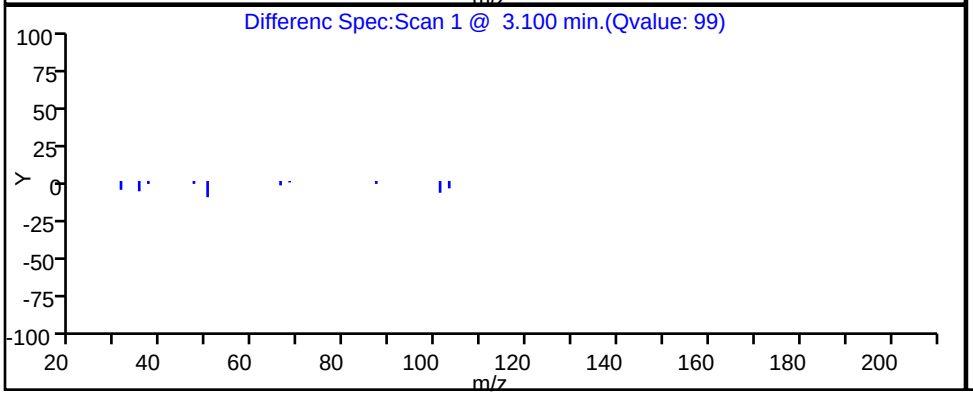








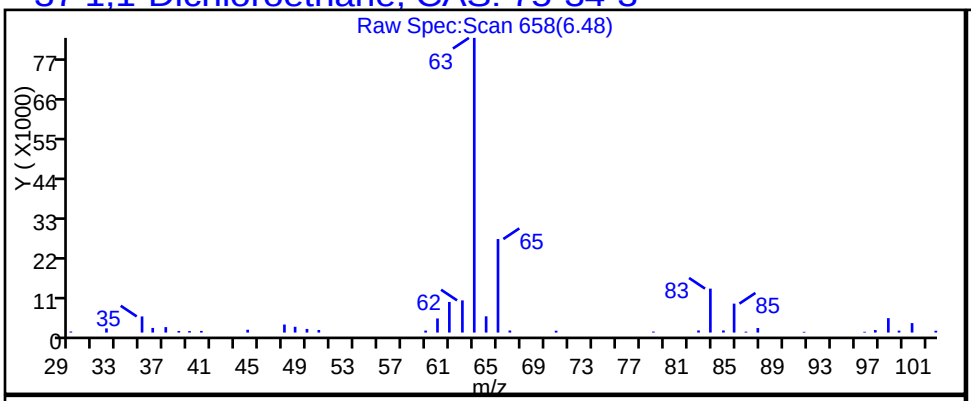


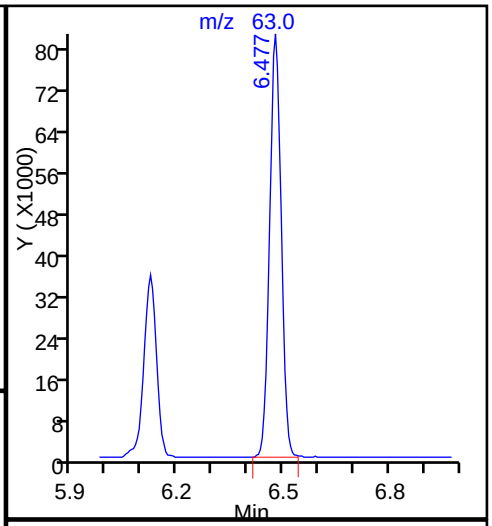


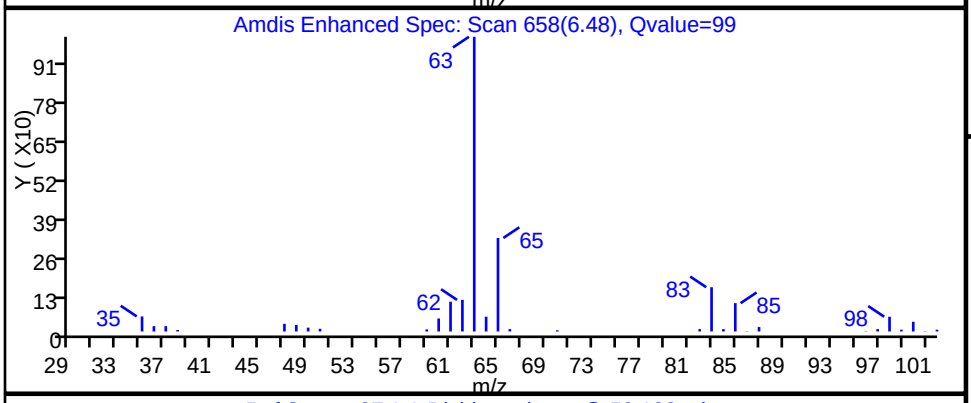
TestAmerica Knoxville

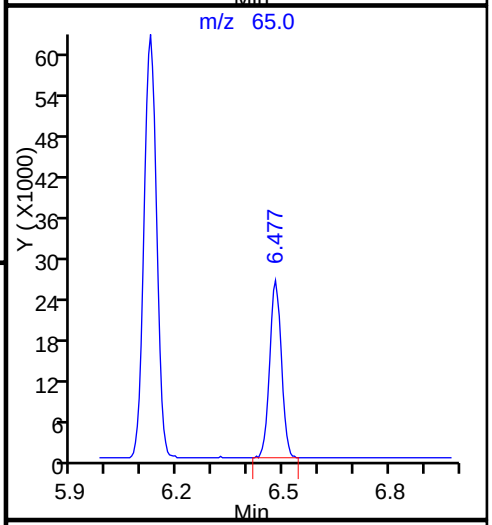
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

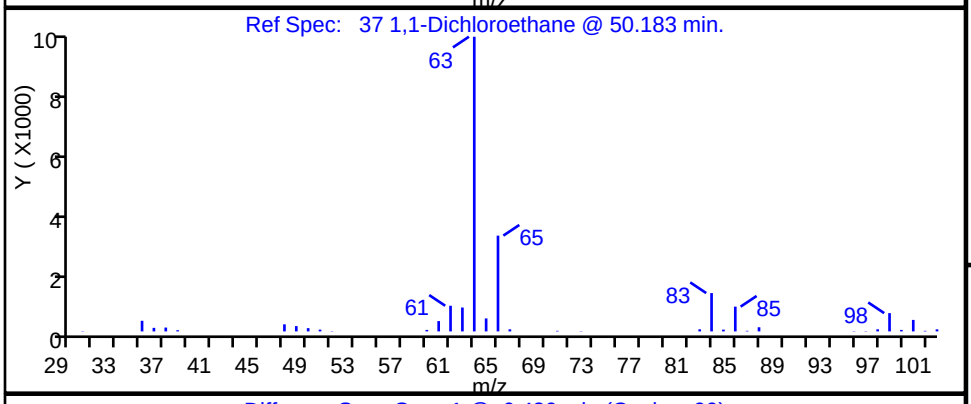
37 1,1-Dichloroethane, CAS: 75-34-3

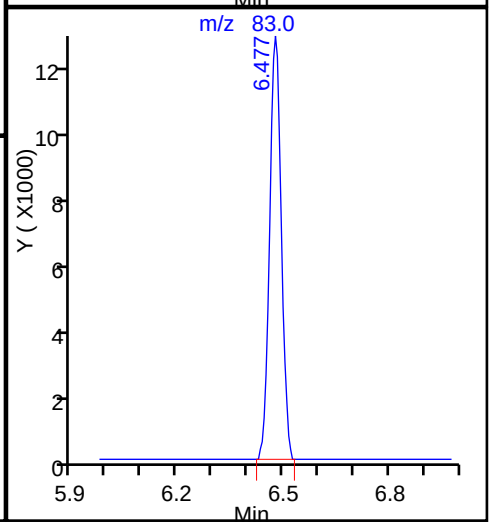


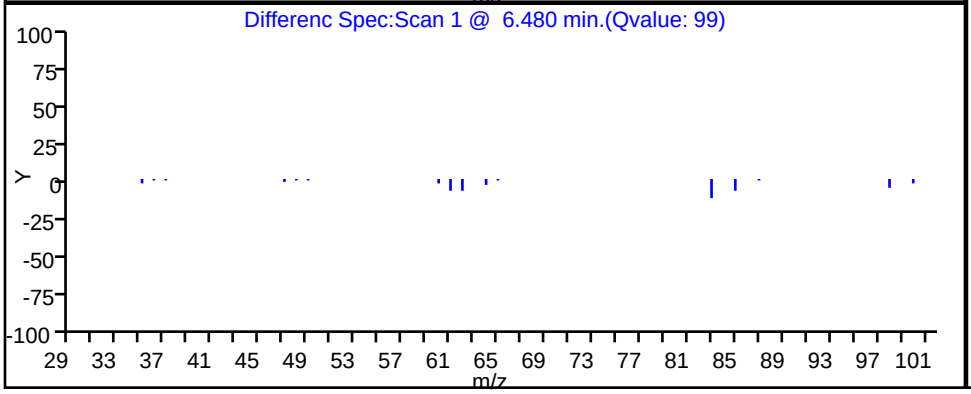












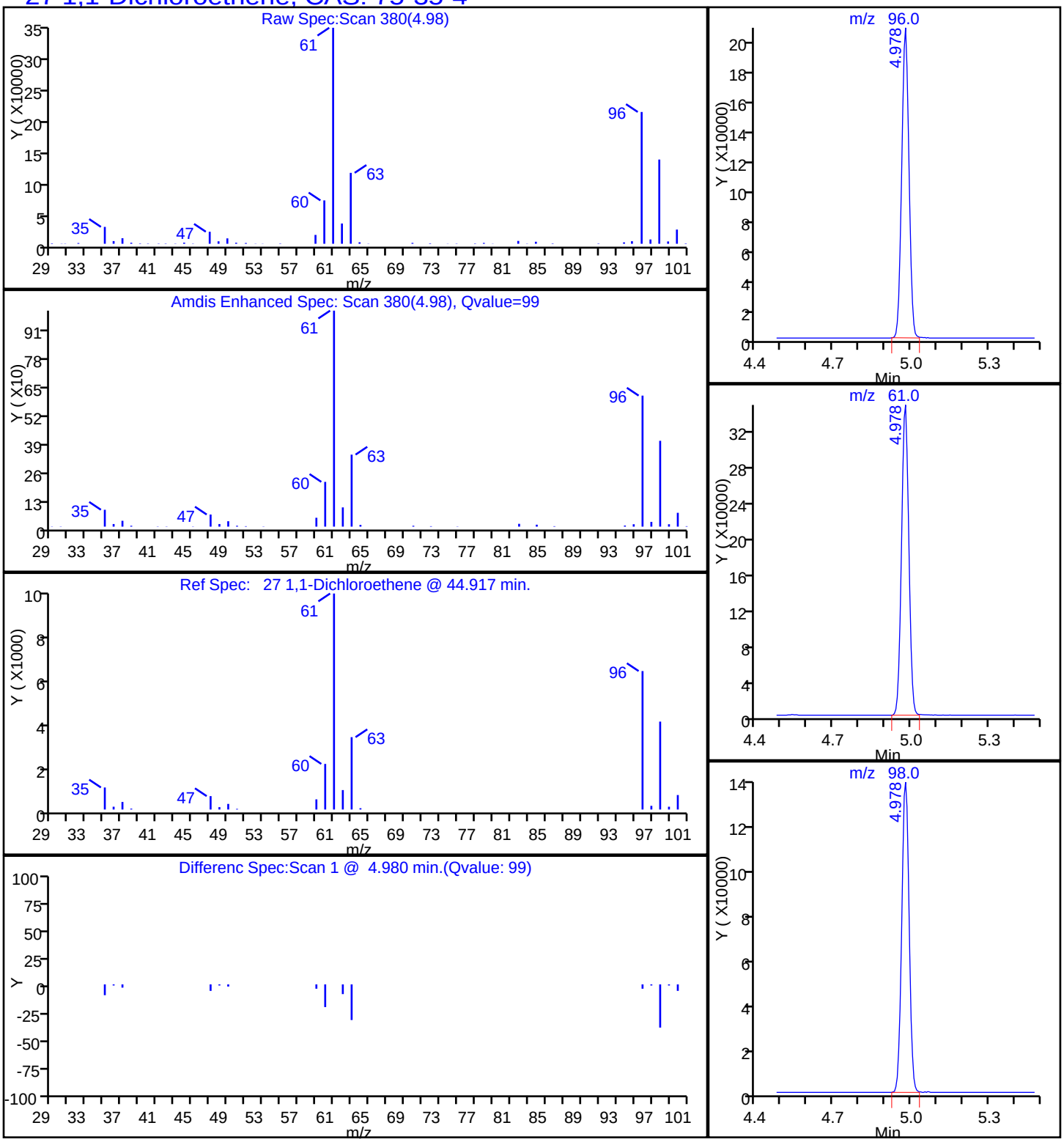
Report Date: 20-May-2016 10:34:16 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D

Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

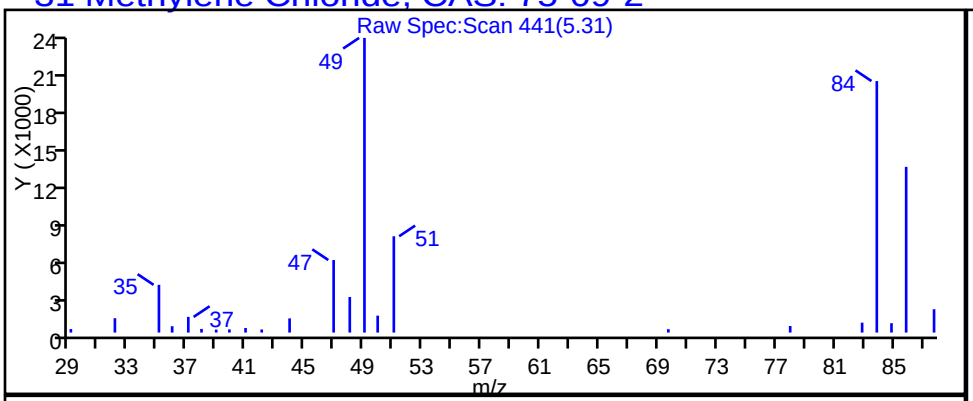
27 1,1-Dichloroethene, CAS: 75-35-4

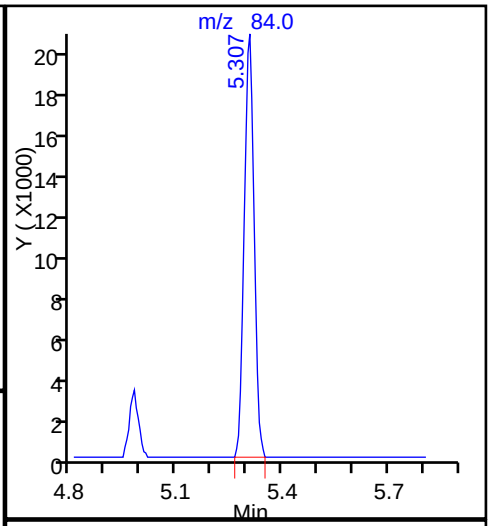


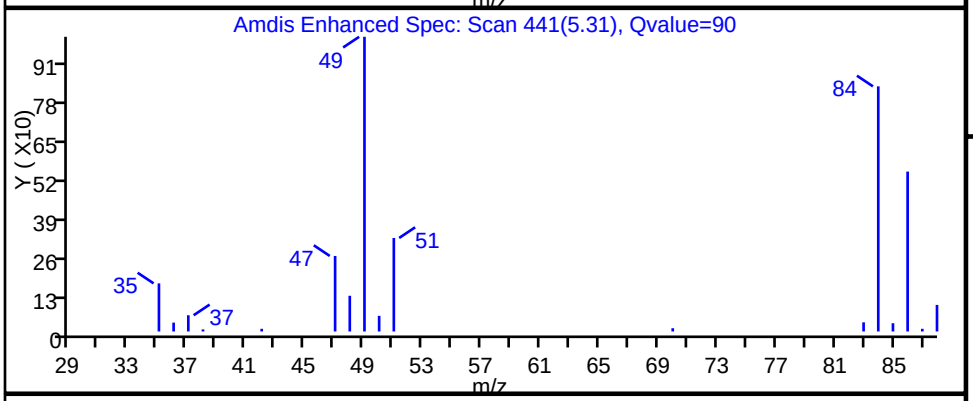
TestAmerica Knoxville

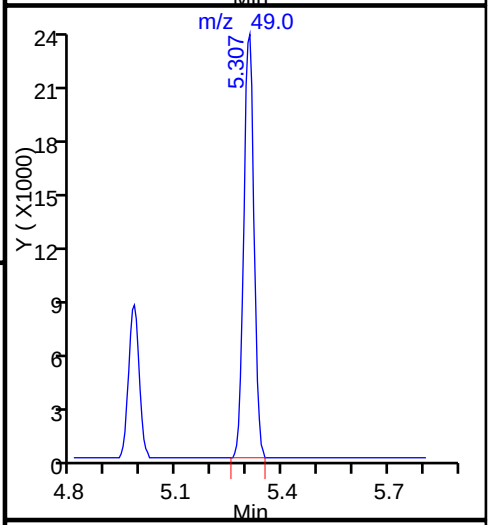
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

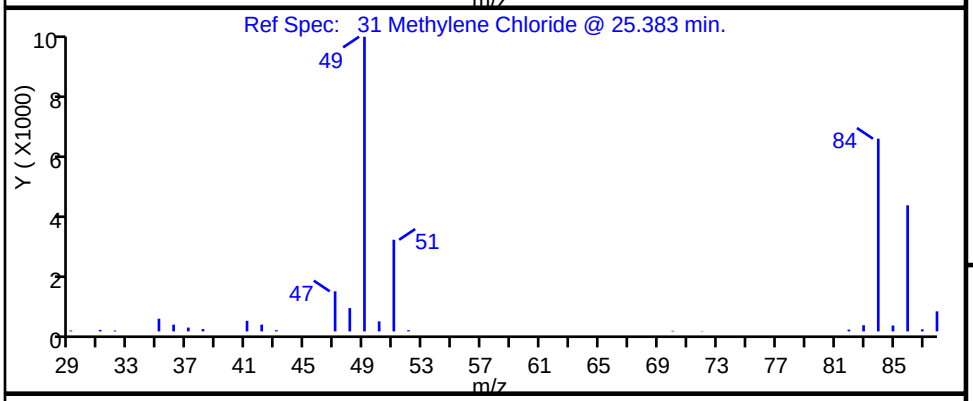
31 Methylene Chloride, CAS: 75-09-2

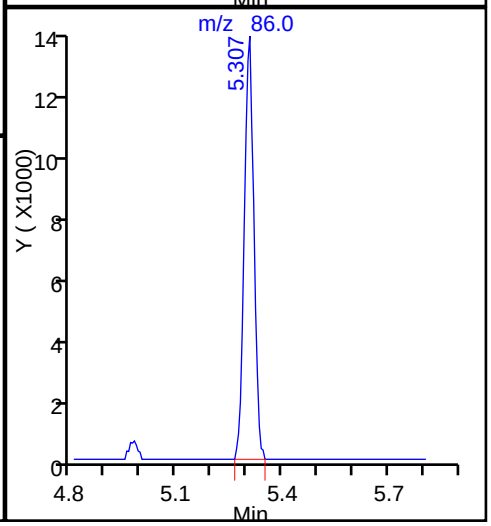


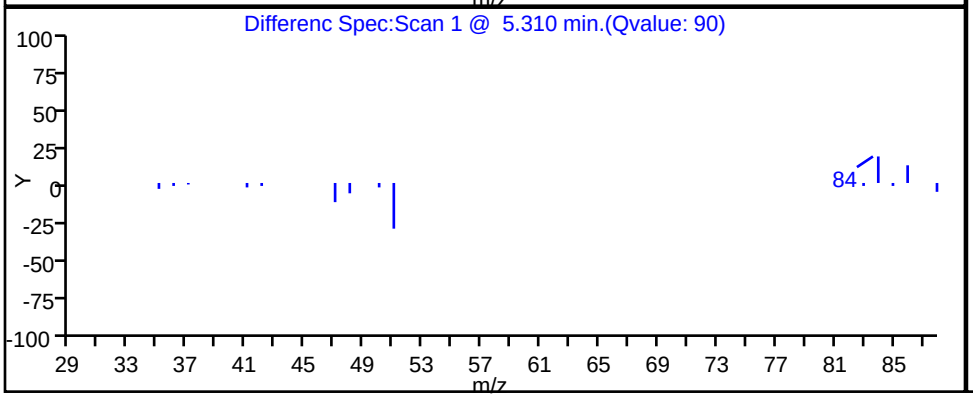








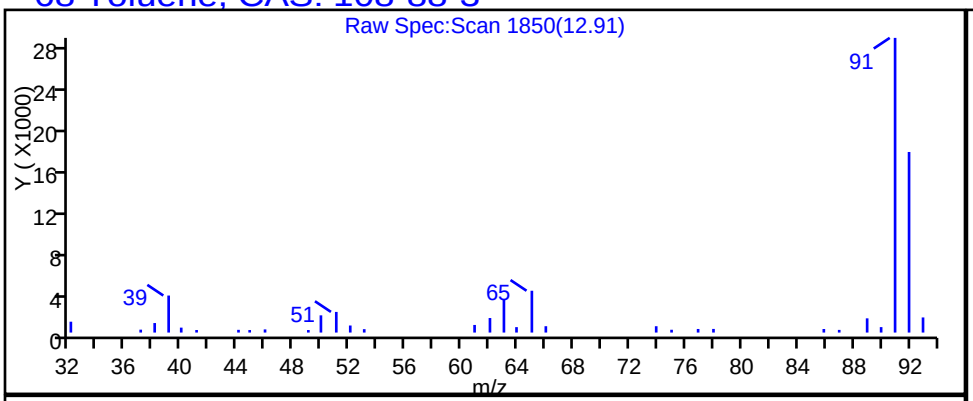


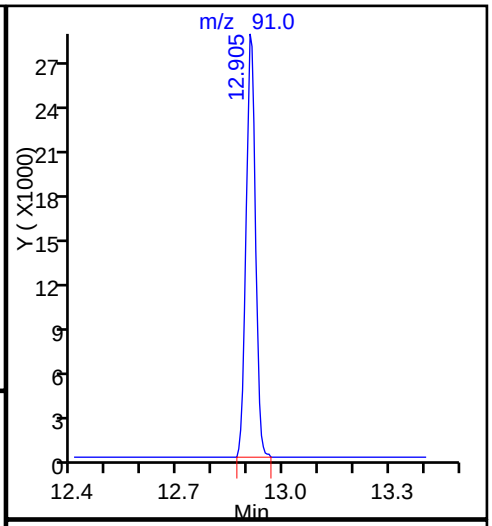


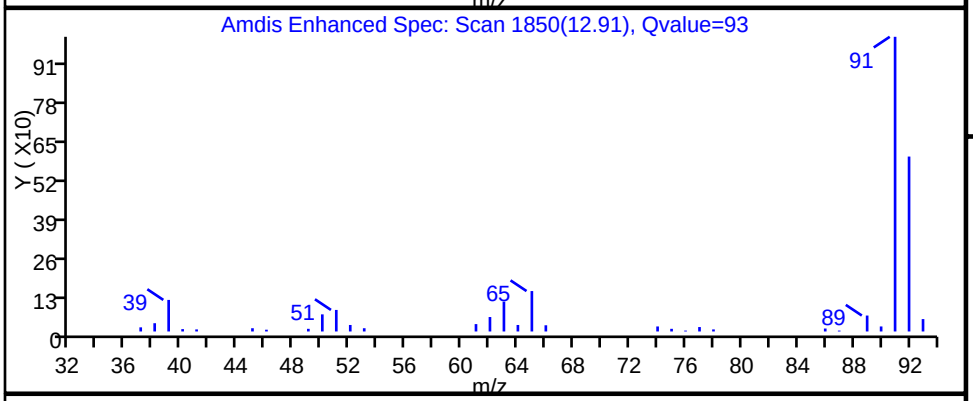
TestAmerica Knoxville

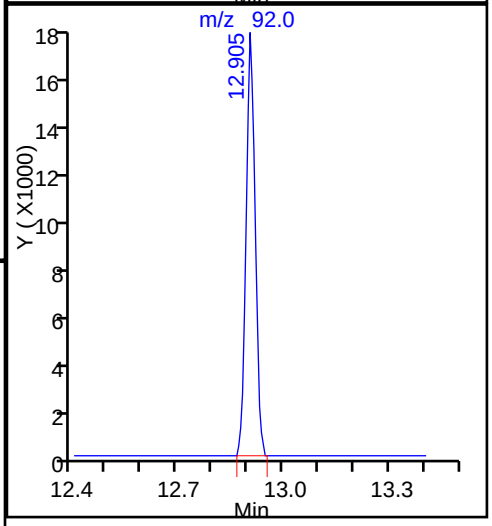
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D				
Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

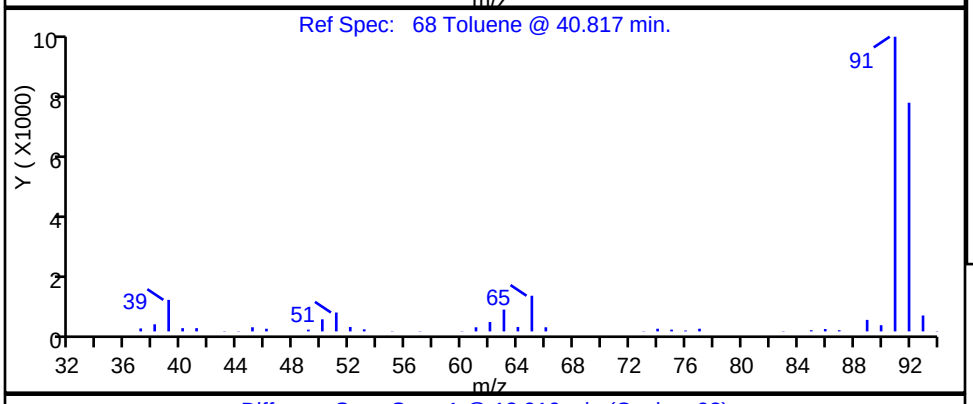
68 Toluene, CAS: 108-88-3

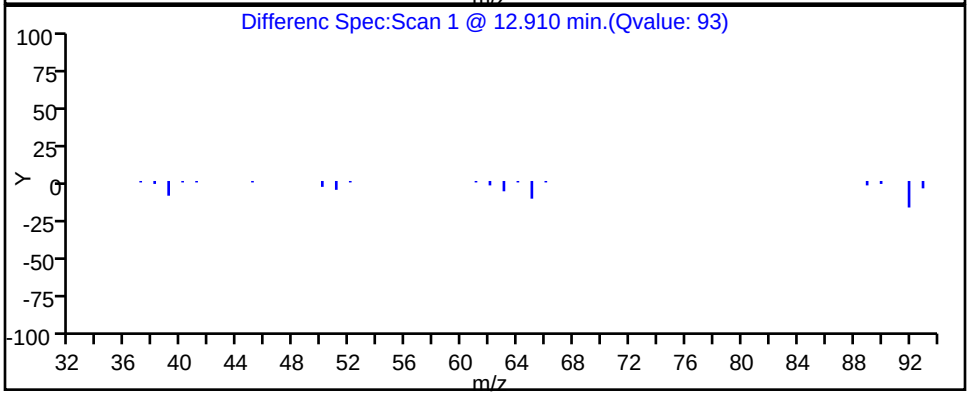












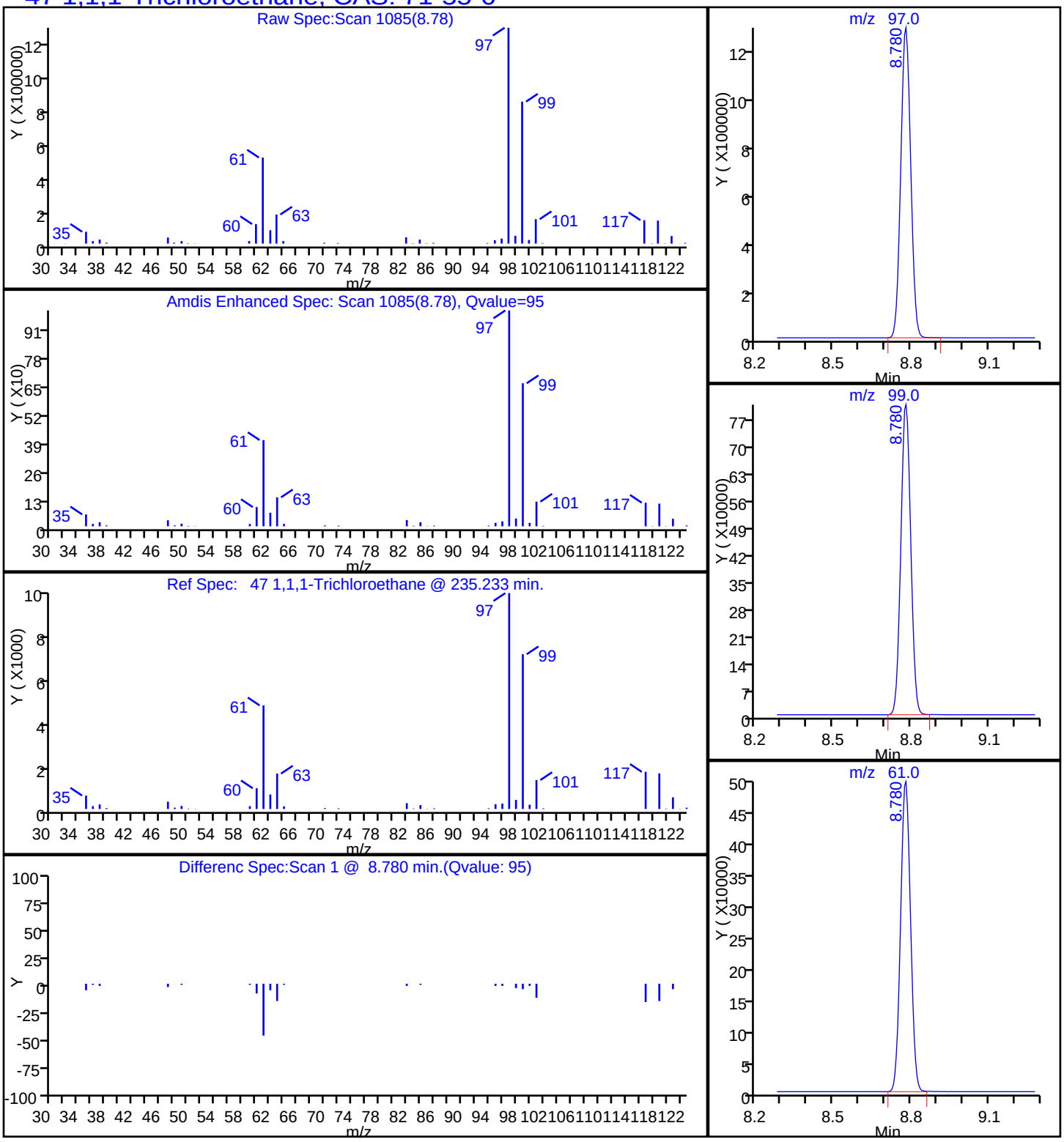
Report Date: 20-May-2016 10:34:16 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P113.D

Injection Date:	20-May-2016 02:46:30	Instrument ID:	ME		
Lims ID:	140-4944-A-3	Lab Sample ID:	140-4944-3		
Client ID:	A-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	13	Worklist Smp#:	21
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: C-INFLUENT | Lab Sample ID: 140-4944-4

Matrix: Air | Lab File ID: EE19P114.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 13:55

Sample wt/vol: 100(mL) | Date Analyzed: 05/20/2016 03:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.91		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.079	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.21	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.41		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.59		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.11	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.12	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.26	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.79	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.11	J	0.40	0.080
108-88-3	Toluene	92.14	19		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.0	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	5.8		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.32	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.2		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: C-INFLUENT | Lab Sample ID: 140-4944-4

Matrix: Air | Lab File ID: EE19P114.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 13:55

Sample wt/vol: 100(mL) | Date Analyzed: 05/20/2016 03:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.50	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.6		1.4	0.27
67-66-3	Chloroform	119.38	1.0	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.6		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.9		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.44	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.48	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	1.1	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	2.8	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.72	J	2.7	0.54
108-88-3	Toluene	92.14	73		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	5.4	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	31		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	5.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	107		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D
Lims ID: 140-4944-A-4
Client ID: C-INFLUENT
Sample Type: Client
Inject. Date: 20-May-2016 03:33:30 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-4944-a-4
Misc. Info.: E051916,TO155,,140-0002879-022
Operator ID: 007126 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-May-2016 08:25:46 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK033

First Level Reviewer: tajh Date: 20-May-2016 08:38:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.755	7.755	0.000	80	298425	4.00	
* 2 1,4-Difluorobenzene	114	9.977	9.982	-0.005	95	1335558	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	90	1301686	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.594	16.599	-0.005	88	1044995	4.29	
6 Chlorodifluoromethane	67	3.043	3.037	0.005	96	14132	0.3718	
8 Dichlorodifluoromethane	85	3.096	3.091	0.005	99	40025	0.1184	
27 1,1-Dichloroethene	96	4.973	4.967	0.006	95	2105	0.0241	
31 Methylene Chloride	84	5.302	5.296	0.006	91	14494	0.1590	
37 1,1-Dichloroethane	63	6.477	6.467	0.010	98	4149	0.0216	
42 cis-1,2-Dichloroethene	96	7.437	7.426	0.011	97	8284	0.0830	
44 Chloroform	83	7.772	7.766	0.006	89	10128	0.0430	
47 1,1,1-Trichloroethane	97	8.775	8.774	0.001	94	51100	0.1991	
51 Benzene	78	9.379	9.378	0.001	96	49582	0.1829	
52 Carbon tetrachloride	117	9.395	9.400	-0.005	95	4231	0.0158	
59 Trichloroethene	130	10.737	10.743	-0.006	93	165281	1.17	
68 Toluene	91	12.905	12.905	0.000	94	1243884	3.87	
76 Tetrachloroethene	129	14.081	14.081	0.000	87	3091	0.0212	
79 Ethylbenzene	91	15.272	15.278	-0.006	98	21501	0.0516	
81 m-Xylene & p-Xylene	91	15.440	15.445	-0.005	99	54661	0.1699	
85 o-Xylene	91	15.973	15.973	0.000	97	23222	0.0677	
96 1,2,4-Trimethylbenzene	105	17.834	17.834	0.000	97	24056	0.0649	
S 126 Xylenes, Total	100				0		0.2376	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

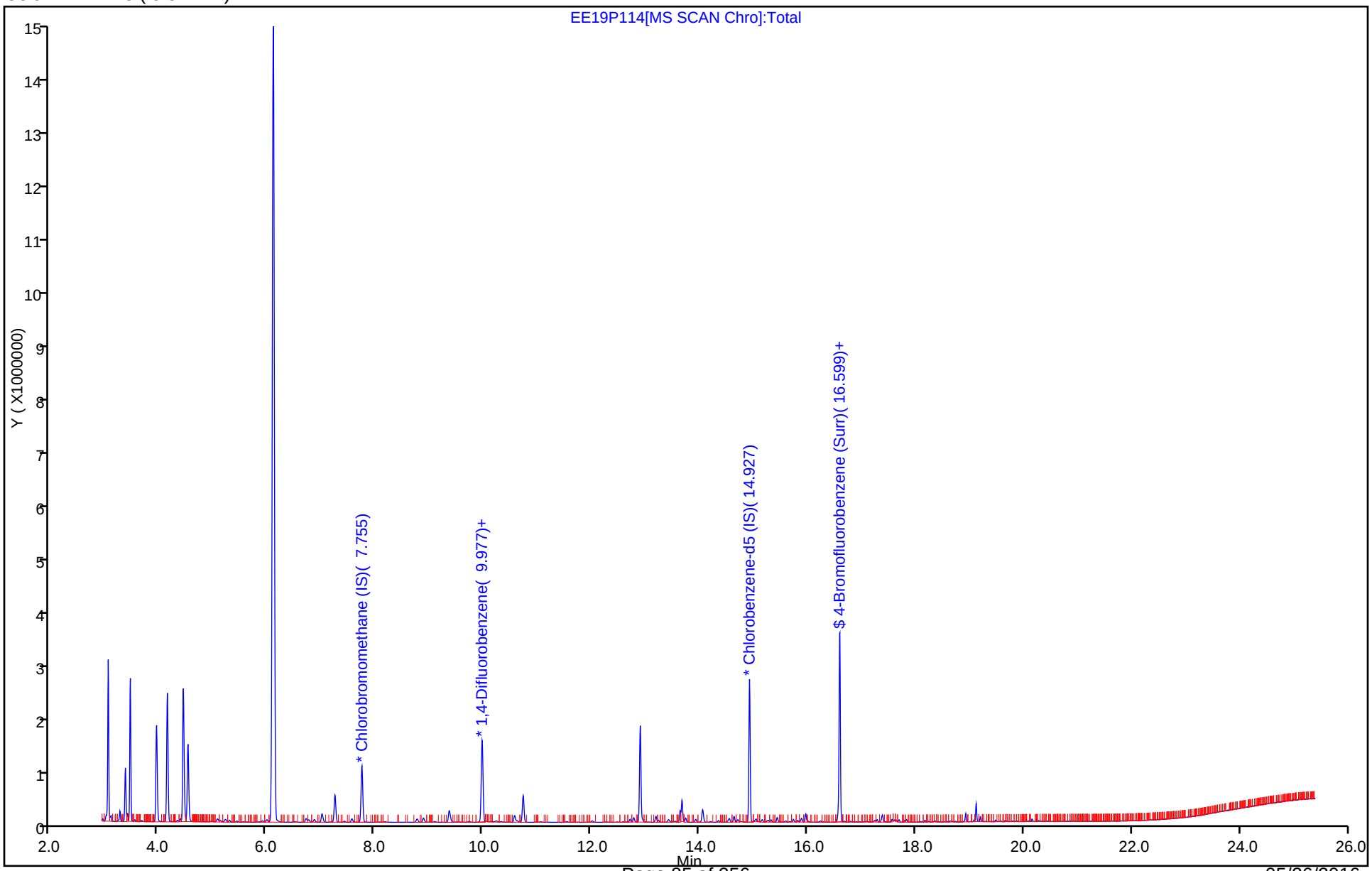
Report Date: 20-May-2016 10:34:20 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D

Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4	Worklist Smp#:	22
Client ID:	C-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

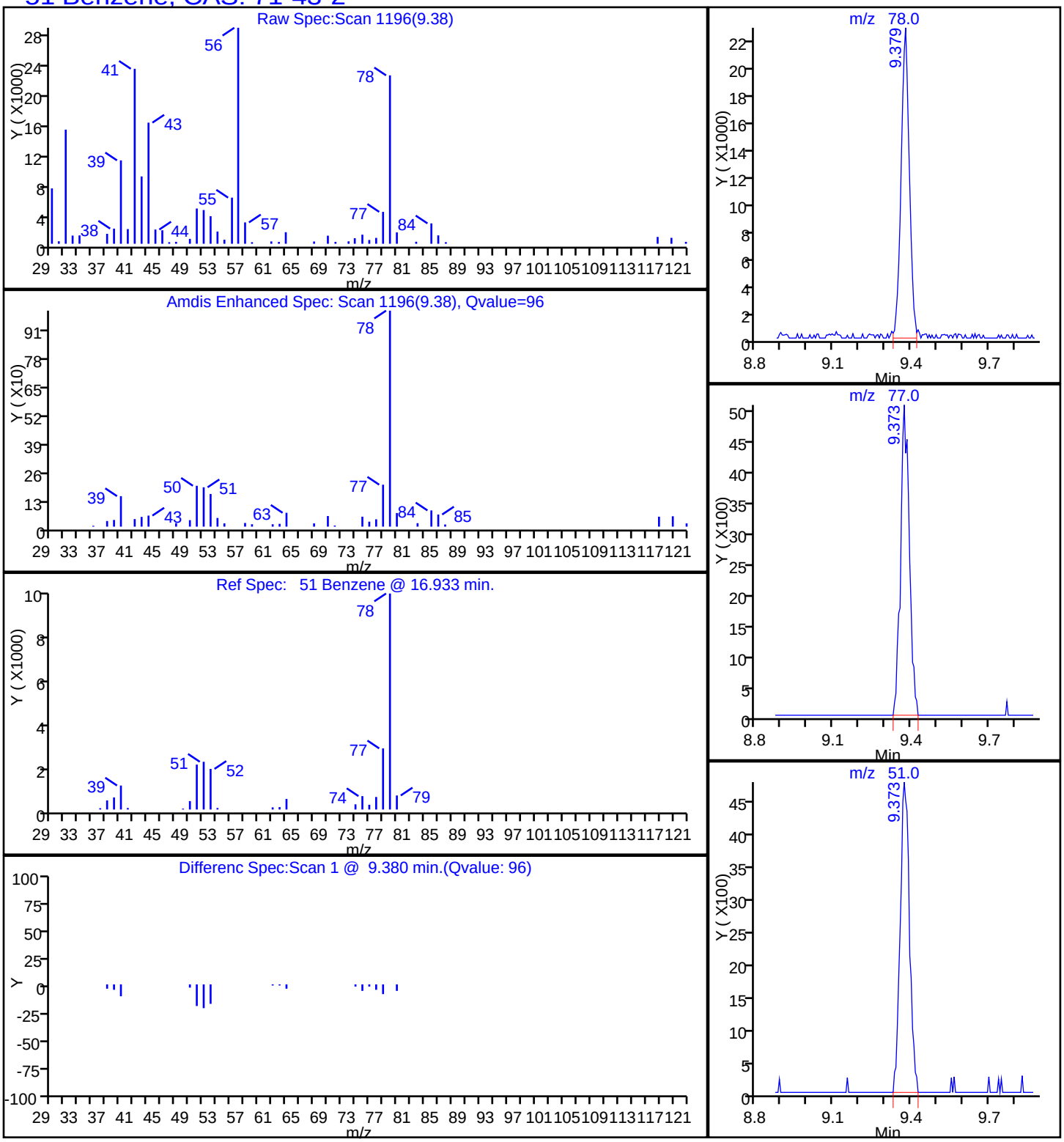
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

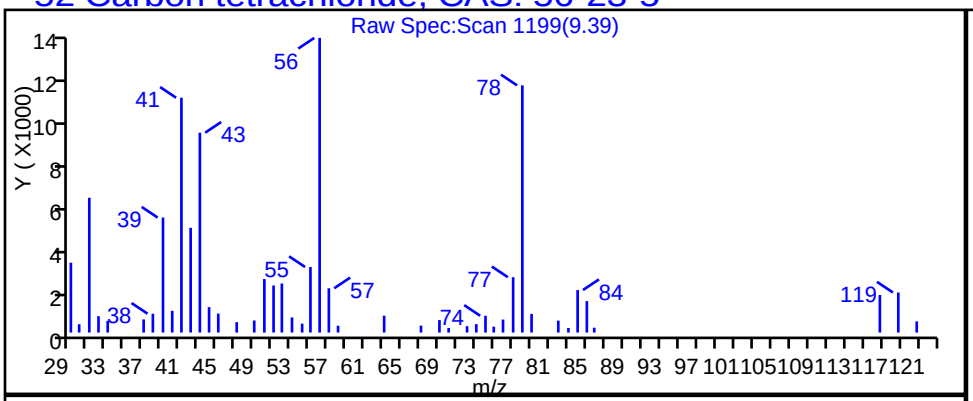
51 Benzene, CAS: 71-43-2

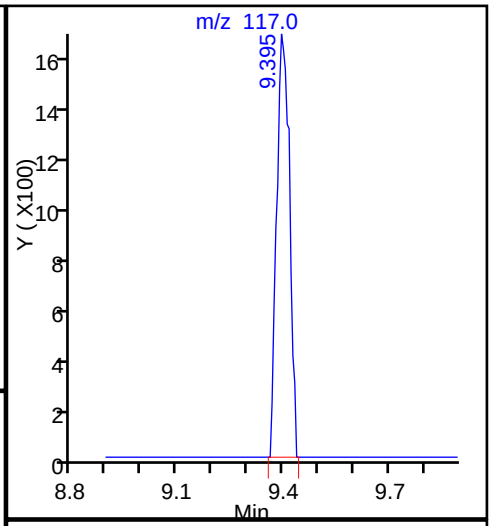


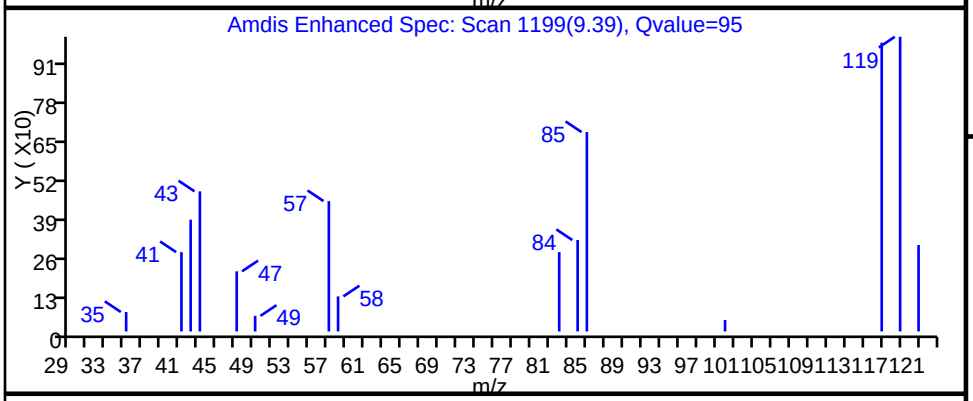
TestAmerica Knoxville

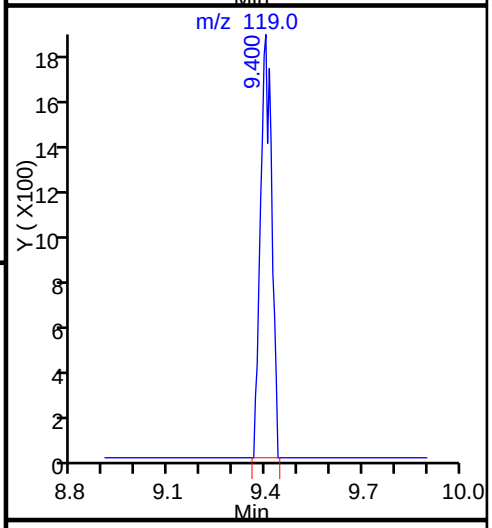
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

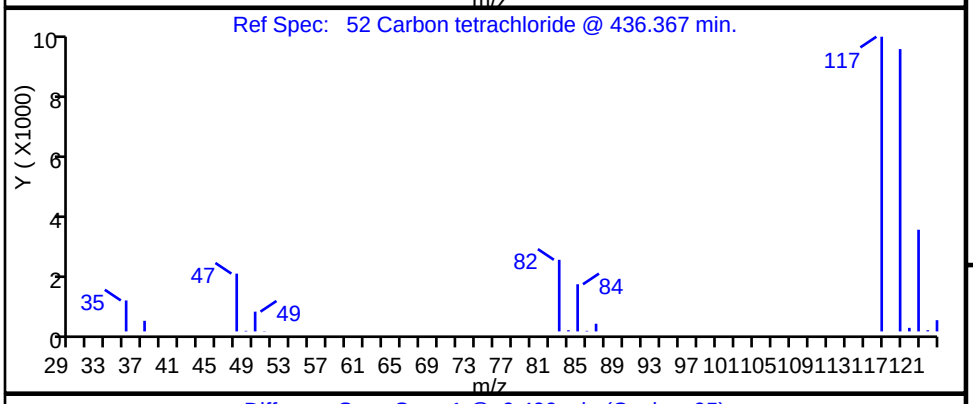
52 Carbon tetrachloride, CAS: 56-23-5

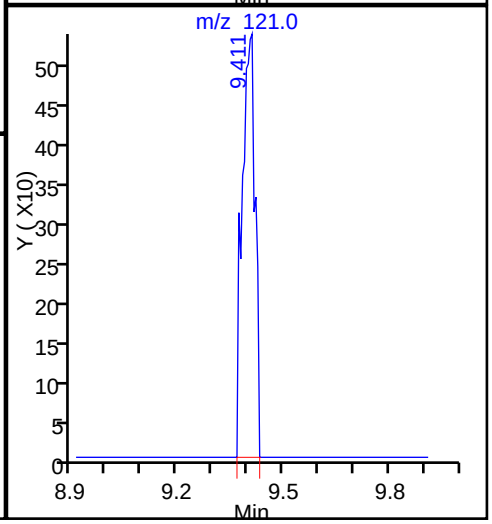


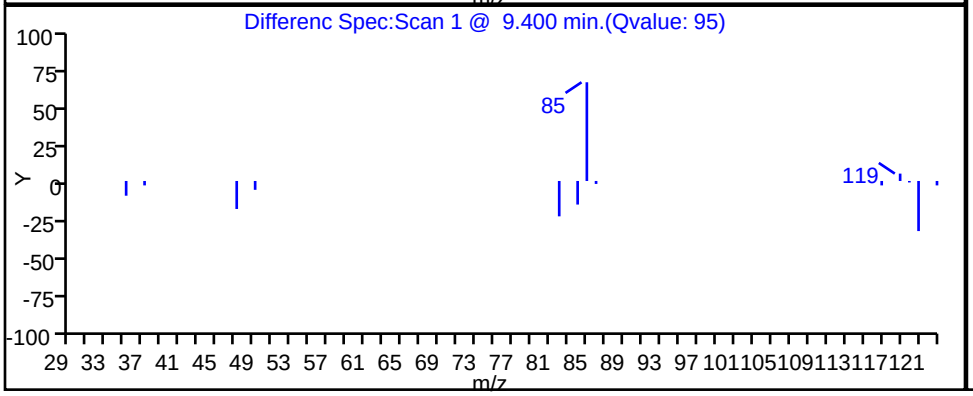








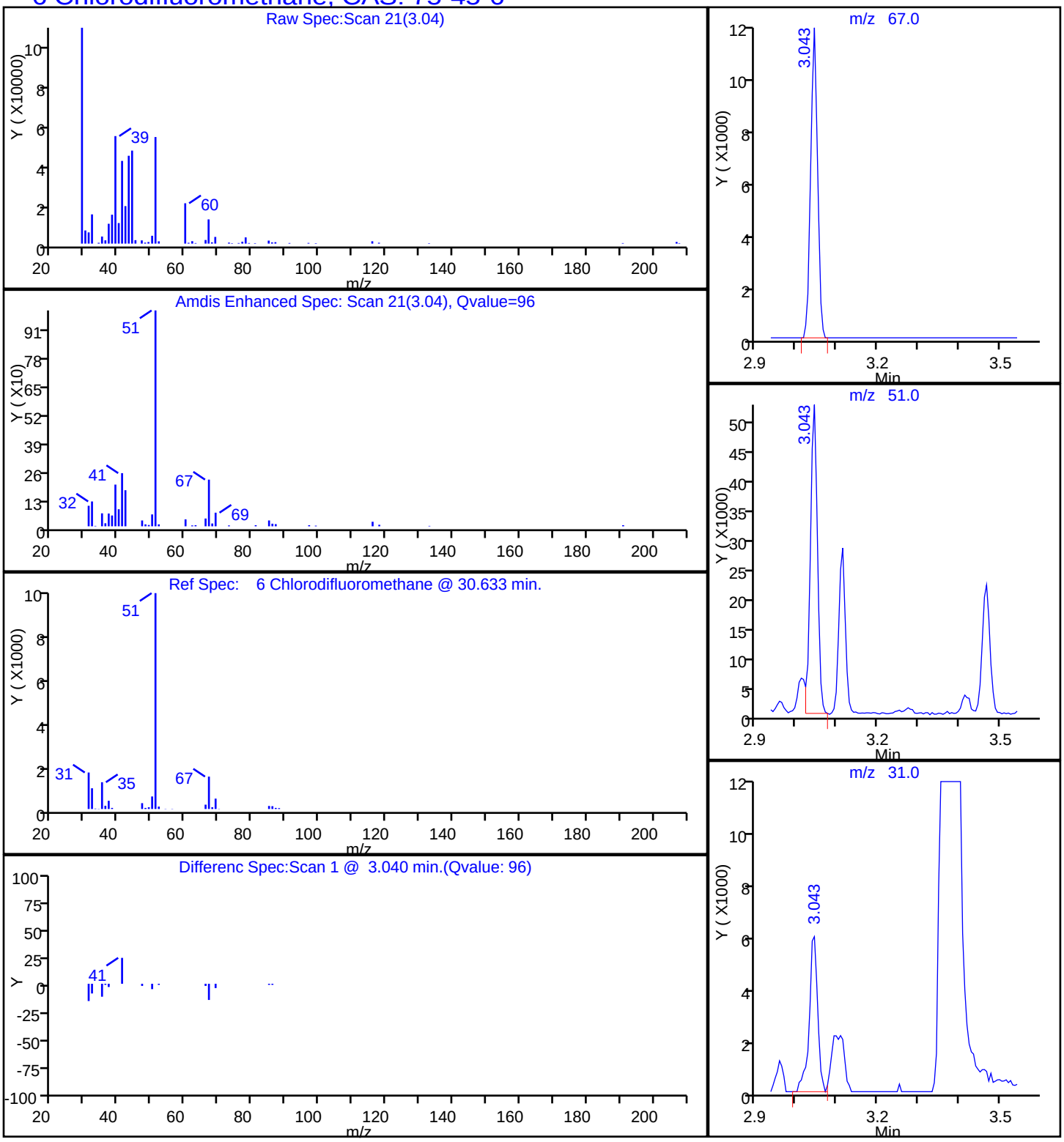




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



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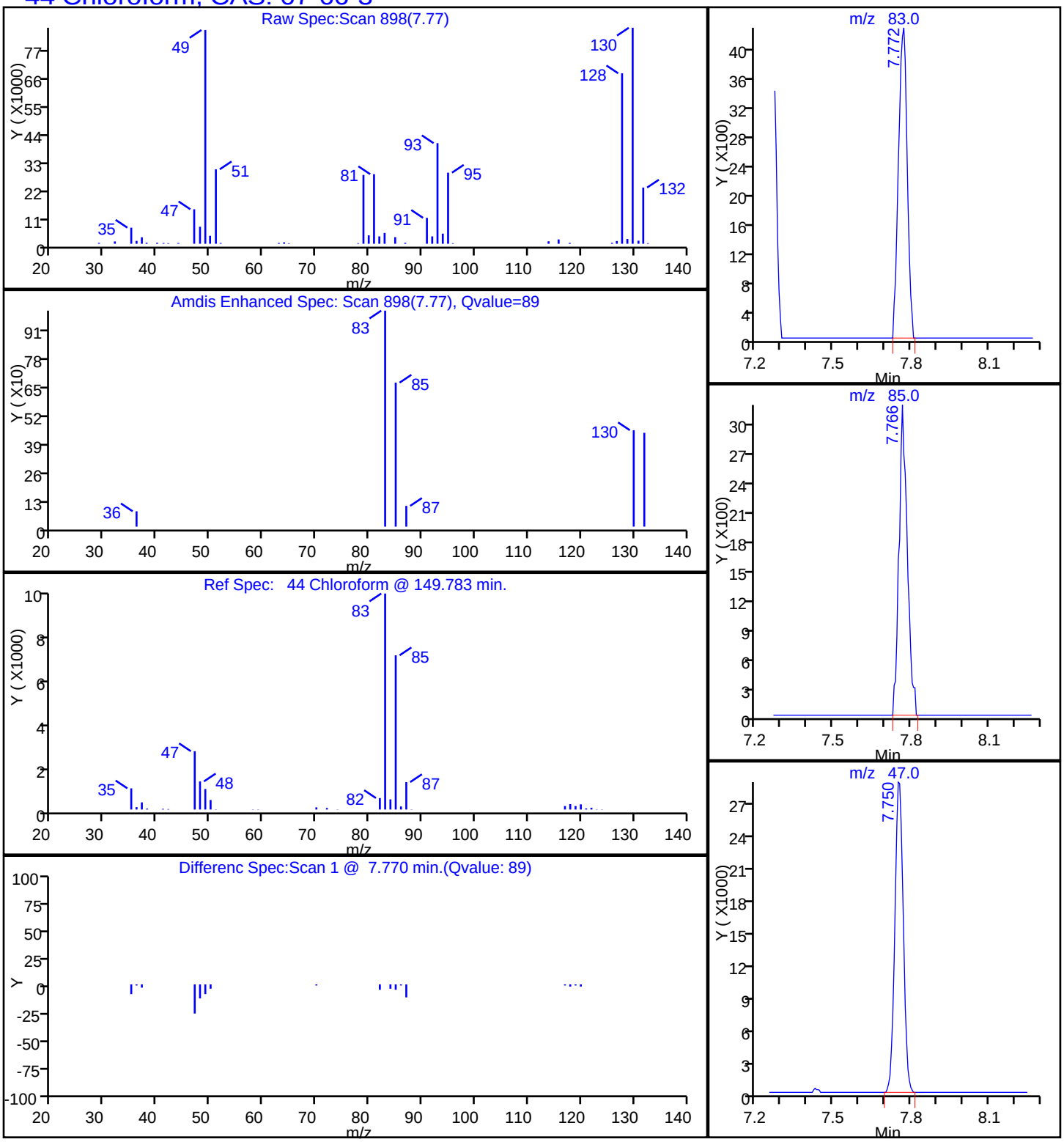
Injection Date: 20-May-2016 03:33:30 Instrument ID: ME
Lims ID: 140-4944-A-4 Lab Sample ID: 140-4944-4
Client ID: C-INFLUENT
Operator ID: 007126 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

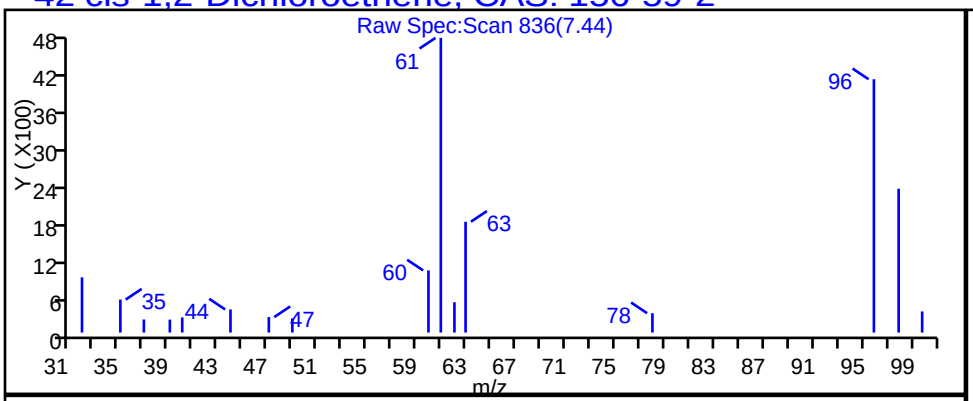
44 Chloroform, CAS: 67-66-3

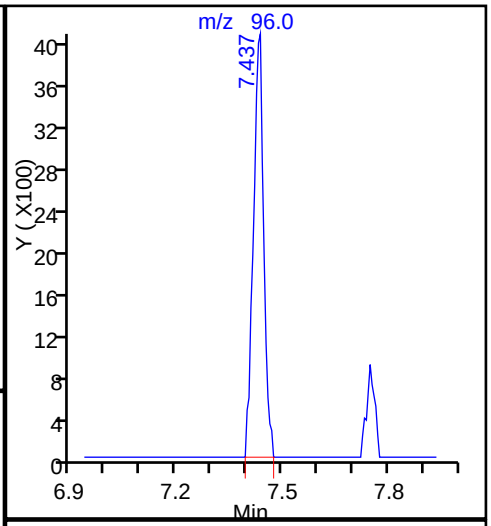


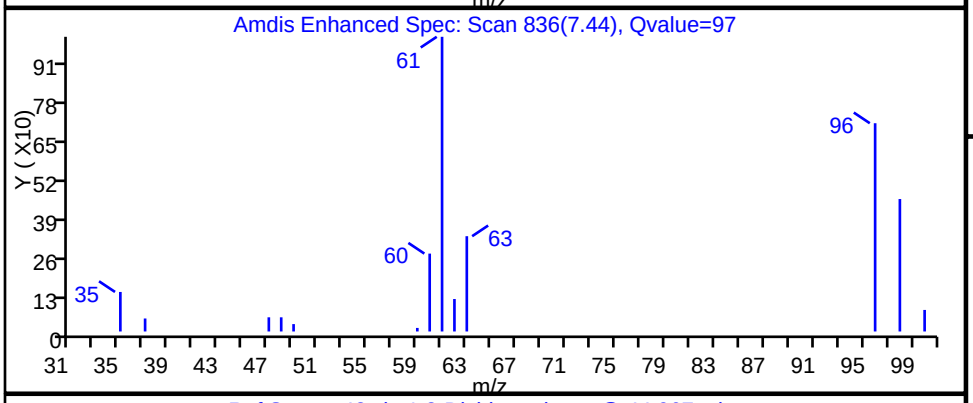
TestAmerica Knoxville

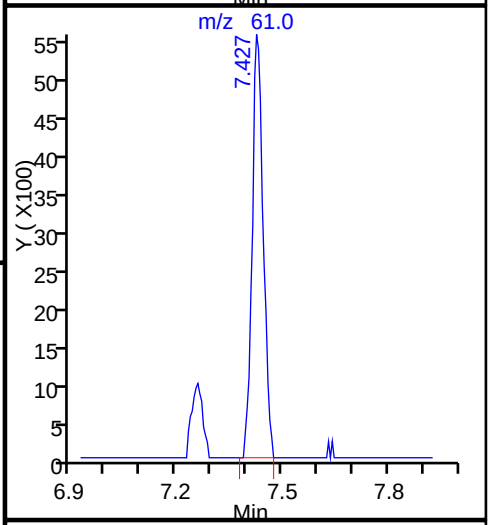
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

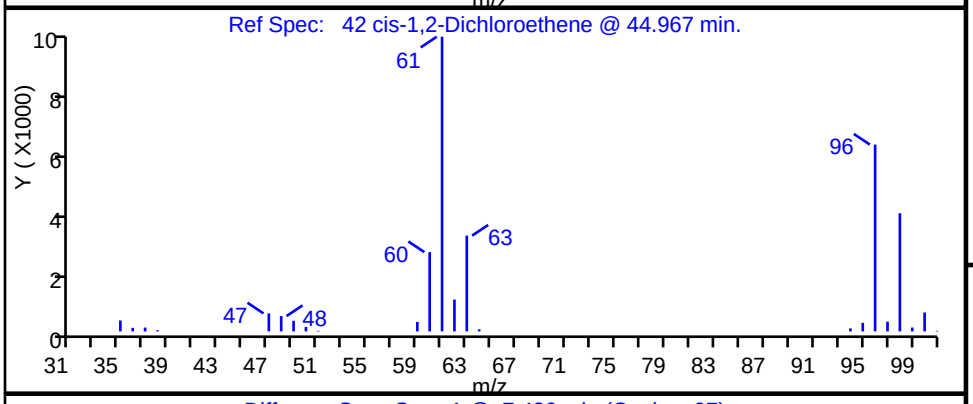
42 cis-1,2-Dichloroethene, CAS: 156-59-2

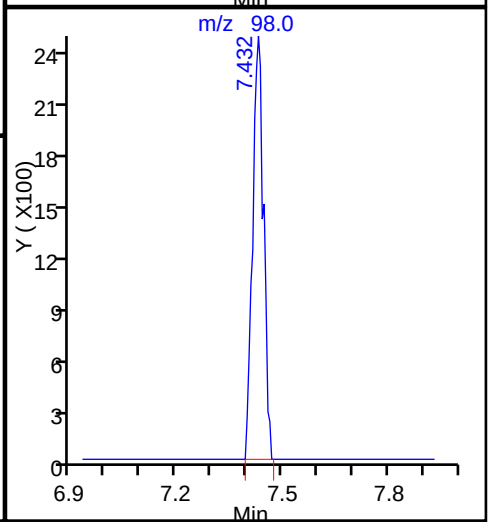


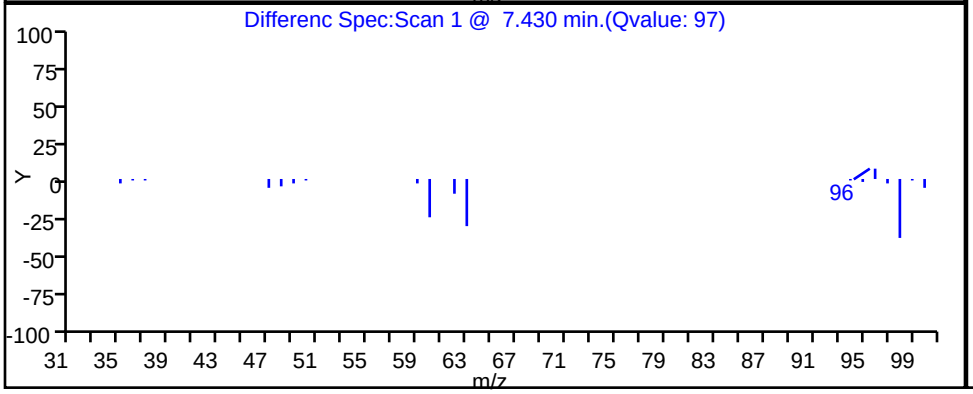












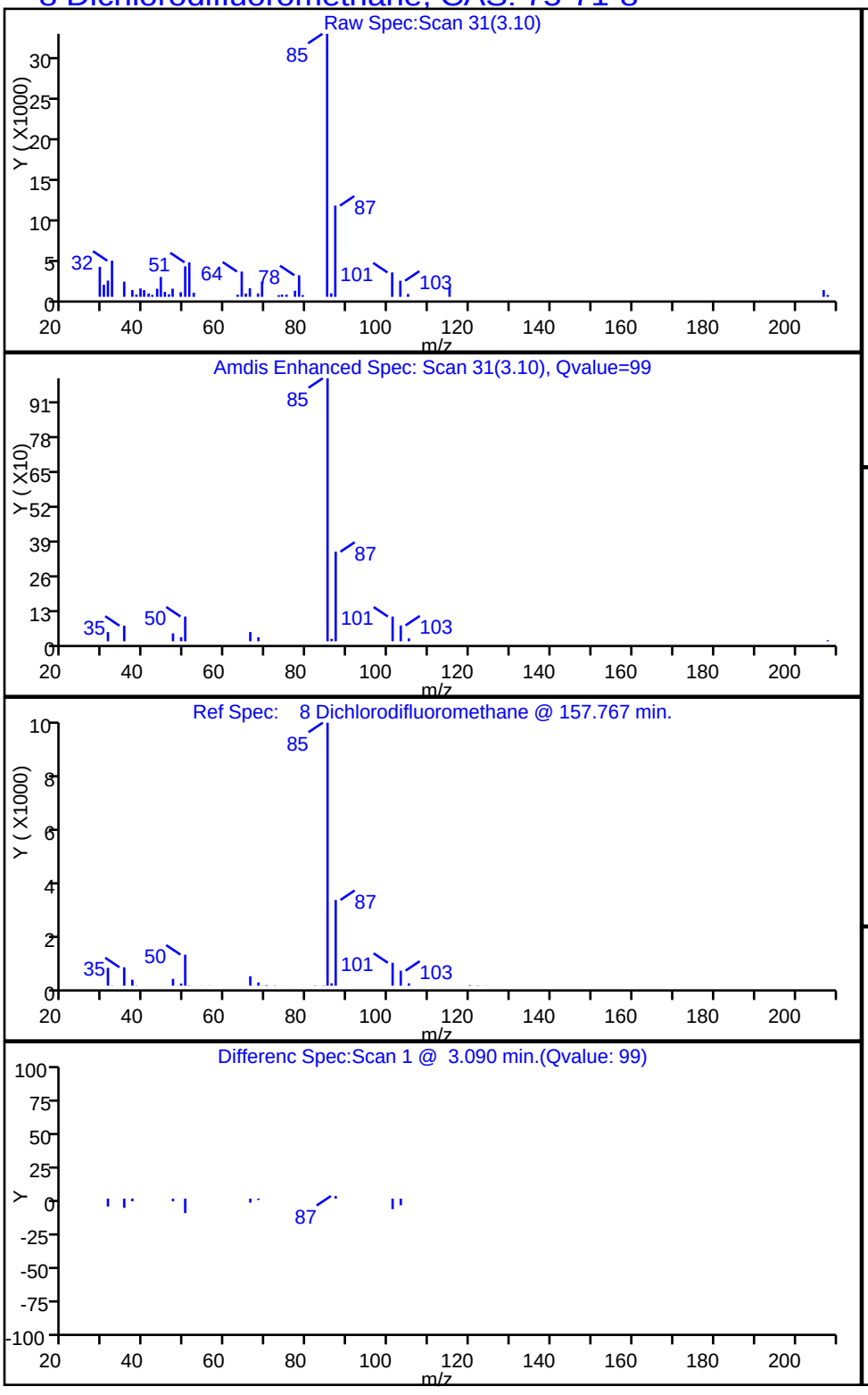
Report Date: 20-May-2016 10:34:21 Chrom Revision: 2.2 16-May-2016 16:09:38

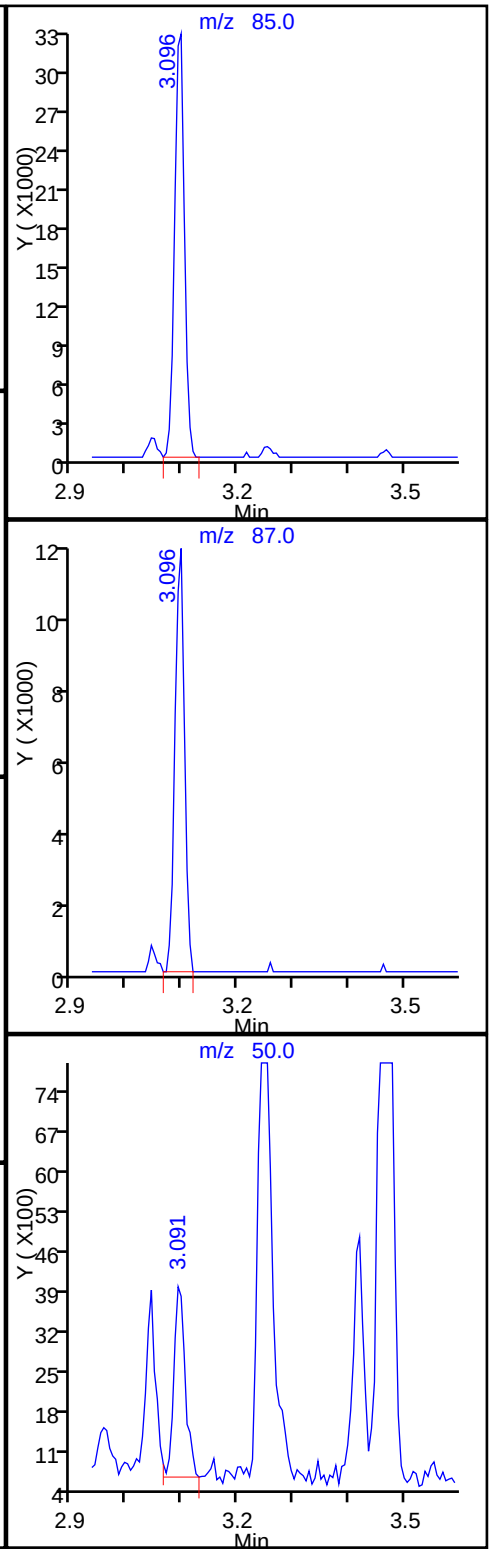
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D

Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8

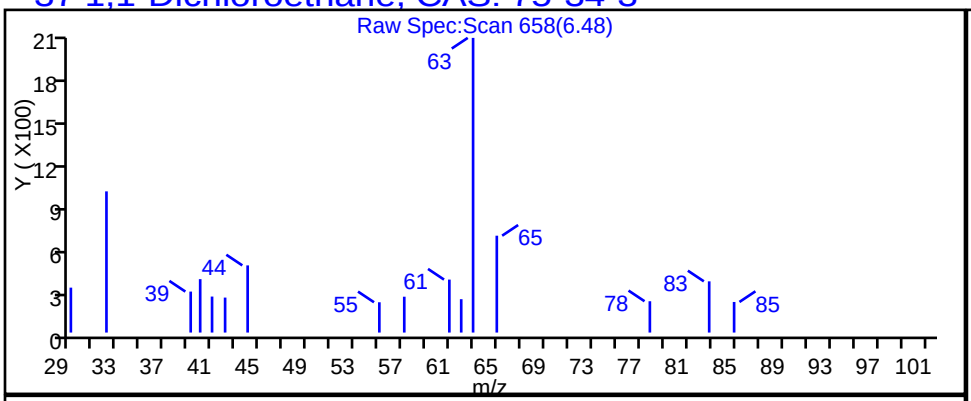


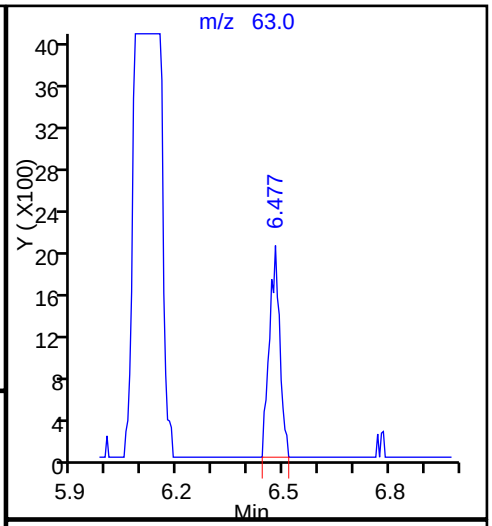


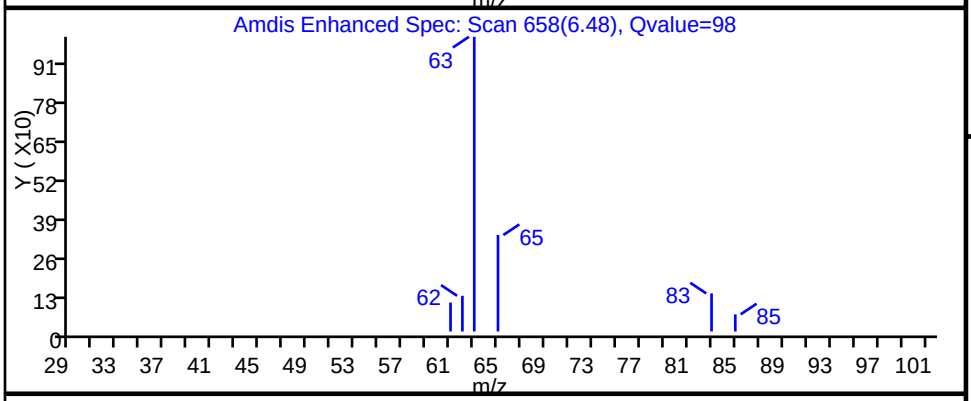
TestAmerica Knoxville

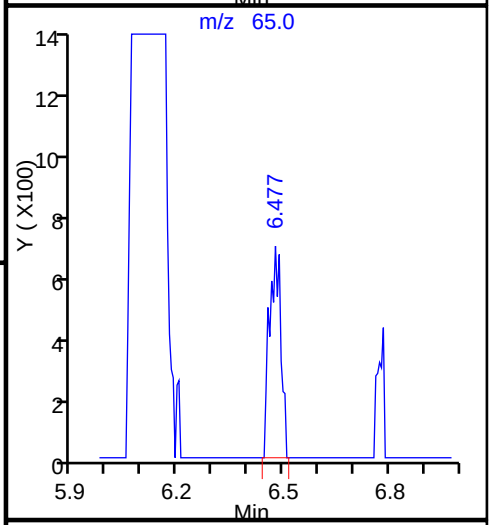
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

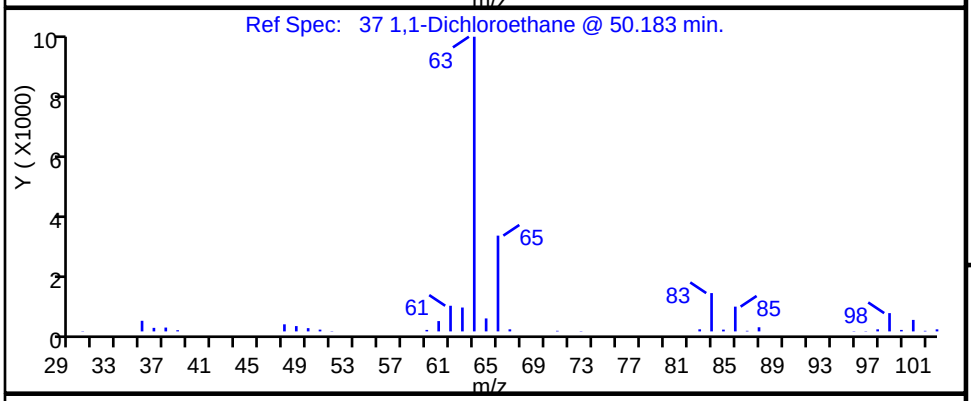
37 1,1-Dichloroethane, CAS: 75-34-3

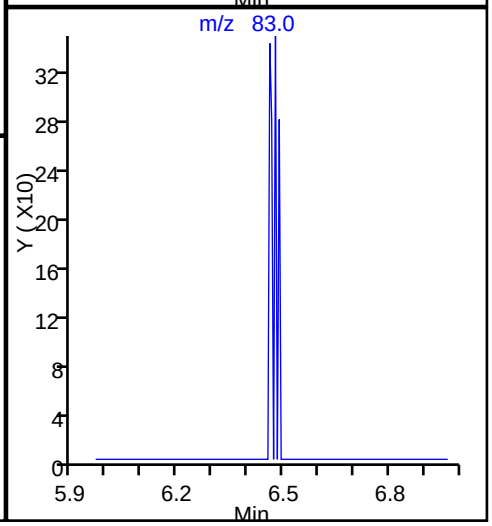


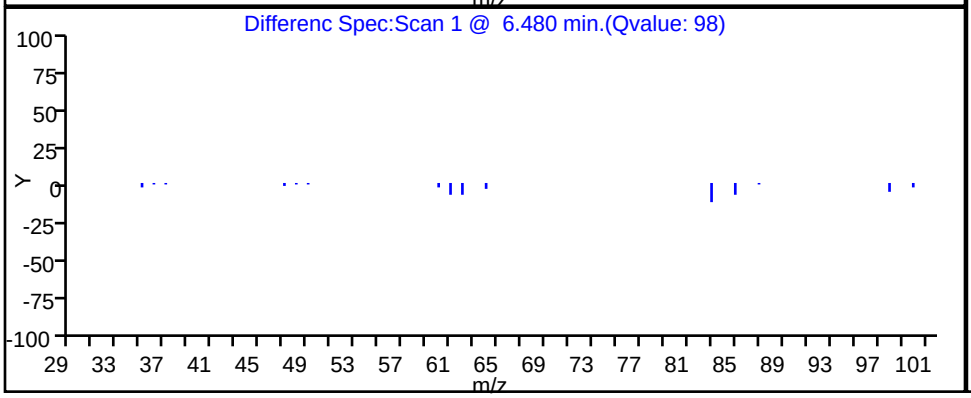








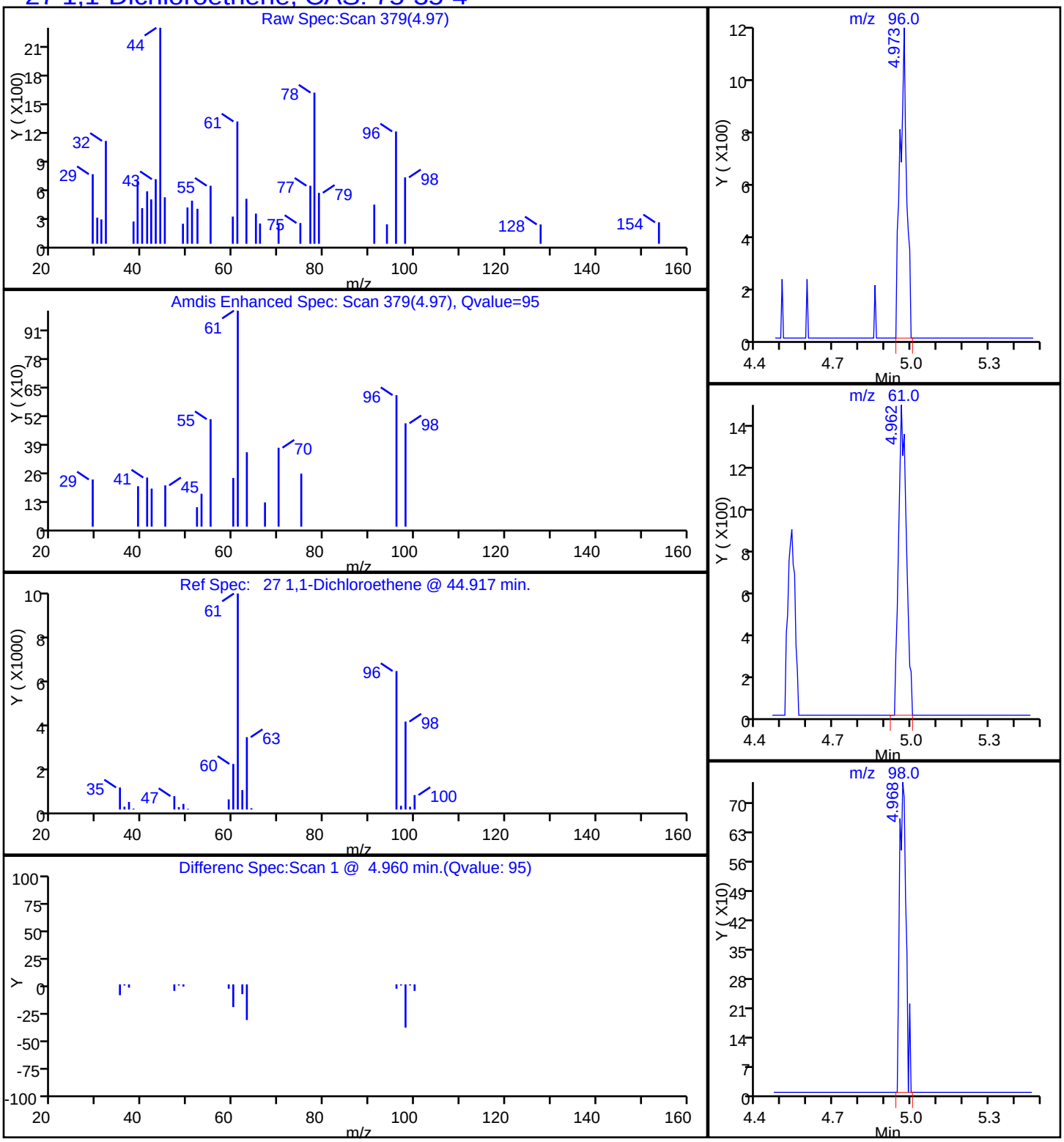




TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D
Injection Date: 20-May-2016 03:33:30 Instrument ID: ME
Lims ID: 140-4944-A-4 Lab Sample ID: 140-4944-4
Client ID: C-INFLUENT
Operator ID: 007126 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

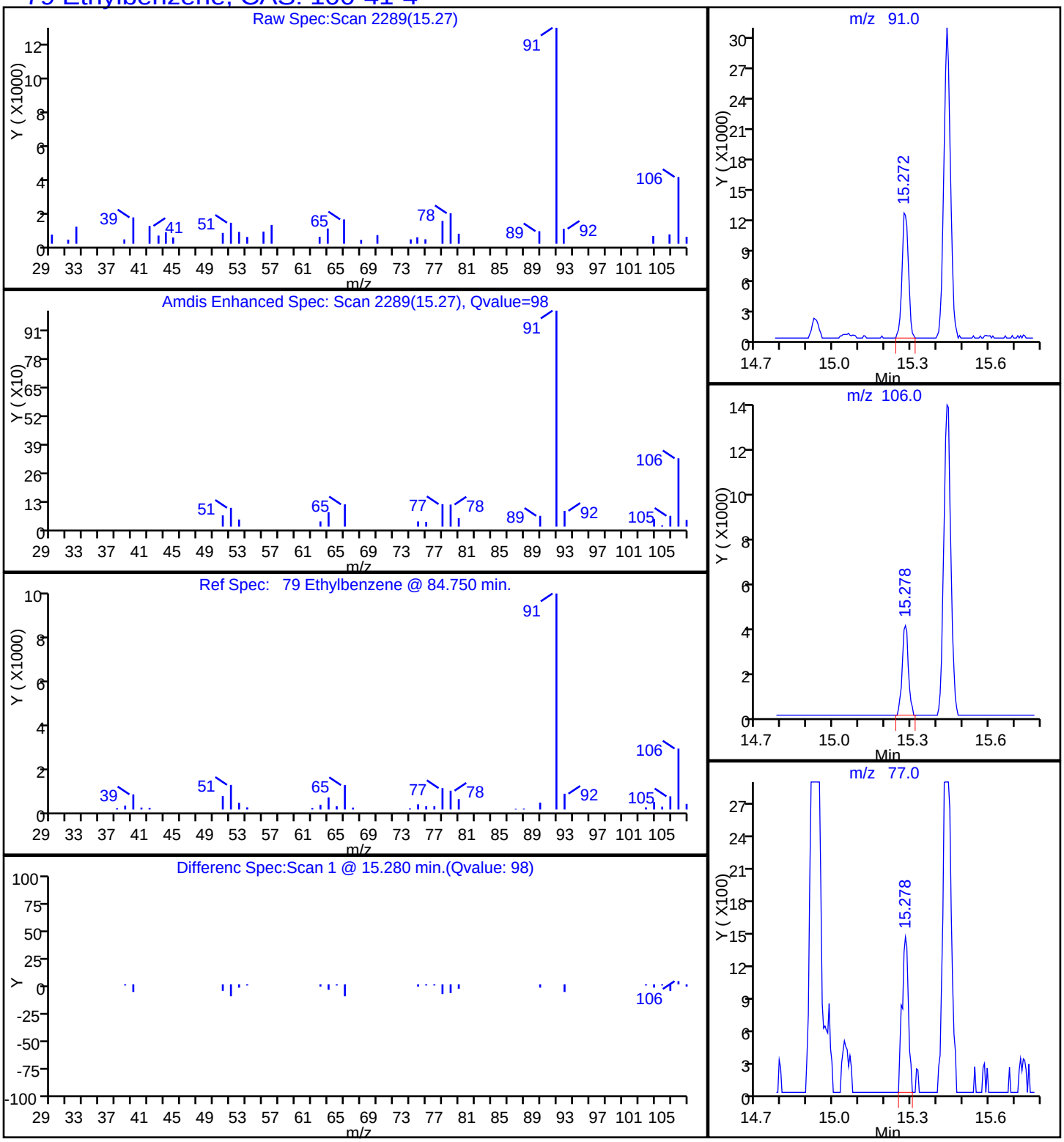
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

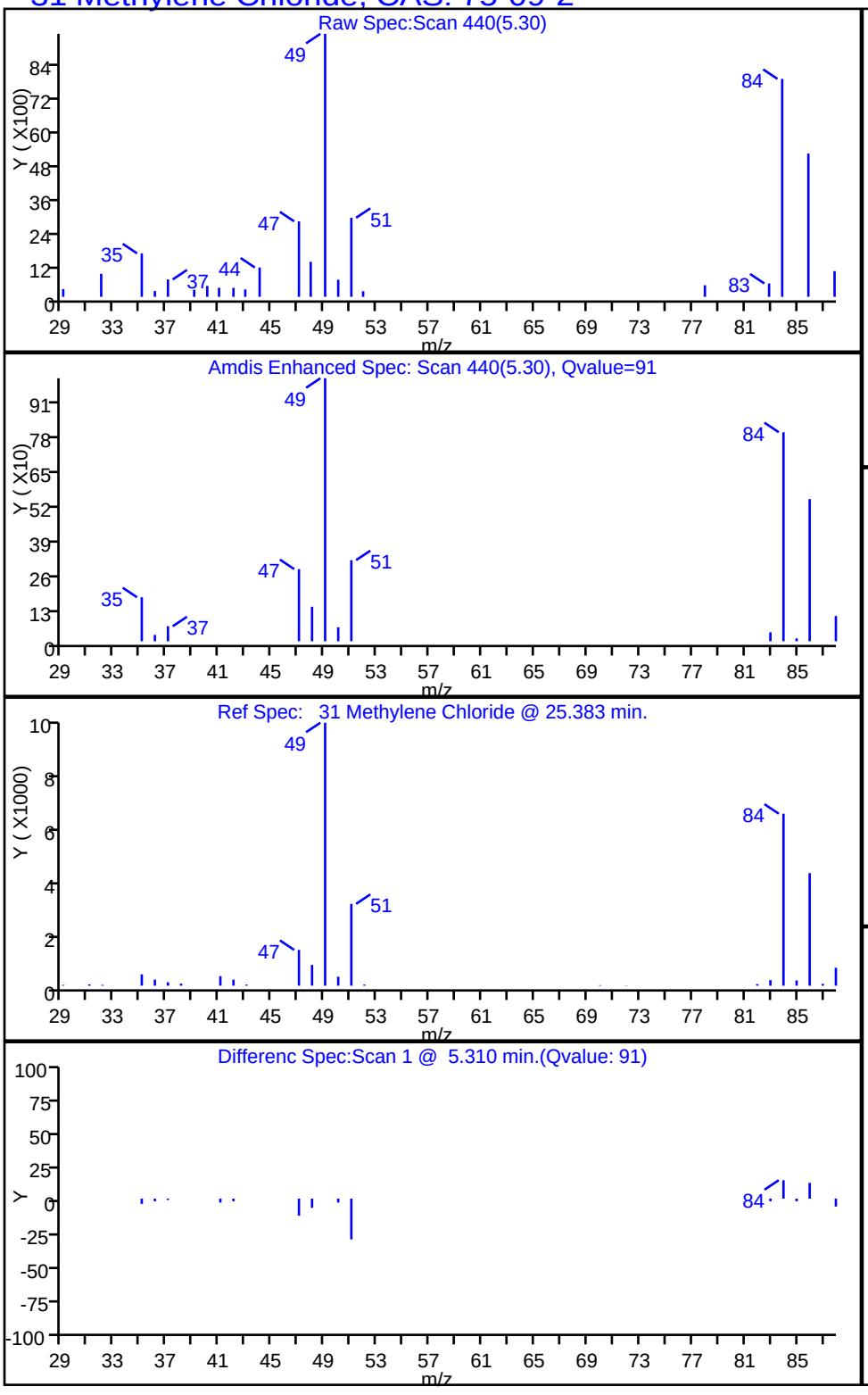
79 Ethylbenzene, CAS: 100-41-4

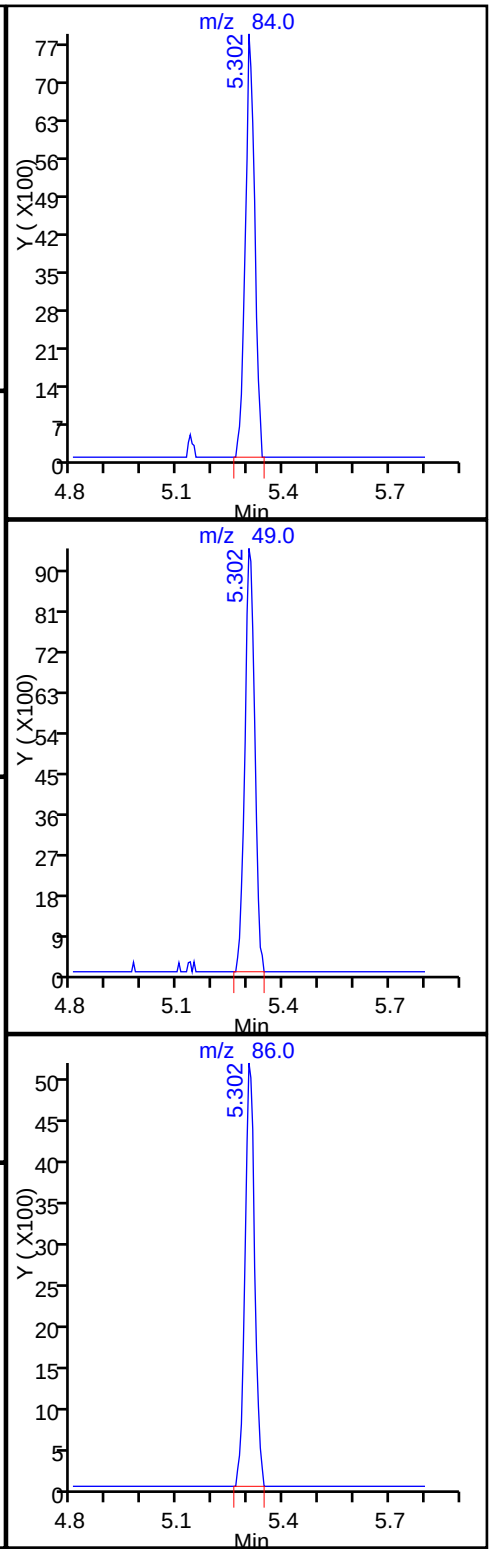


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

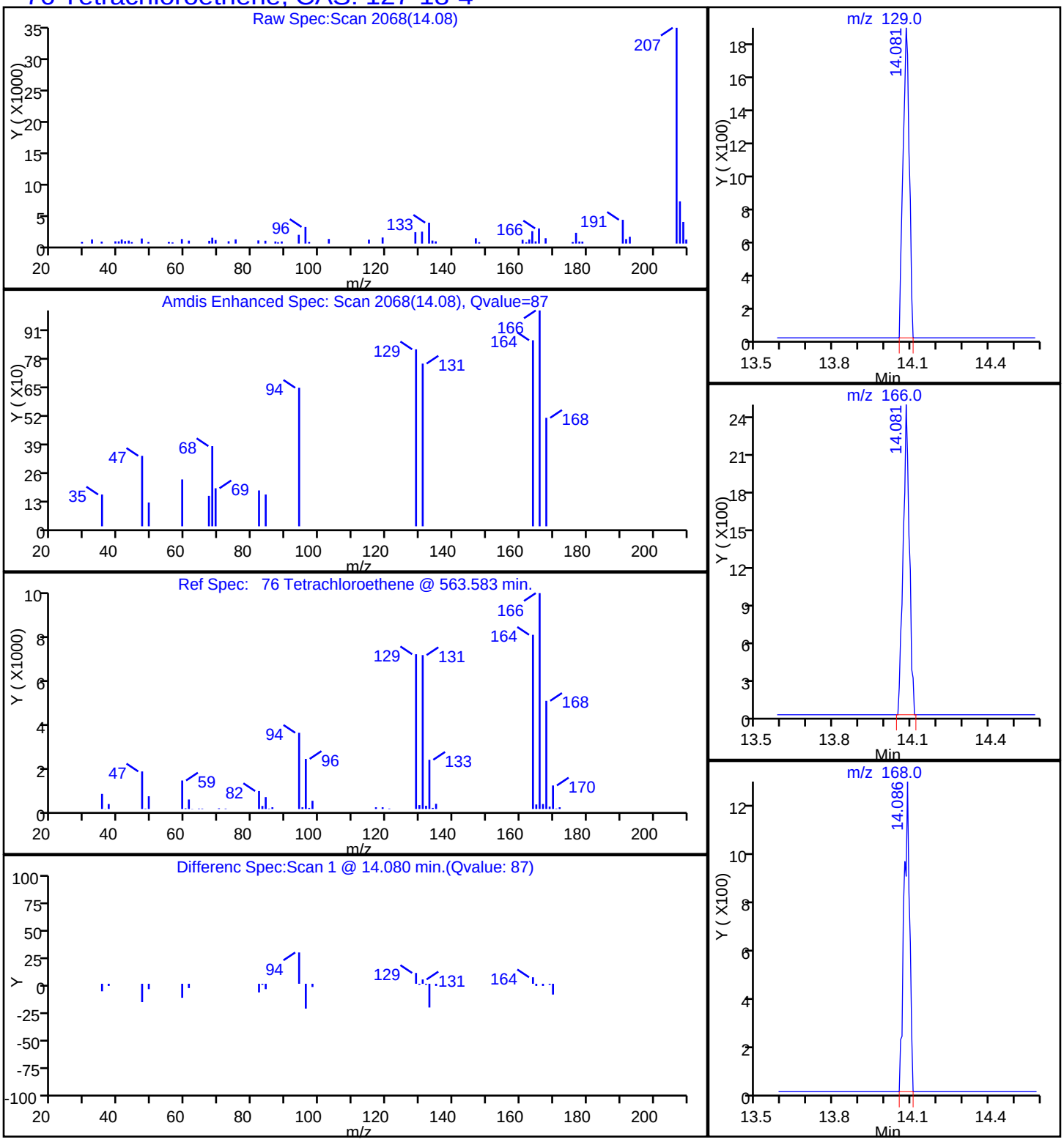




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

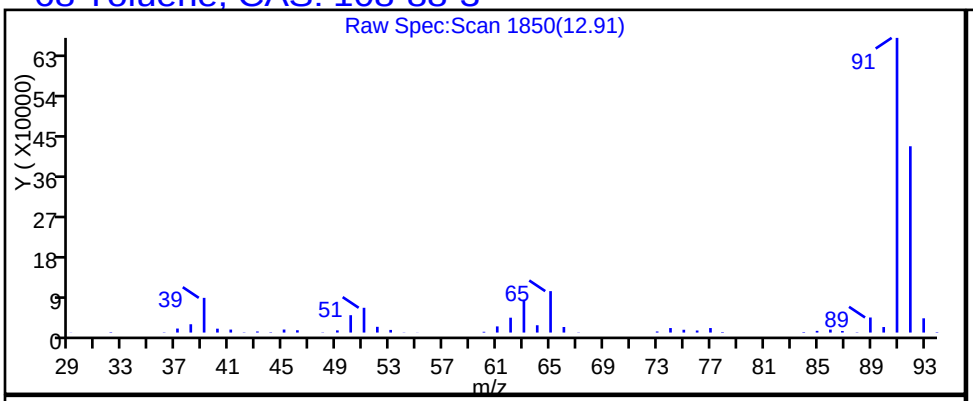
76 Tetrachloroethene, CAS: 127-18-4

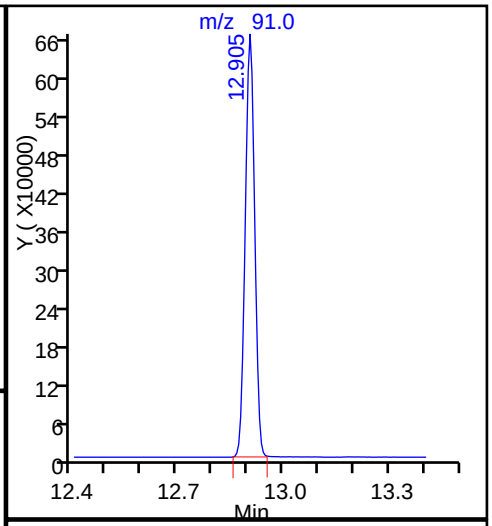


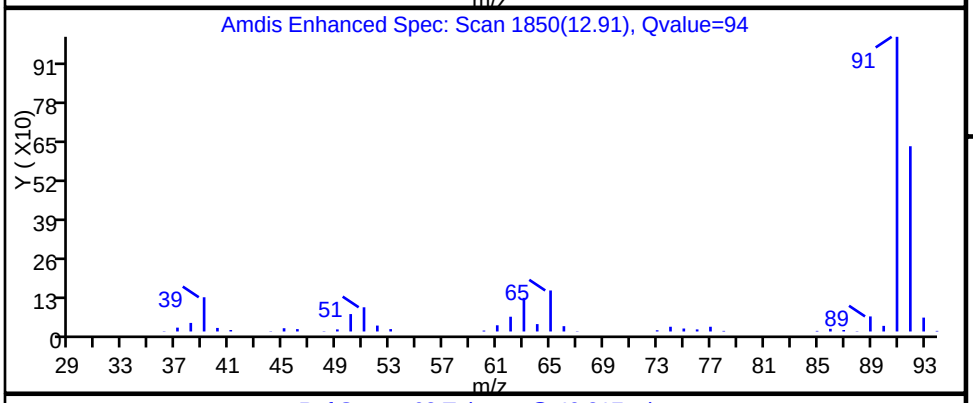
TestAmerica Knoxville

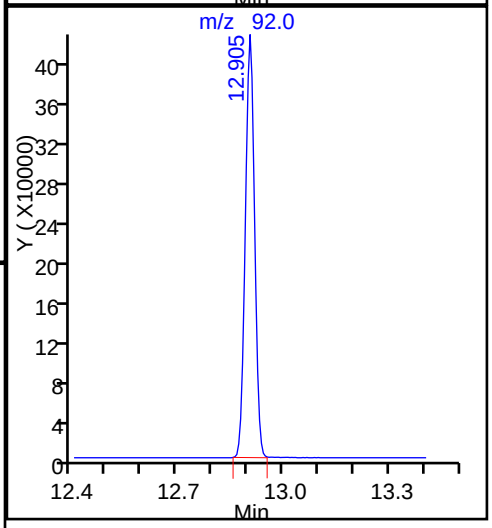
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

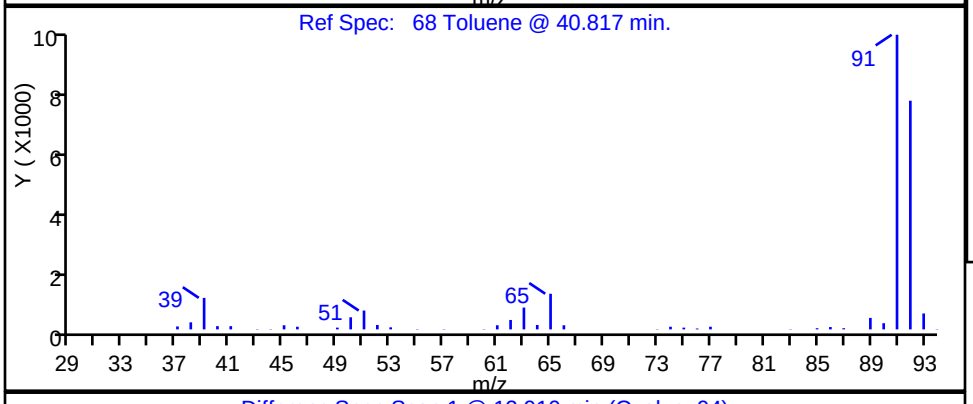
68 Toluene, CAS: 108-88-3

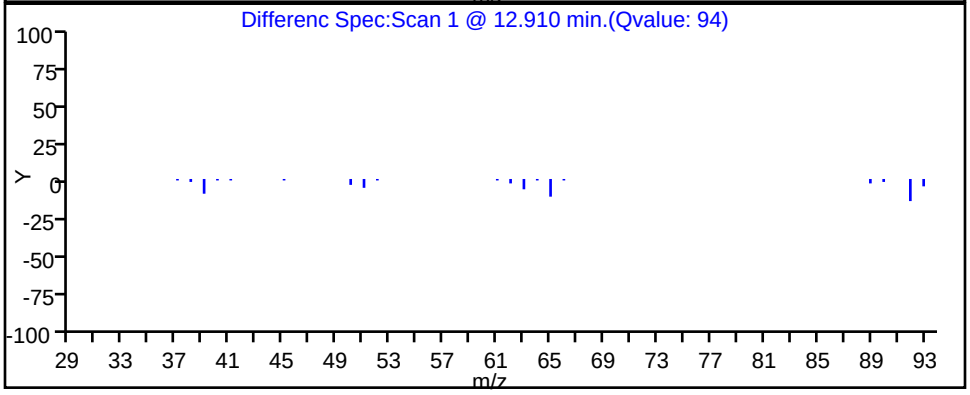








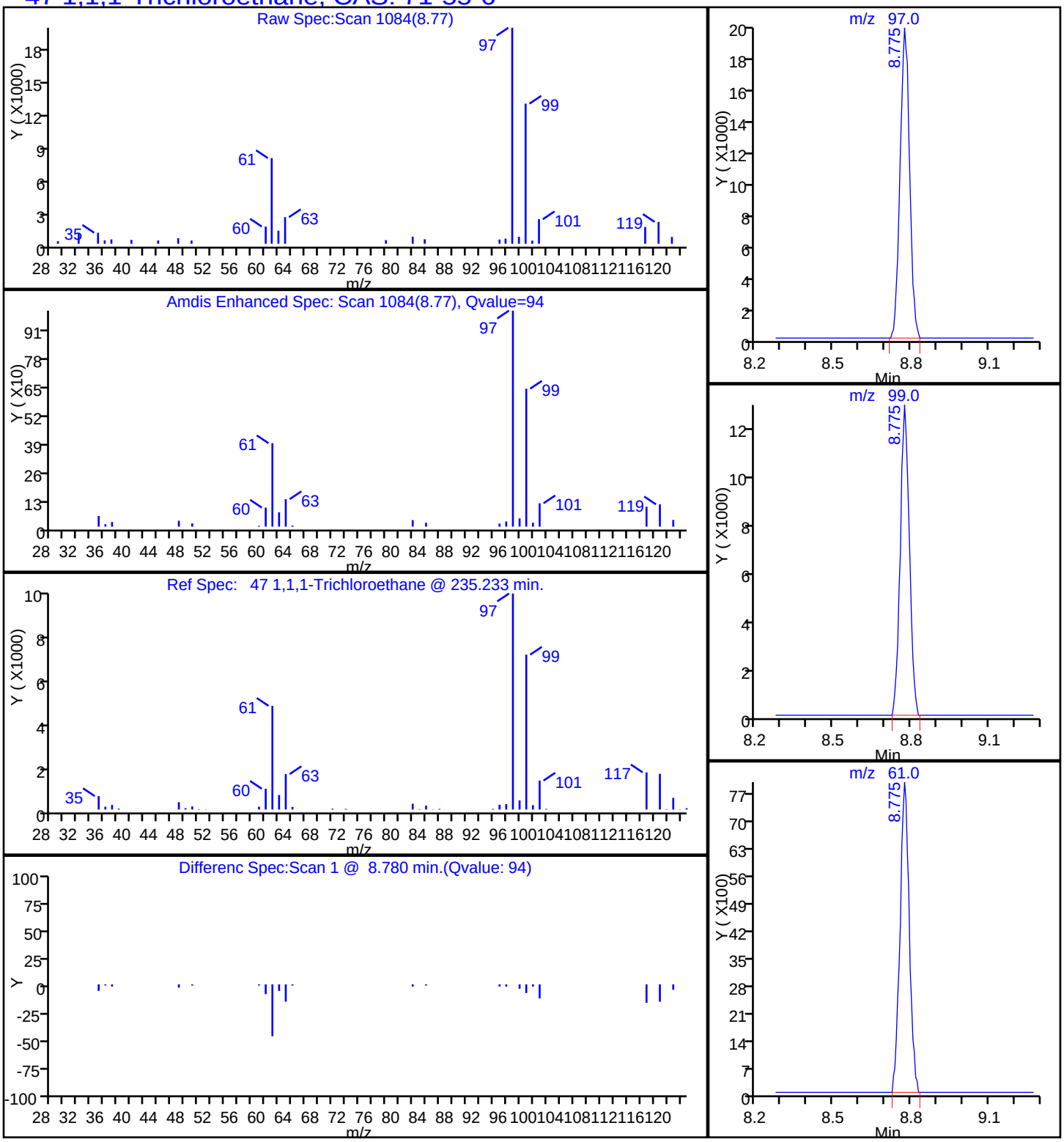




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



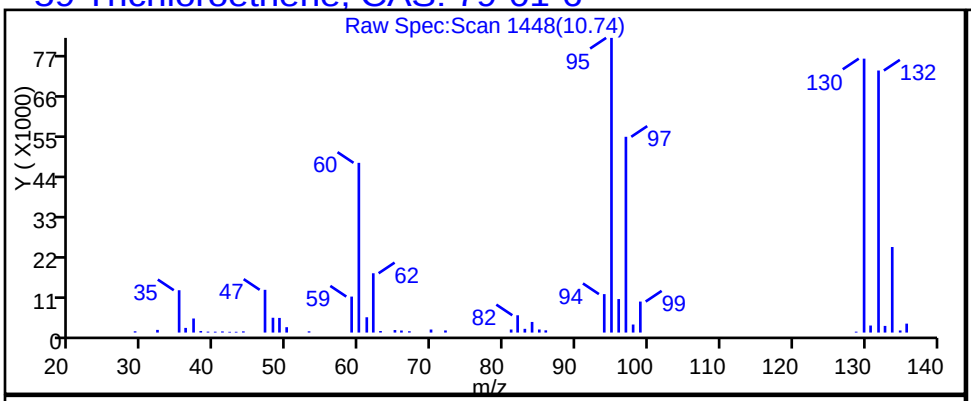
Report Date: 20-May-2016 10:34:22 Chrom Revision: 2.2 16-May-2016 16:09:38

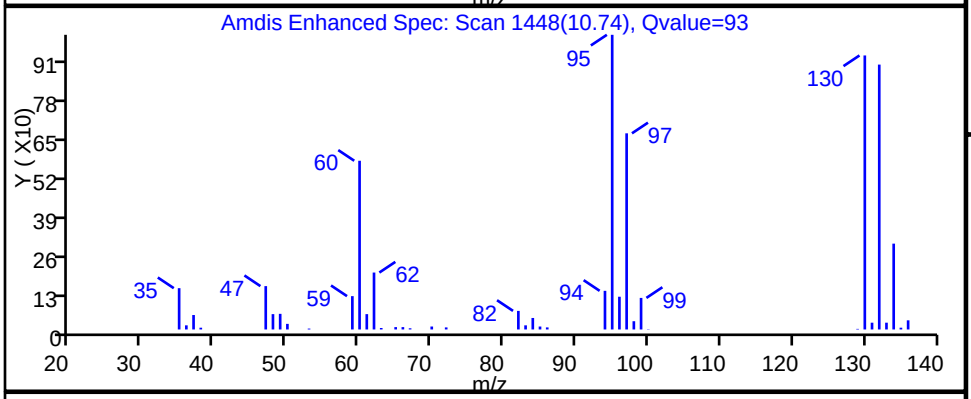
TestAmerica Knoxville

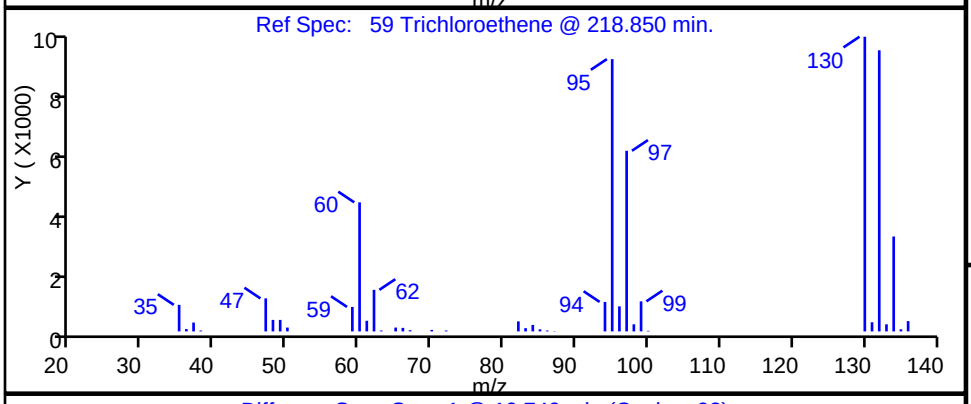
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D

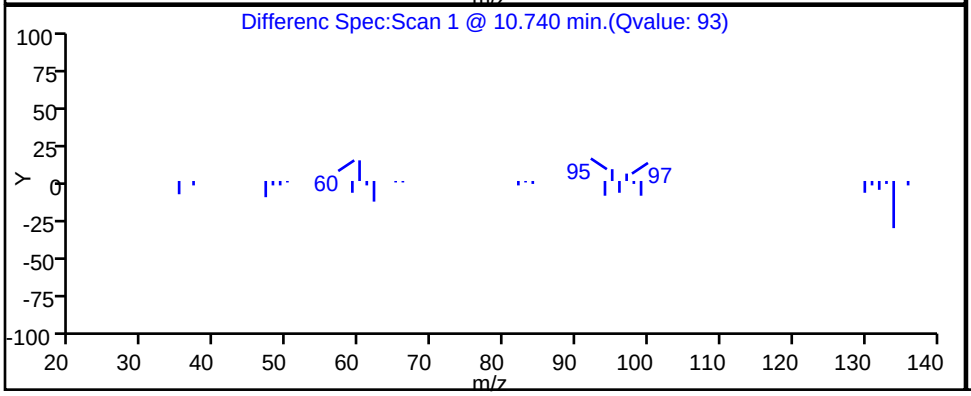
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

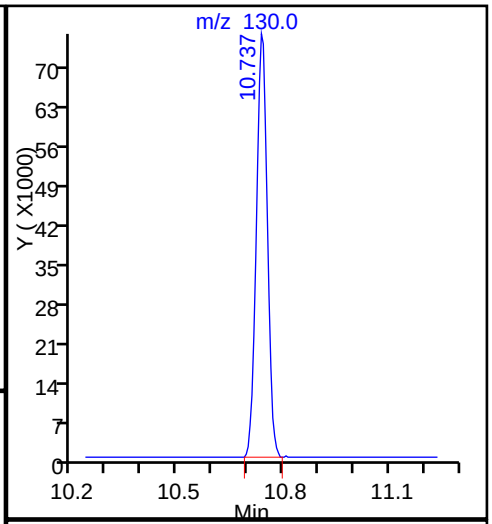
59 Trichloroethene, CAS: 79-01-6

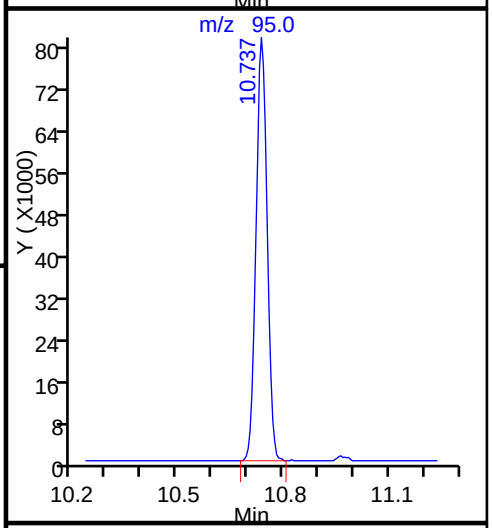


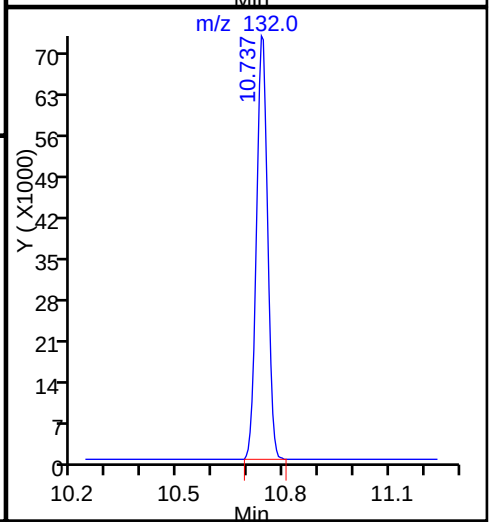








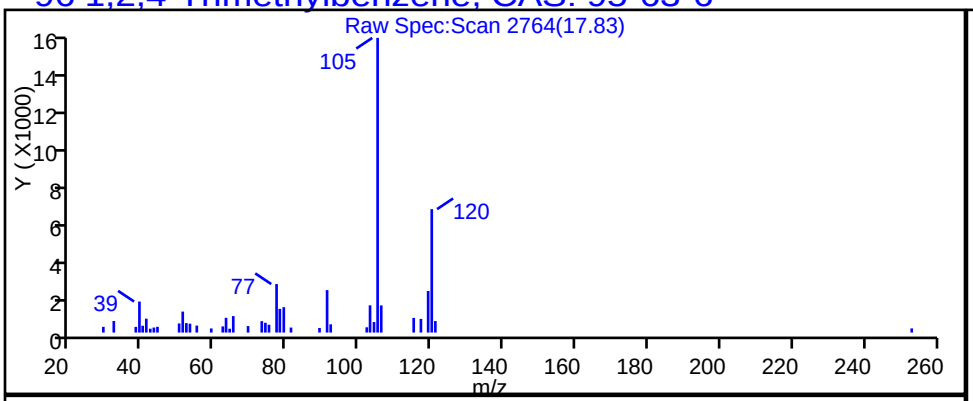


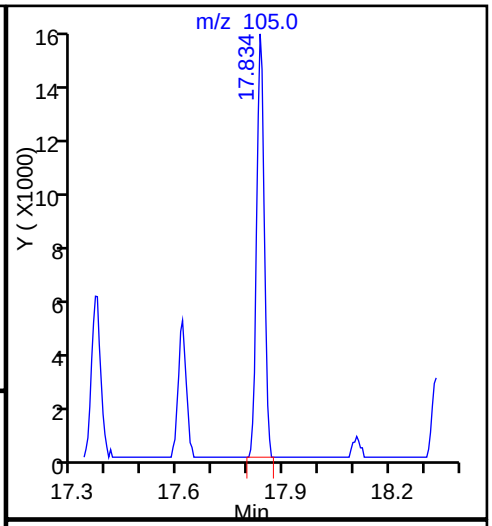


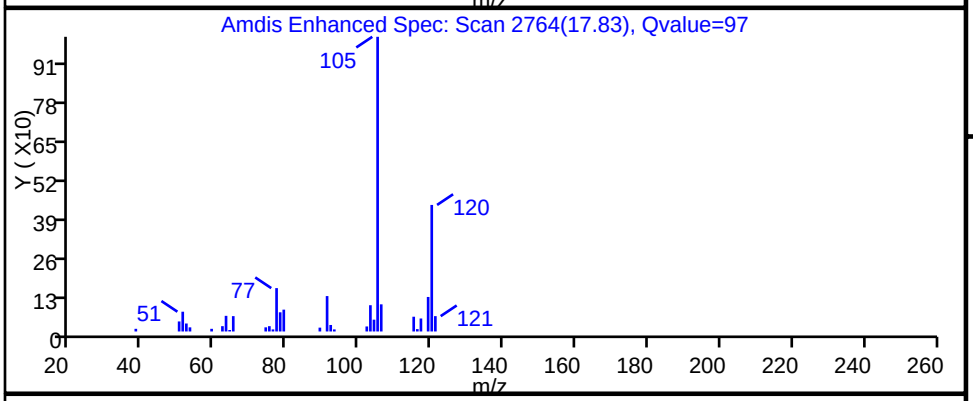
TestAmerica Knoxville

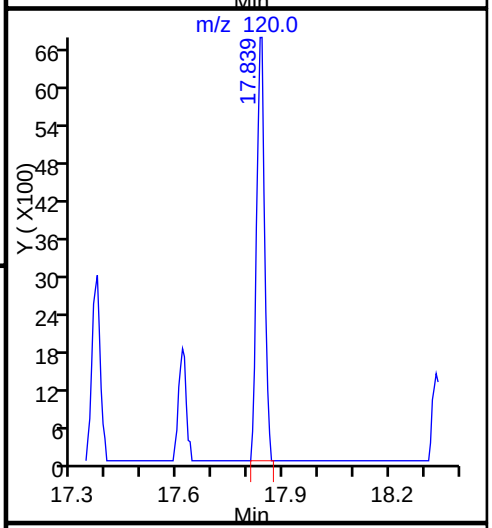
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

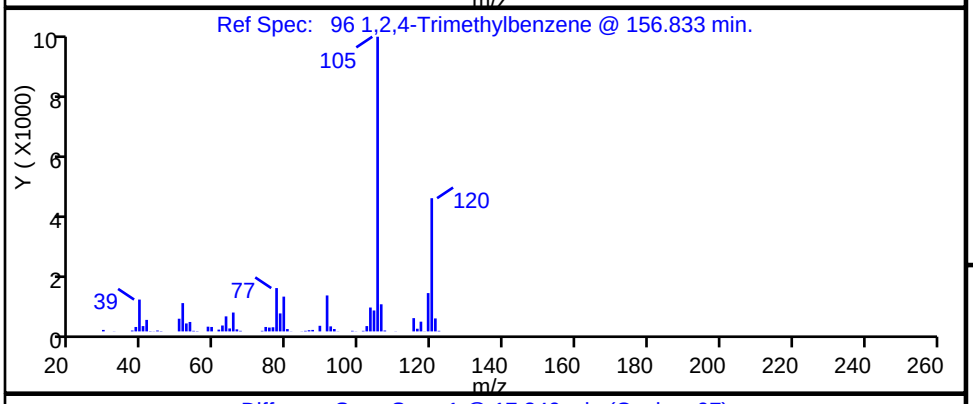
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

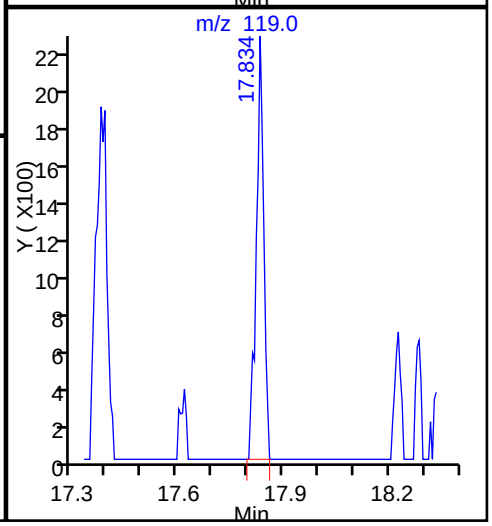


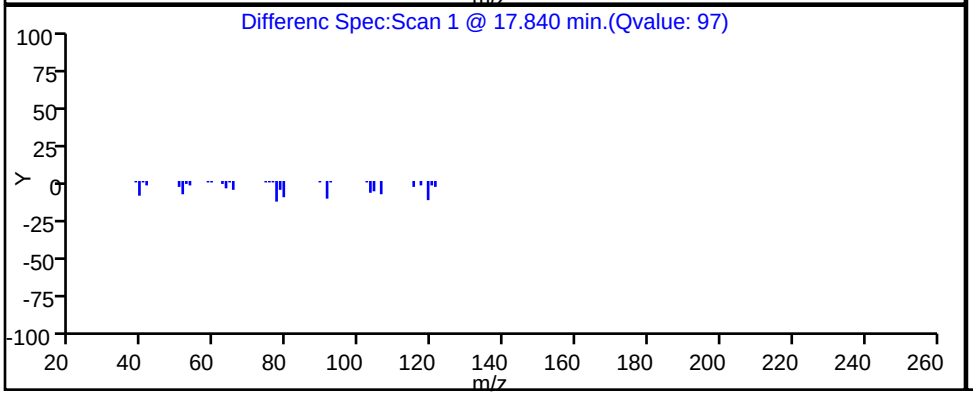






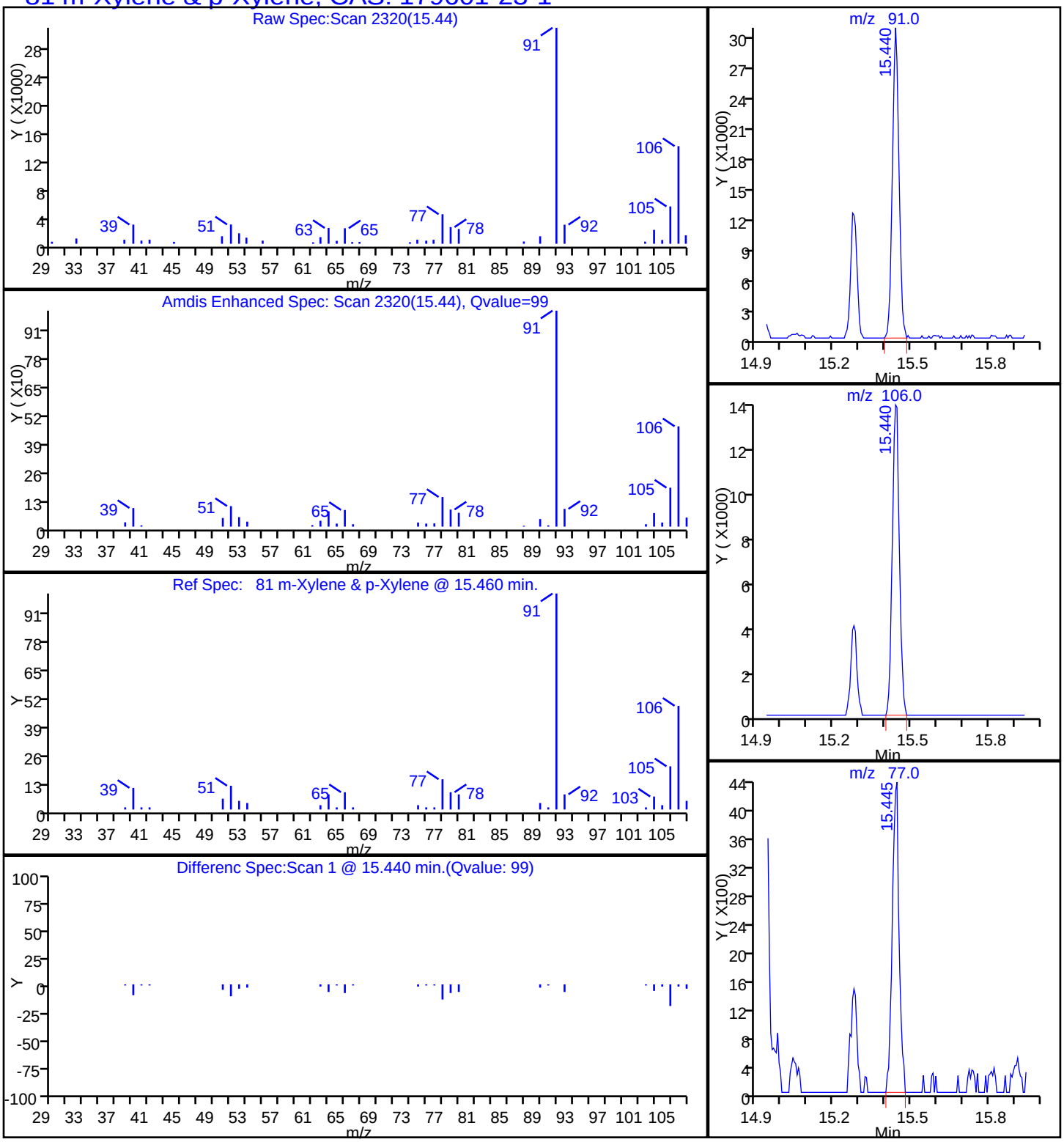






Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D
Injection Date: 20-May-2016 03:33:30 Instrument ID: ME
Lims ID: 140-4944-A-4 Lab Sample ID: 140-4944-4
Client ID: C-INFLUENT
Operator ID: 007126 ALS Bottle#: 14 Worklist Smp#: 22
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

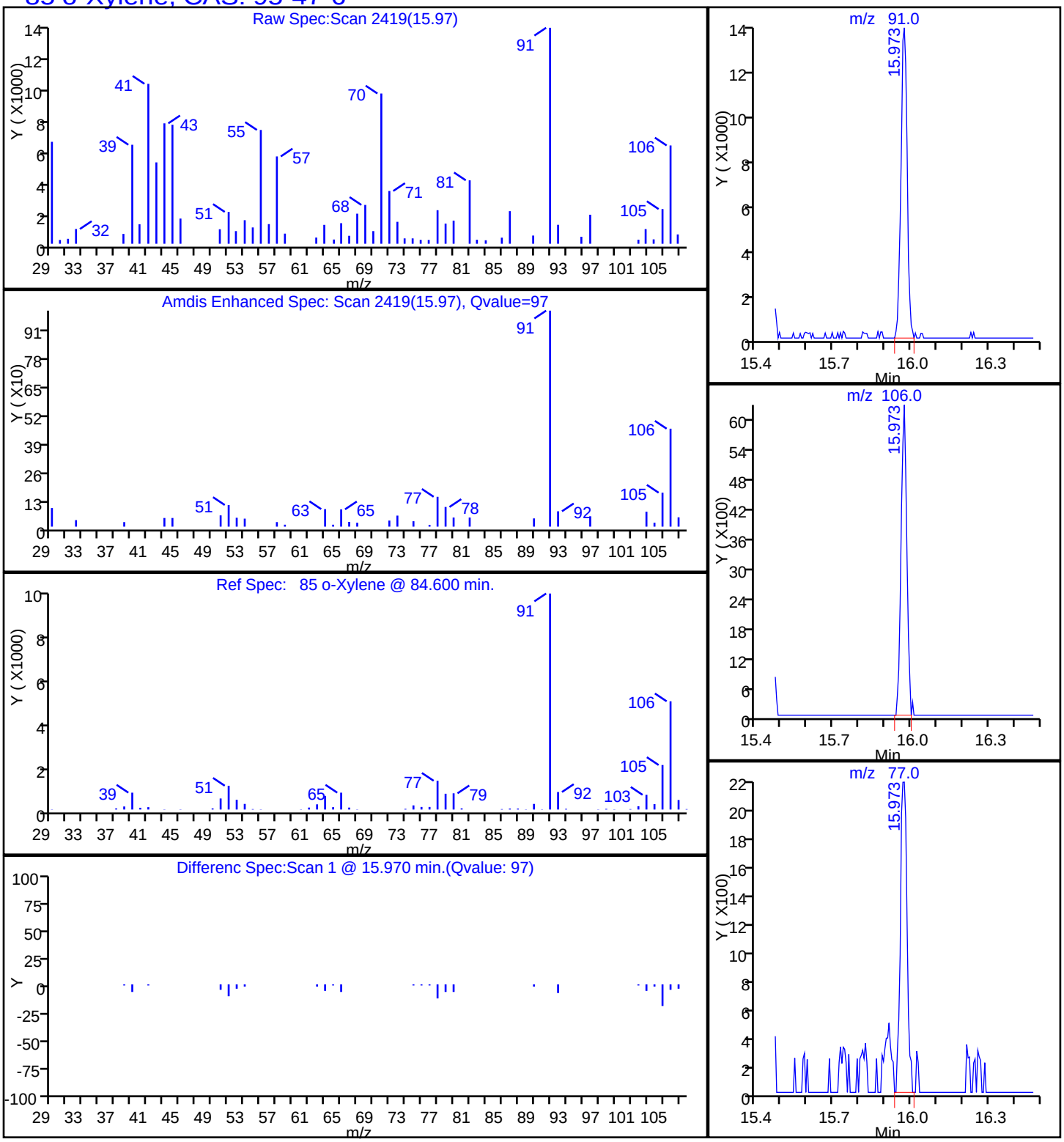
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P114.D				
Injection Date:	20-May-2016 03:33:30	Instrument ID:	ME		
Lims ID:	140-4944-A-4	Lab Sample ID:	140-4944-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	14	Worklist Smp#:	22
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: C-MID-GAC | Lab Sample ID: 140-4944-5

Matrix: Air | Lab File ID: EE19P115.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 13:50

Sample wt/vol: 100(mL) | Date Analyzed: 05/20/2016 04:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.090	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.31	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.11	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.13	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.080	J	0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.1	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.16	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: C-MID-GAC Lab Sample ID: 140-4944-5

Matrix: Air Lab File ID: EE19P115.D

Analysis Method: TO 15 LL Date Collected: 05/12/2016 13:50

Sample wt/vol: 100(mL) Date Analyzed: 05/20/2016 04:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.6		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.8		1.4	0.27
67-66-3	Chloroform	119.38	0.44	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.46	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	0.51	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	0.54	J	2.7	0.54
108-88-3	Toluene	92.14	3.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	6.0	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	0.81	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D				
Lims ID:	140-4944-A-5				
Client ID:	C-MID-GAC				
Sample Type:	Client				
Inject. Date:	20-May-2016 04:18:30	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-4944-a-5				
Misc. Info.:	E051916,TO155,,140-0002879-023				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-May-2016 08:25:46	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: tajh		Date:	20-May-2016 08:38:41		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.755	7.755	0.000	79	289827	4.00	
* 2 1,4-Difluorobenzene	114	9.977	9.982	-0.005	95	1299670	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	90	1218082	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	88	914521	4.01	
6 Chlorodifluoromethane	67	3.048	3.037	0.011	95	14146	0.3832	
8 Dichlorodifluoromethane	85	3.096	3.091	0.005	99	45910	0.1398	
27 1,1-Dichloroethene	96	4.978	4.967	0.011	96	2161	0.0255	
31 Methylene Chloride	84	5.296	5.296	0.000	91	9752	0.1101	
37 1,1-Dichloroethane	63	6.472	6.467	0.005	18	4270	0.0229	
42 cis-1,2-Dichloroethene	96	7.426	7.426	0.000	97	6032	0.0622	
44 Chloroform	83	7.772	7.766	0.006	88	4116	0.0180	
47 1,1,1-Trichloroethane	97	8.780	8.774	0.006	95	54941	0.2204	
51 Benzene	78	9.373	9.378	-0.005	97	60254	0.2285	
68 Toluene	91	12.905	12.905	0.000	93	62798	0.2090	
76 Tetrachloroethene	129	14.048	14.081	-0.033	30	2188	0.0160	
96 1,2,4-Trimethylbenzene	105	17.834	17.834	0.000	98	11379	0.0328	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

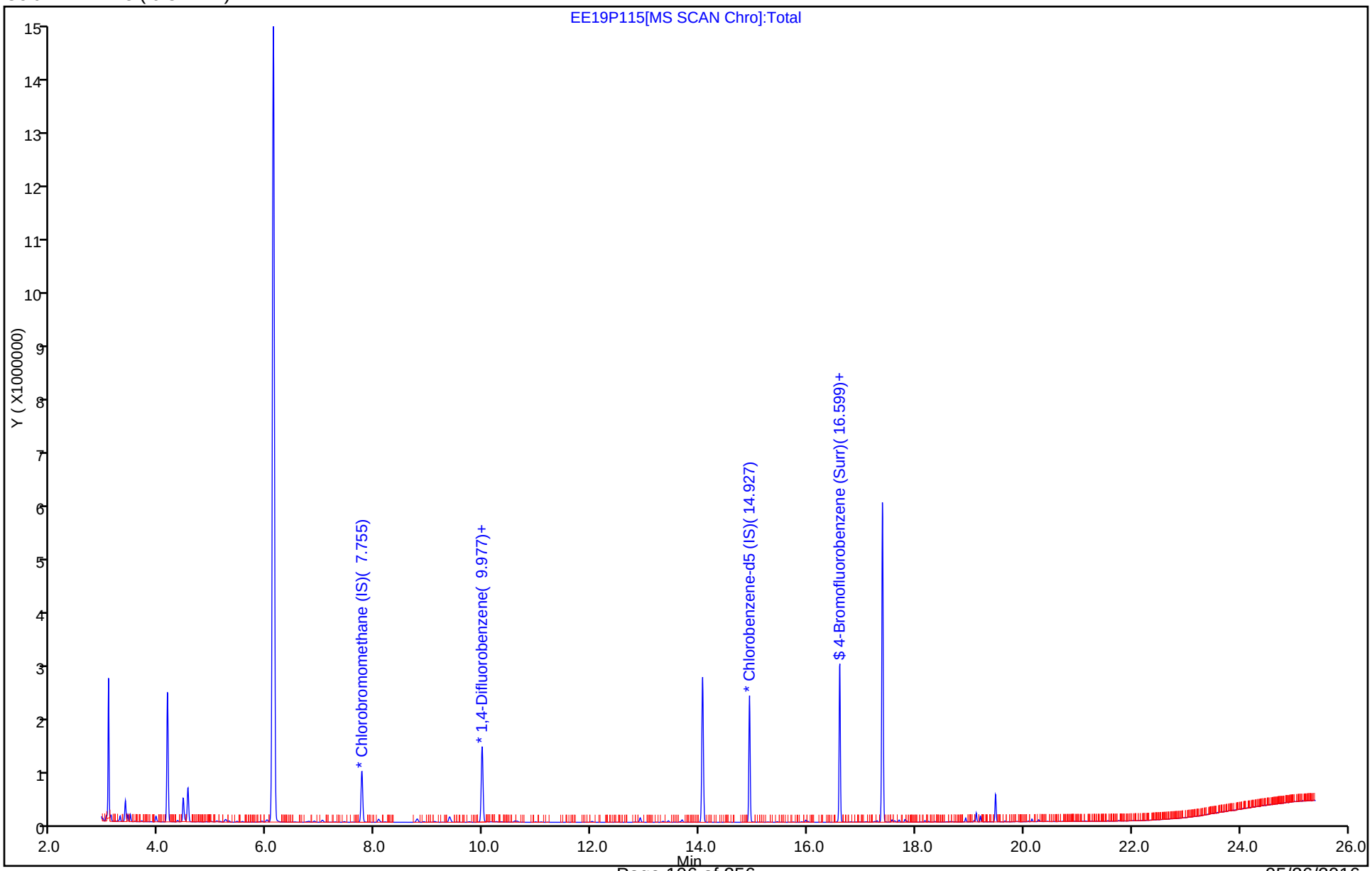
Report Date: 20-May-2016 10:34:28 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D

Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5	Worklist Smp#:	23
Client ID:	C-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



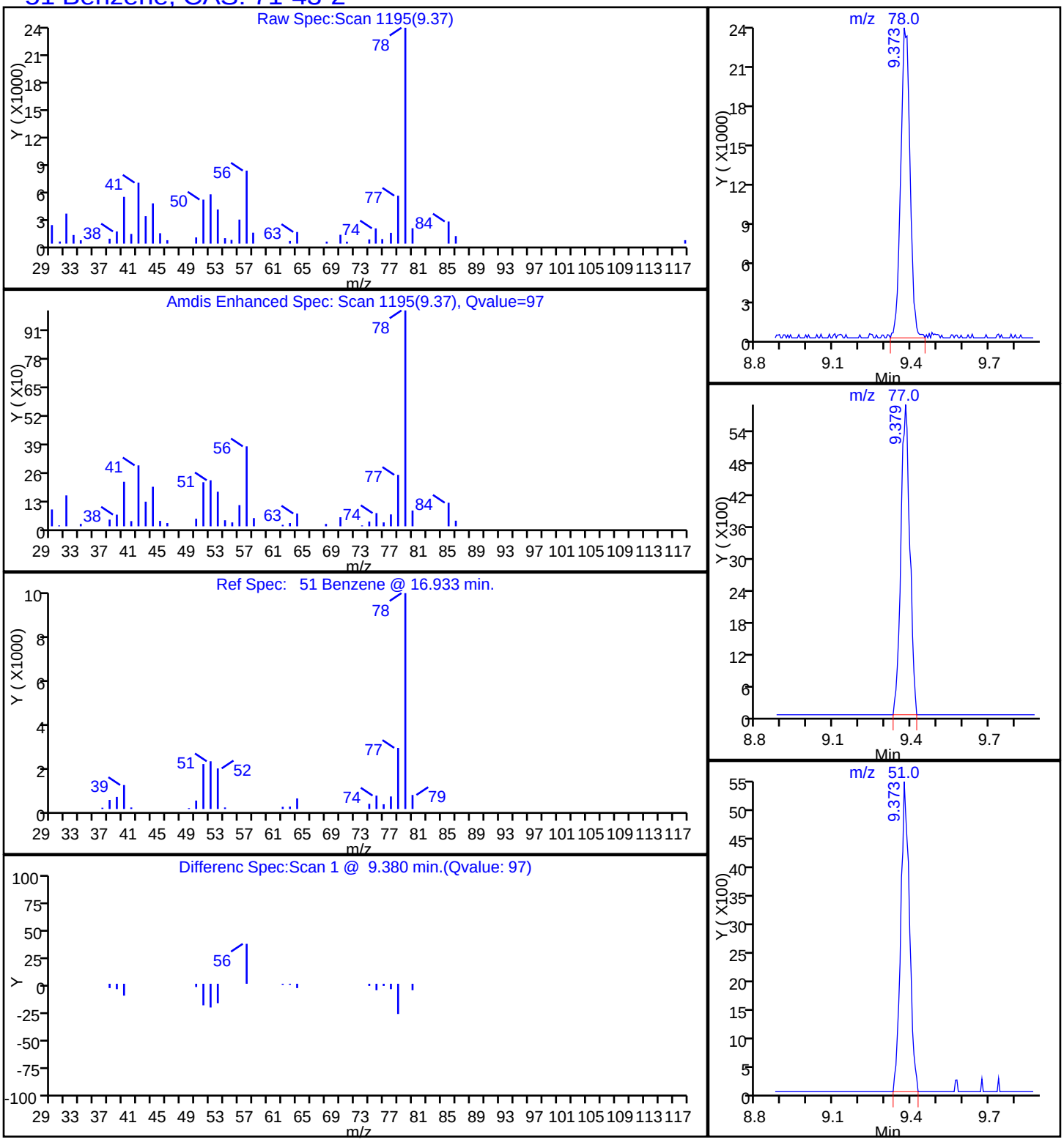
Report Date: 20-May-2016 10:34:29 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D

Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5
Client ID:	C-MID-GAC		
Operator ID:	007126	ALS Bottle#:	15 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

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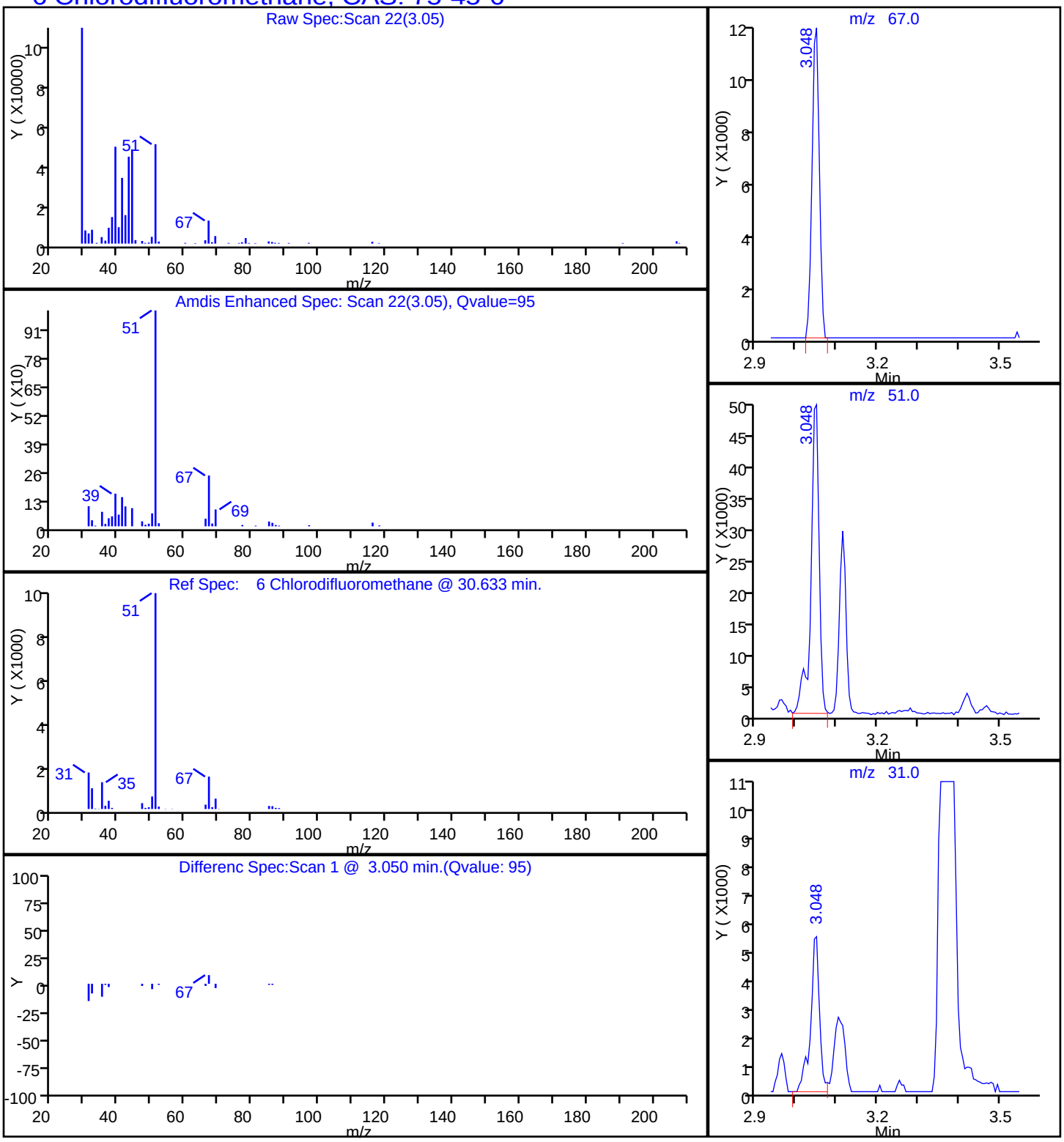
Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME		
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5		
Client ID:	C-MID-GAC				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D				
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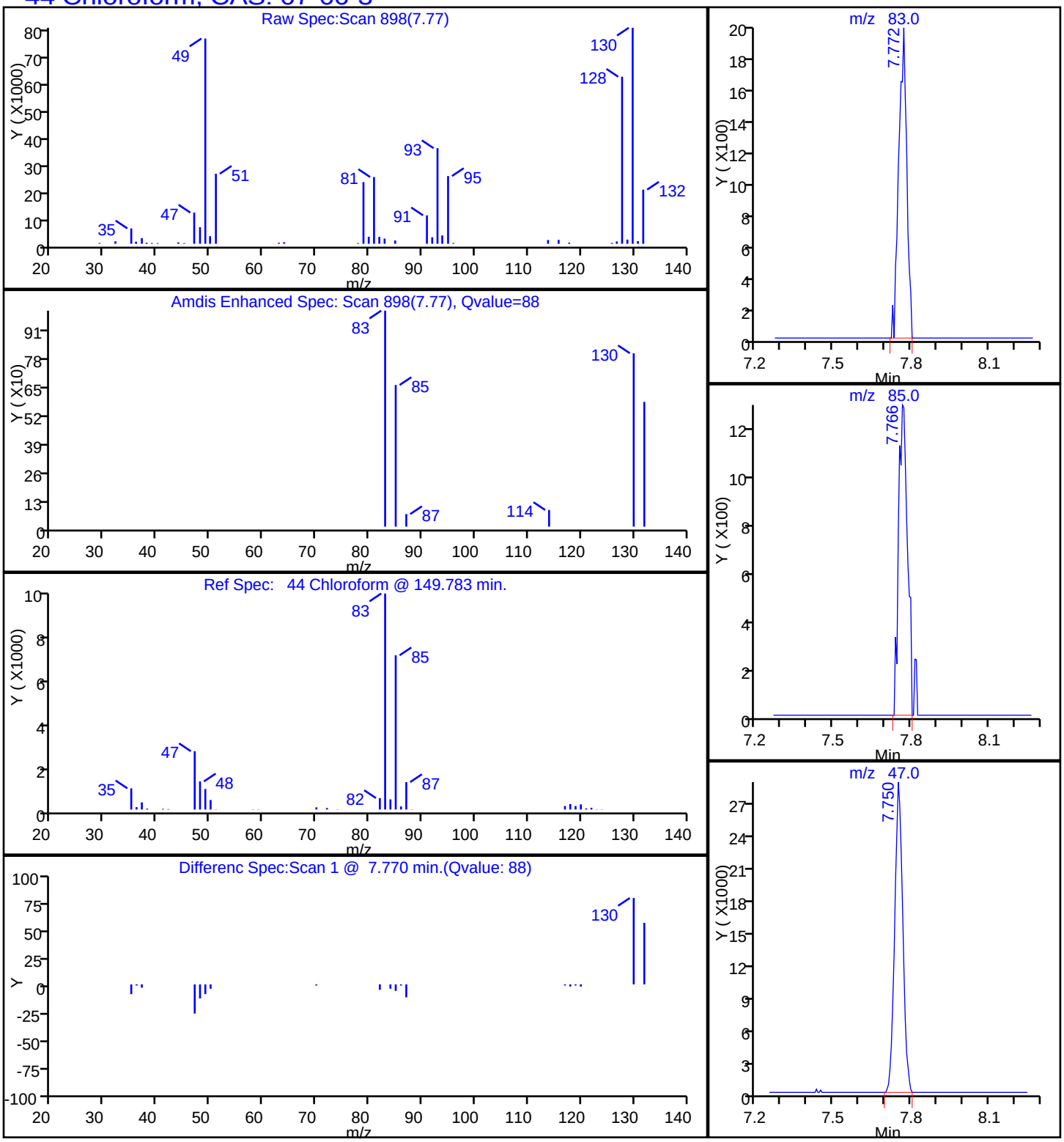
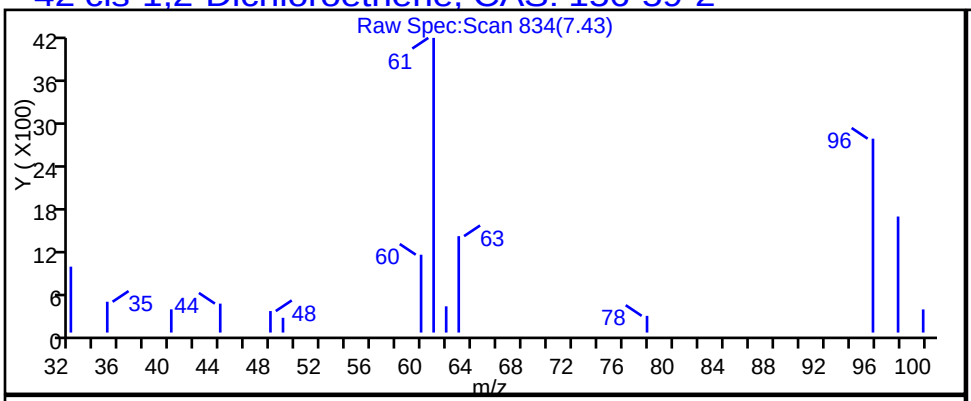
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5		
Client ID:	C-MID-GAC				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

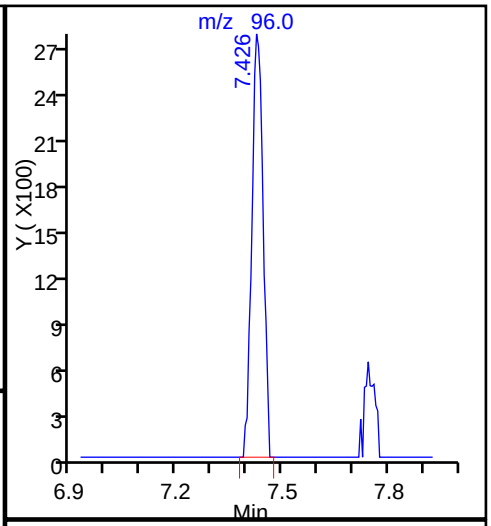
44 Chloroform, CAS: 67-66-3

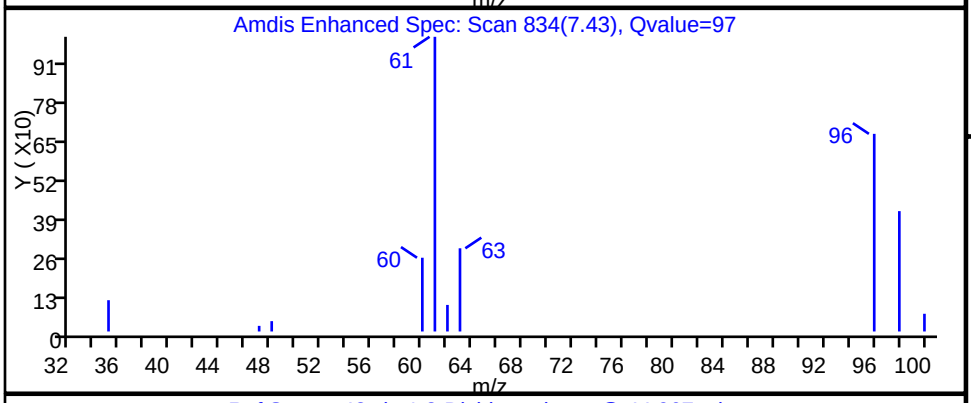


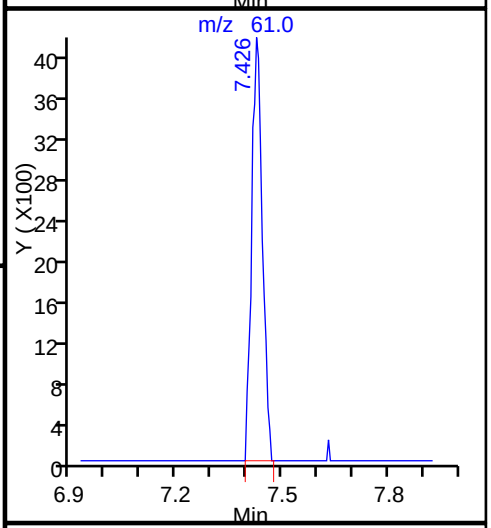
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D
Injection Date: 20-May-2016 04:18:30 Instrument ID: ME
Lims ID: 140-4944-A-5 Lab Sample ID: 140-4944-5
Client ID: C-MID-GAC
Operator ID: 007126 ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

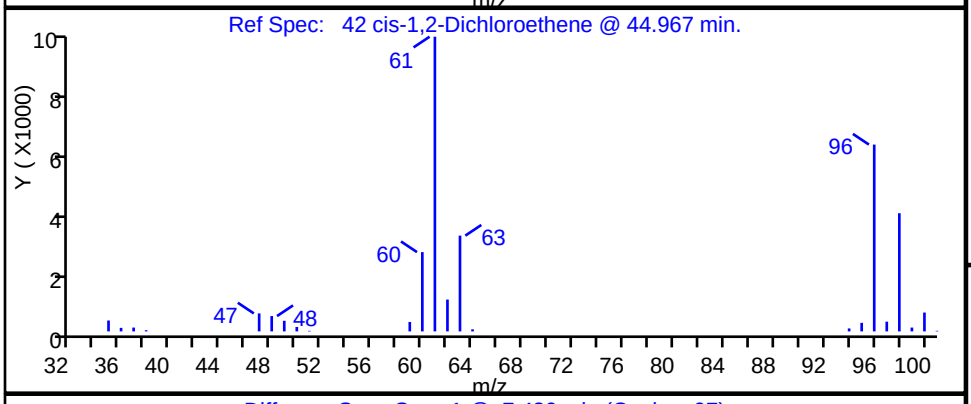
42 cis-1,2-Dichloroethene, CAS: 156-59-2

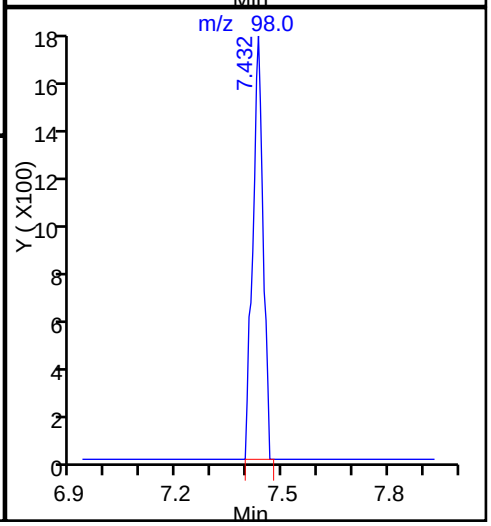


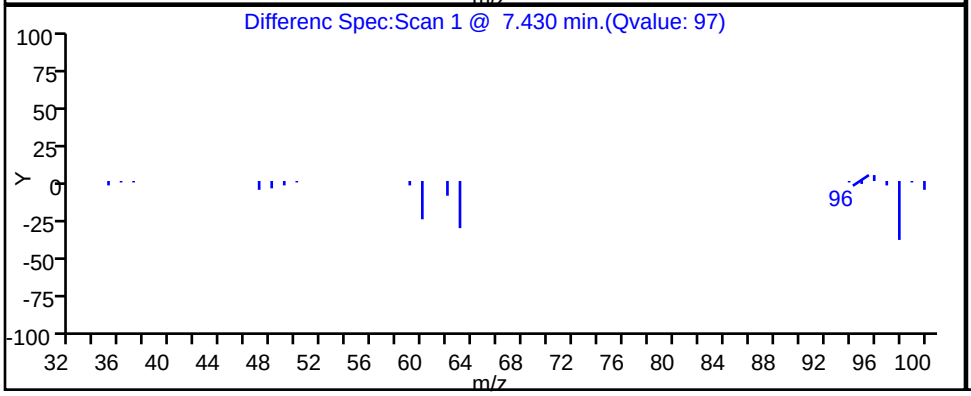












Report Date: 20-May-2016 10:34:29 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D

Injection Date: 20-May-2016 04:18:30 Instrument ID: ME

Lims ID: 140-4944-A-5 Lab Sample ID: 140-4944-5

Client ID: C-MID-GAC

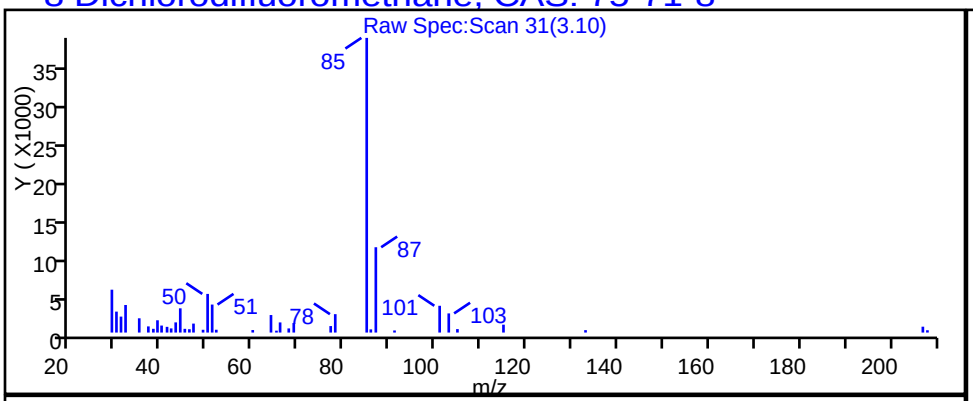
Operator ID: 007126 ALS Bottle#: 15 Worklist Smp#: 23

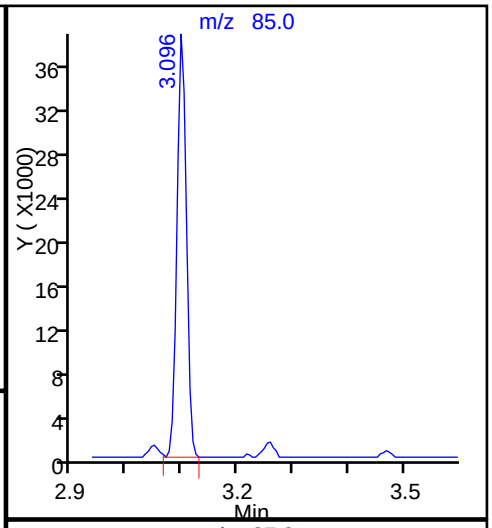
Purge Vol: 500.000 mL Dil. Factor: 1.0000

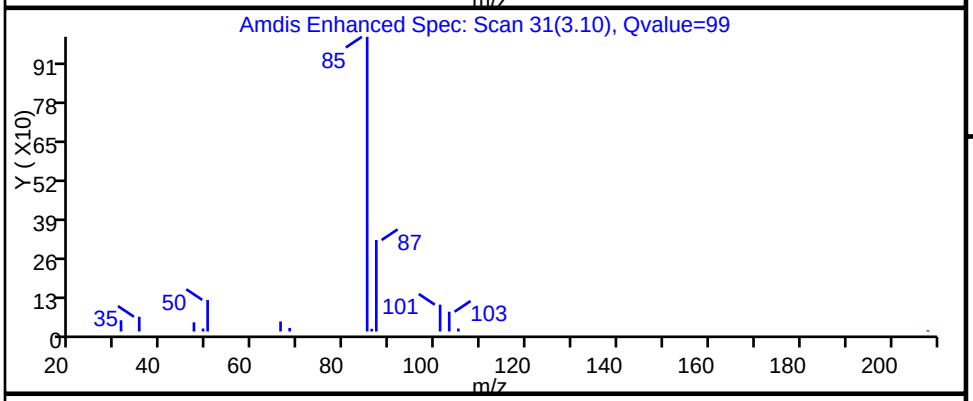
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL

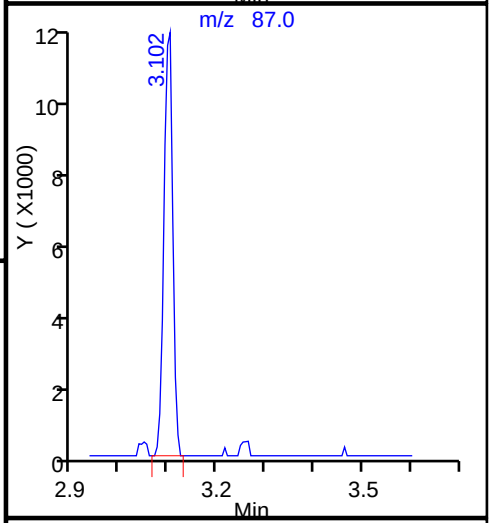
Column: RTX-5 (0.32 mm) Detector MS SCAN

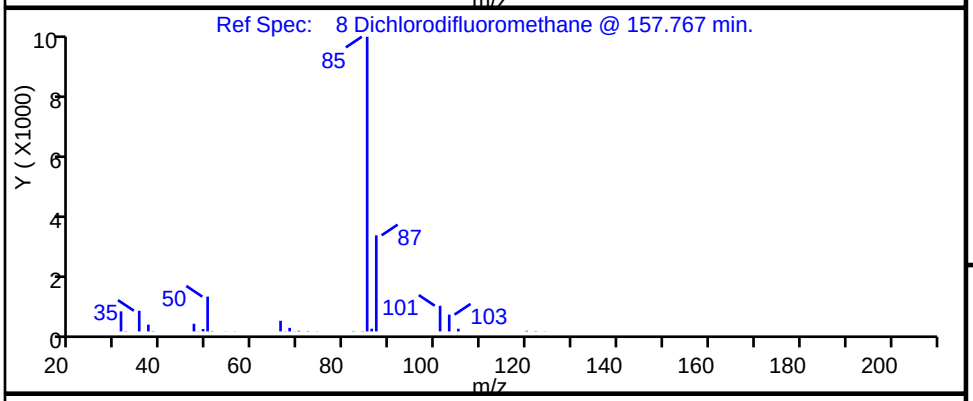
8 Dichlorodifluoromethane, CAS: 75-71-8

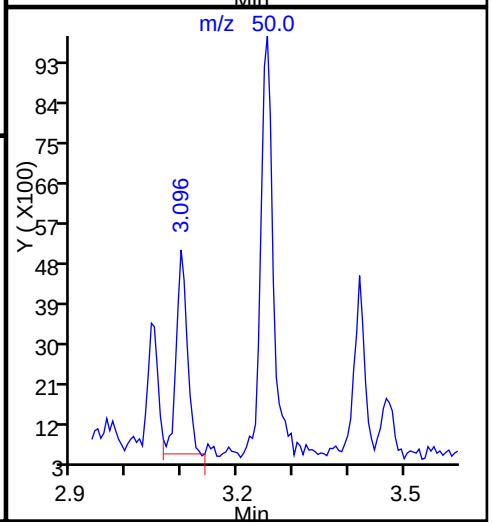


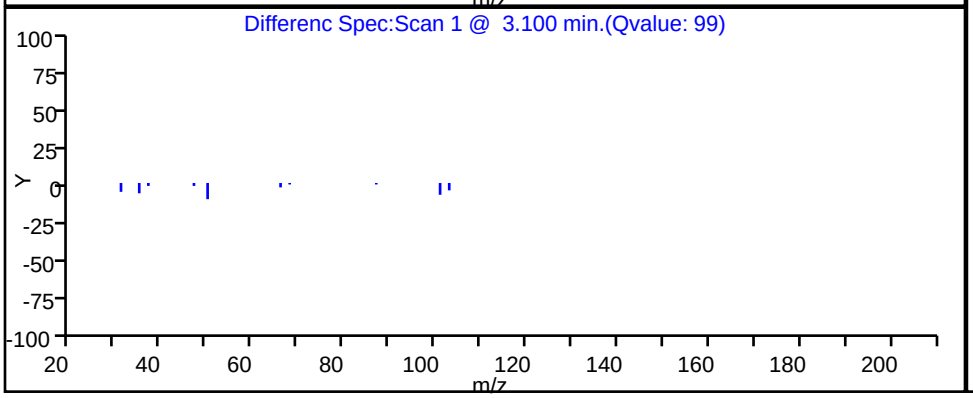










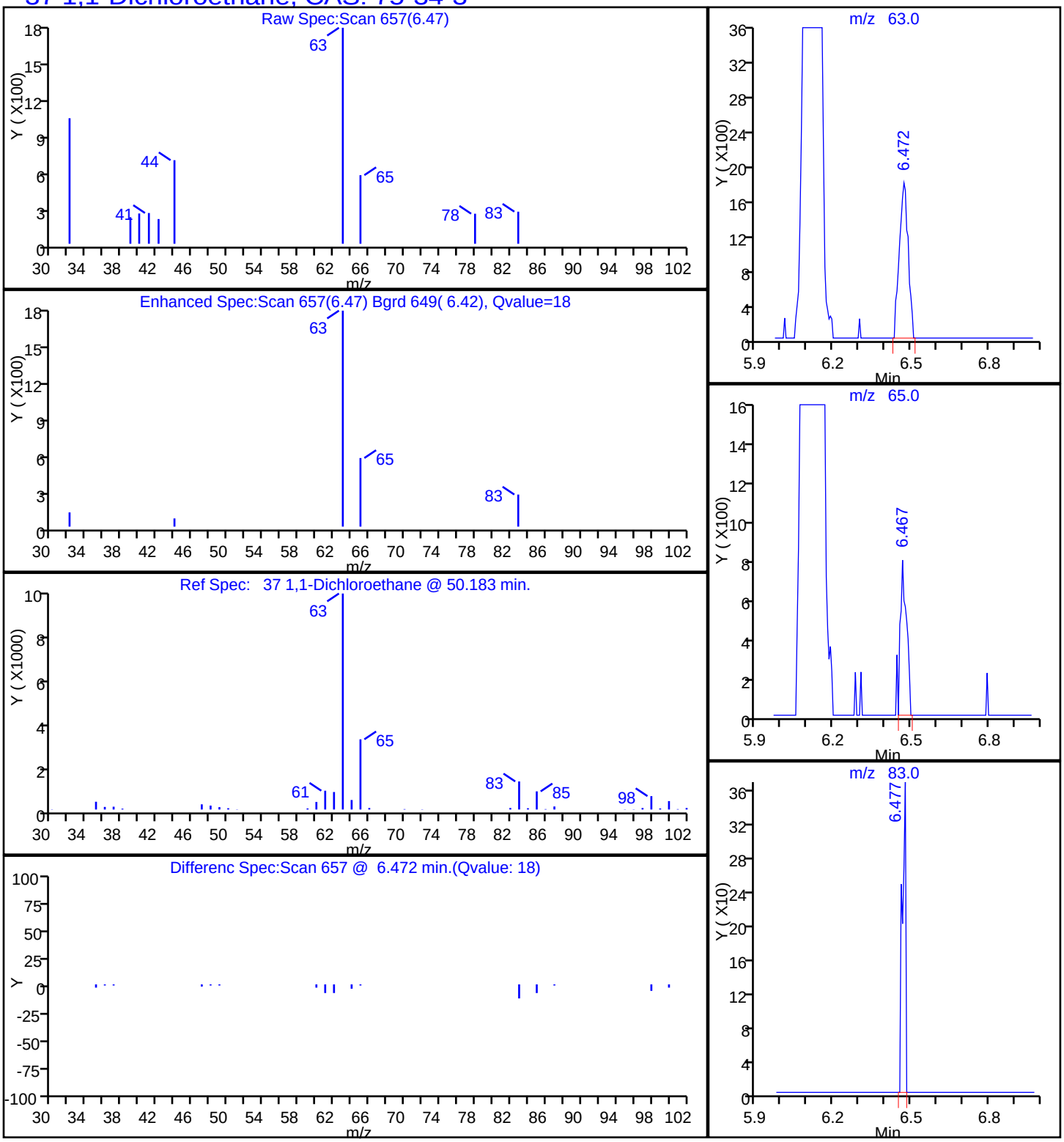


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D

Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5
Client ID:	C-MID-GAC		
Operator ID:	007126	ALS Bottle#:	15 Worklist Smp#: 23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

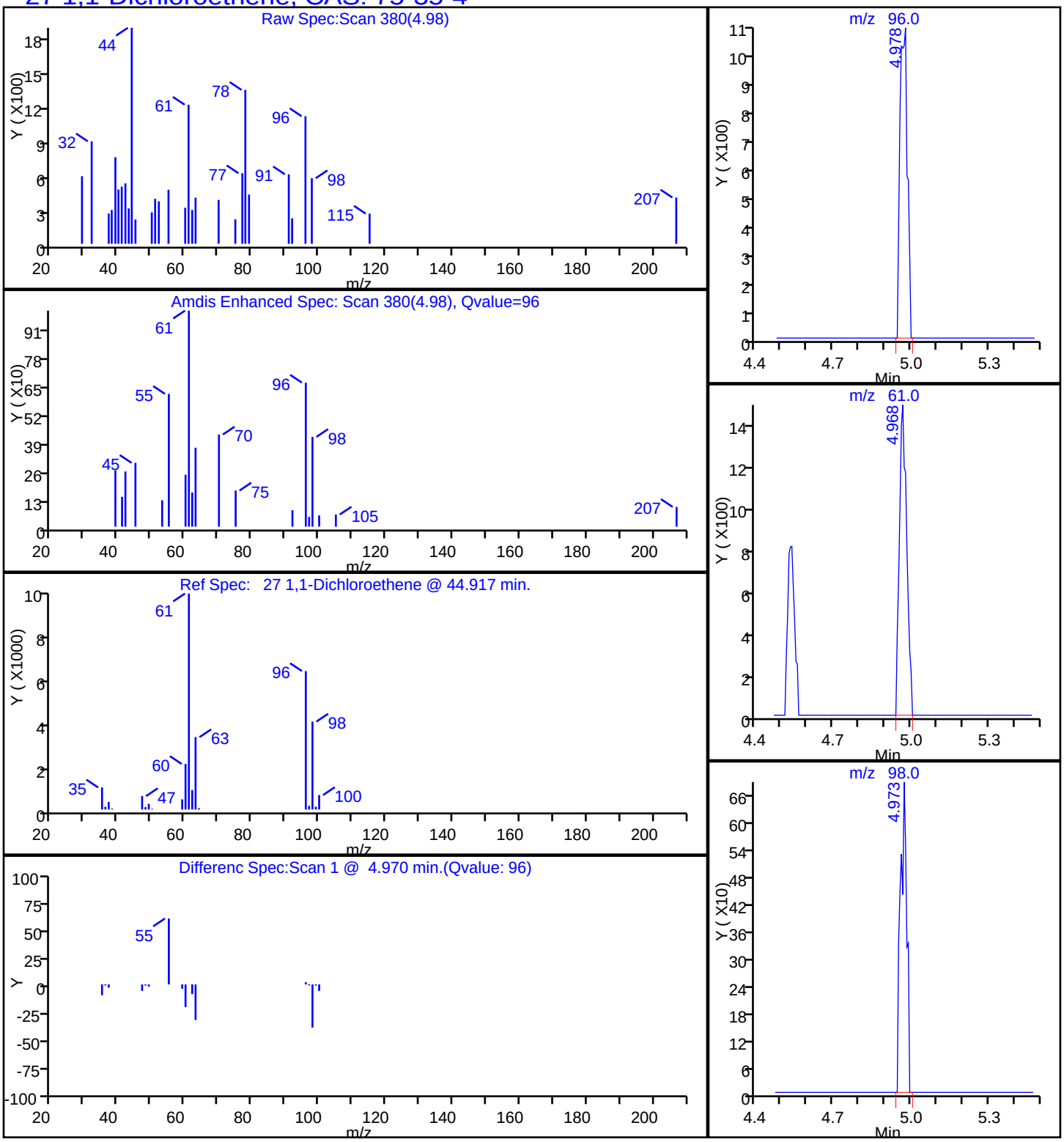
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D				
Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME		
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5		
Client ID:	C-MID-GAC				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

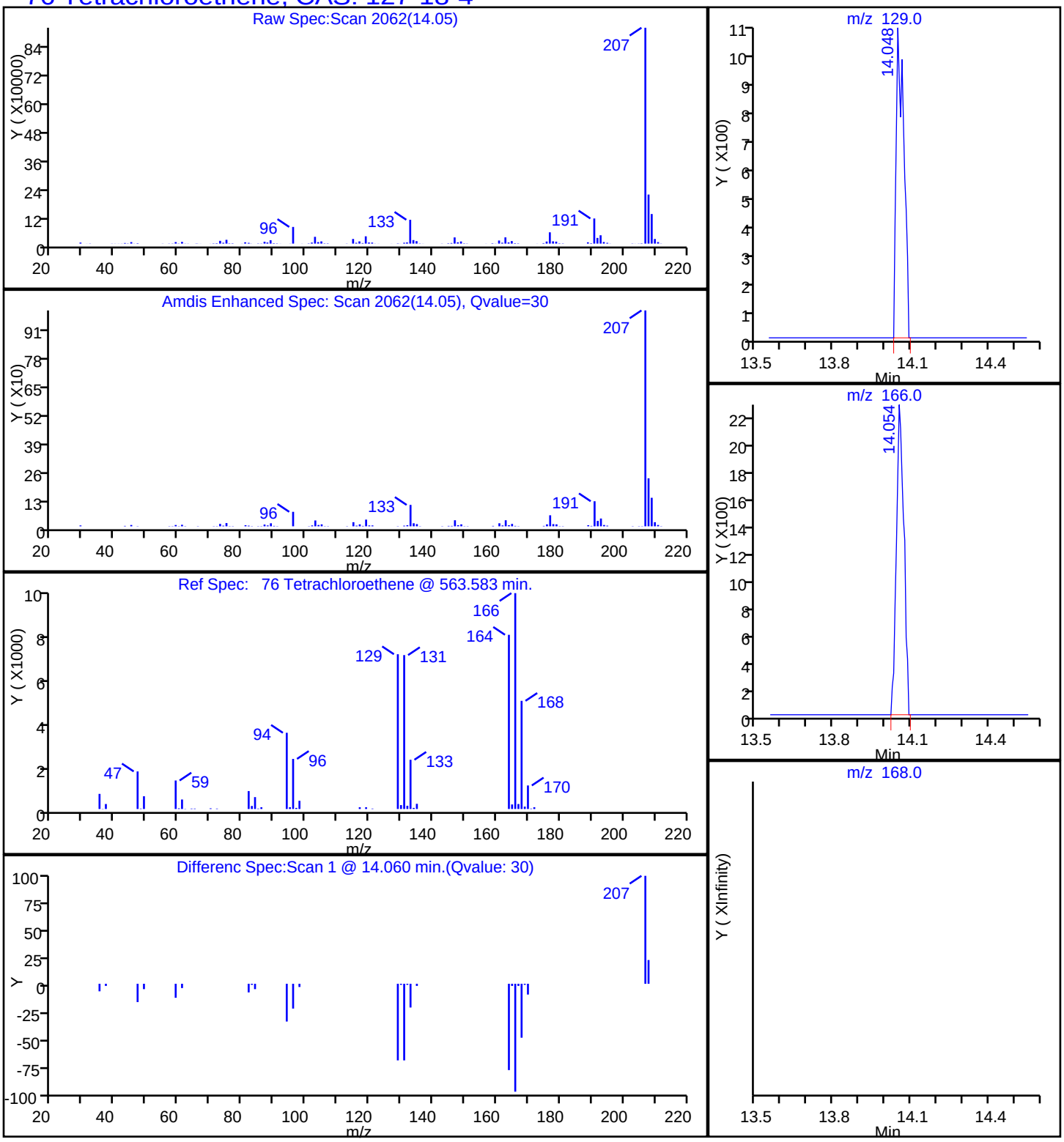
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

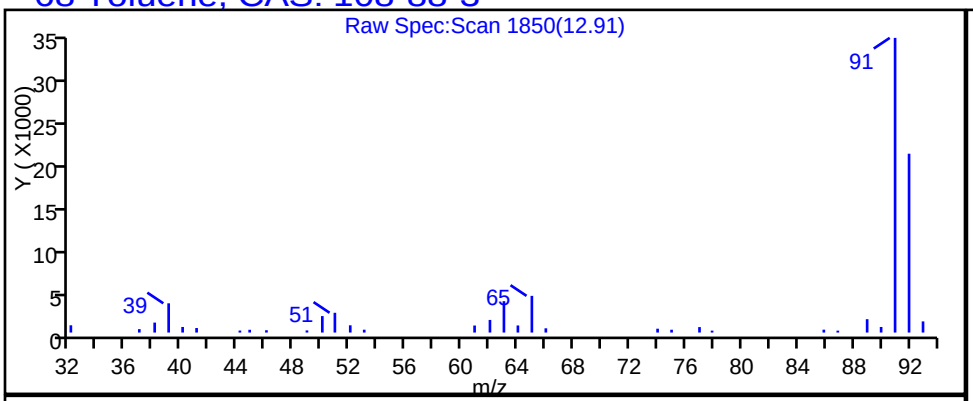
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D				
Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME		
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5		
Client ID:	C-MID-GAC				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

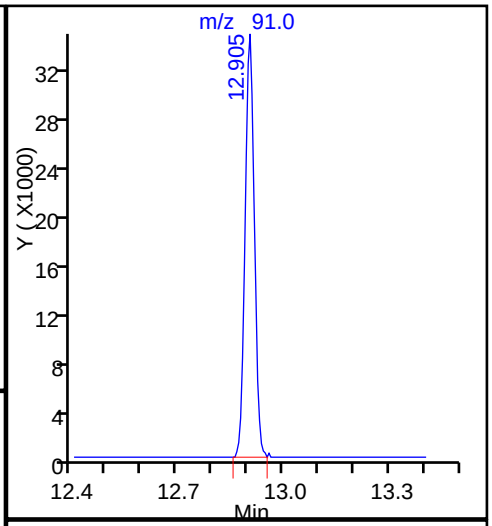
76 Tetrachloroethene, CAS: 127-18-4

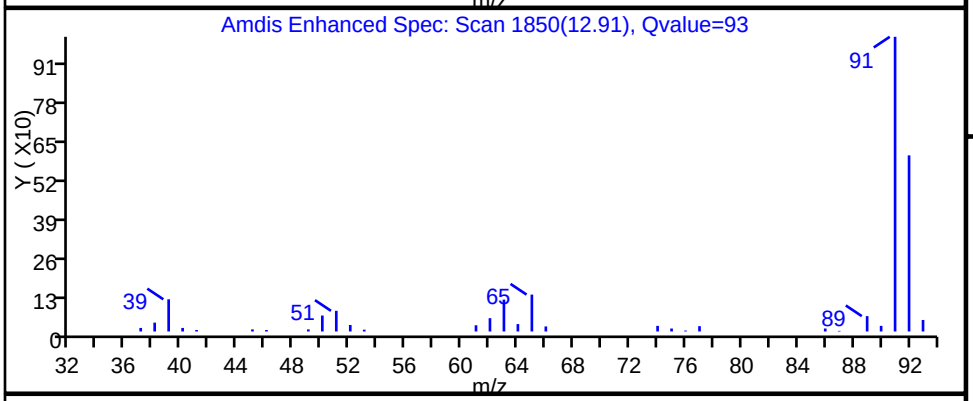


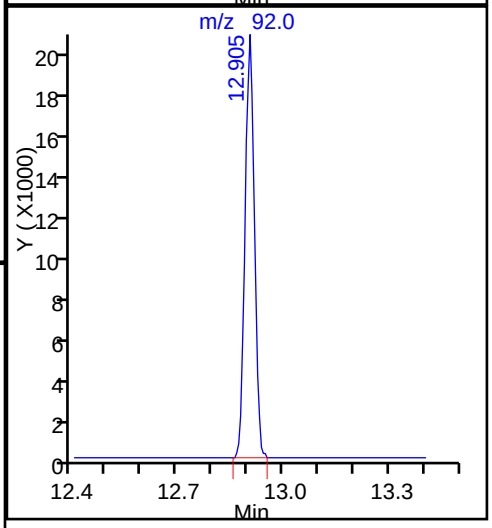
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D
Injection Date: 20-May-2016 04:18:30 Instrument ID: ME
Lims ID: 140-4944-A-5 Lab Sample ID: 140-4944-5
Client ID: C-MID-GAC
Operator ID: 007126 ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

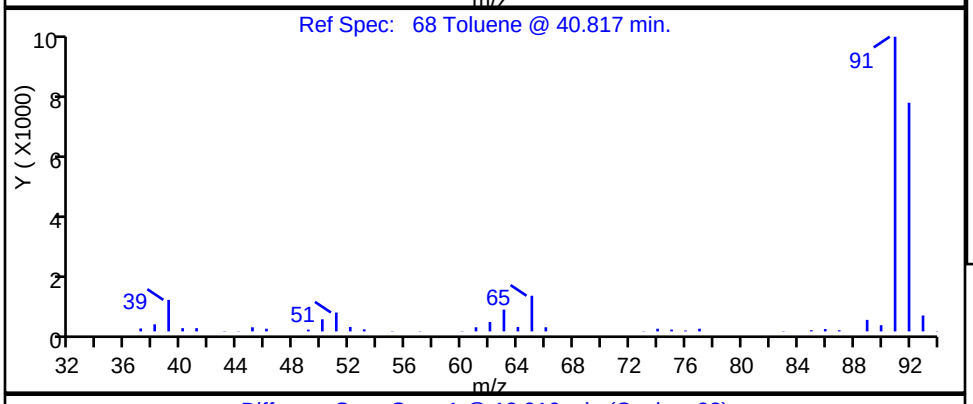
68 Toluene, CAS: 108-88-3

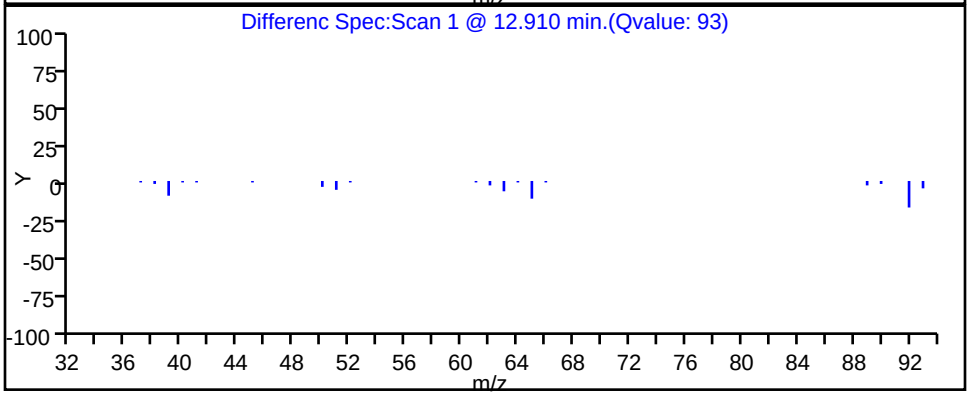






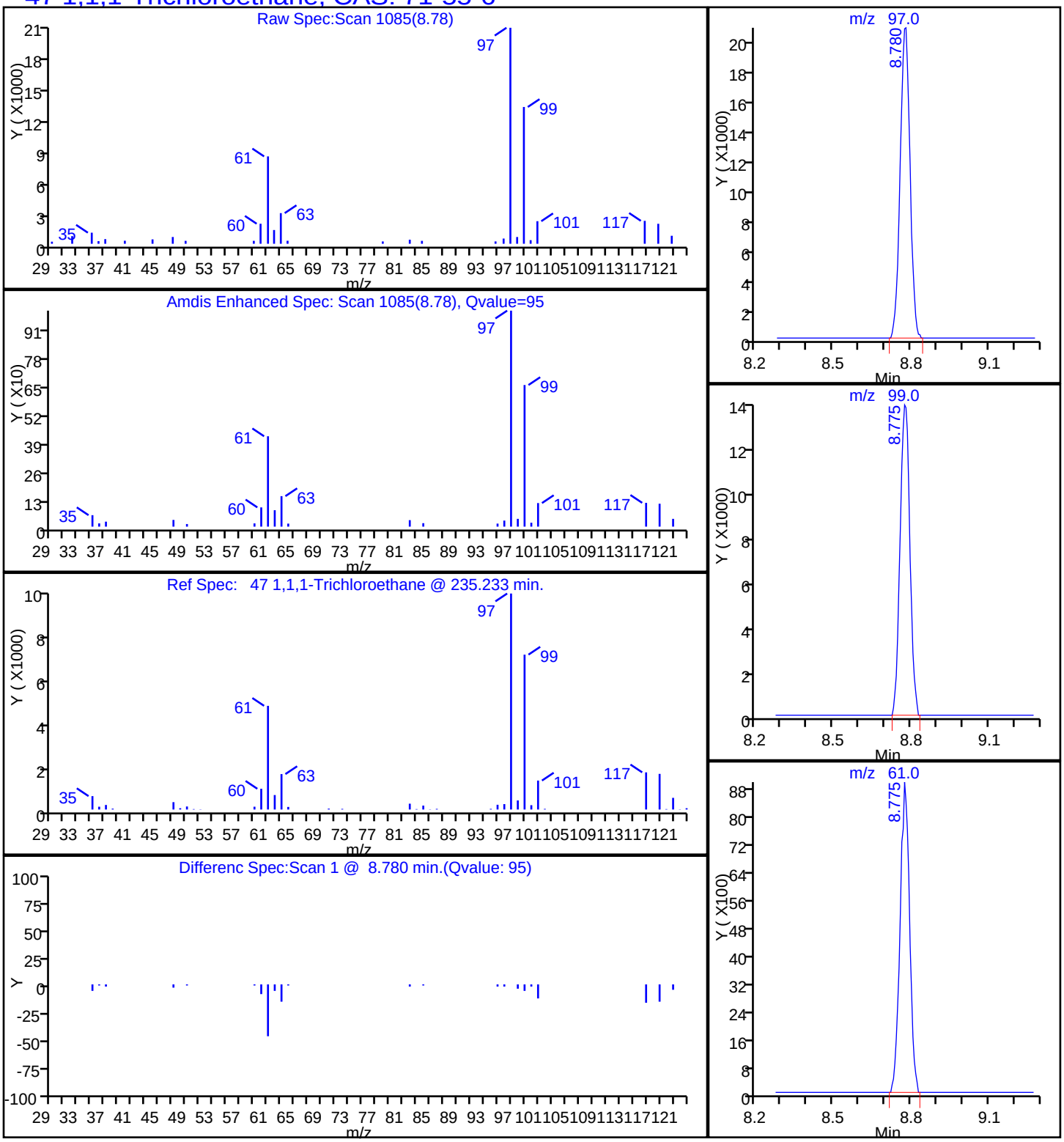






Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D
Injection Date: 20-May-2016 04:18:30 Instrument ID: ME
Lims ID: 140-4944-A-5 Lab Sample ID: 140-4944-5
Client ID: C-MID-GAC
Operator ID: 007126 ALS Bottle#: 15 Worklist Smp#: 23
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

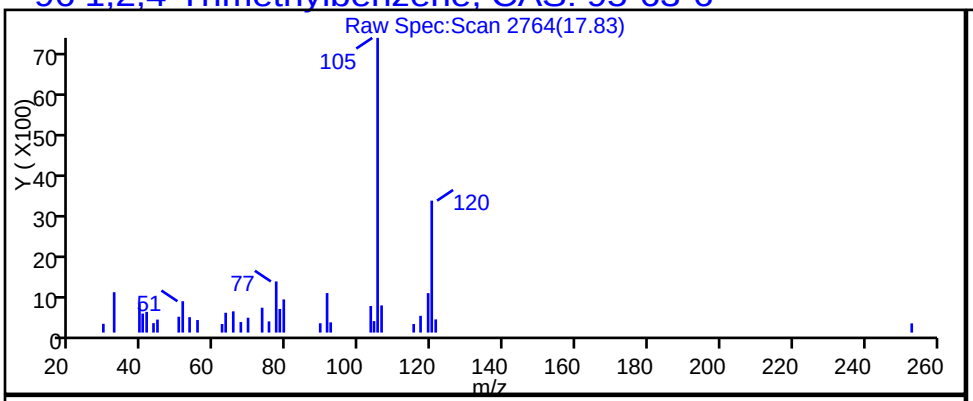
47 1,1,1-Trichloroethane, CAS: 71-55-6

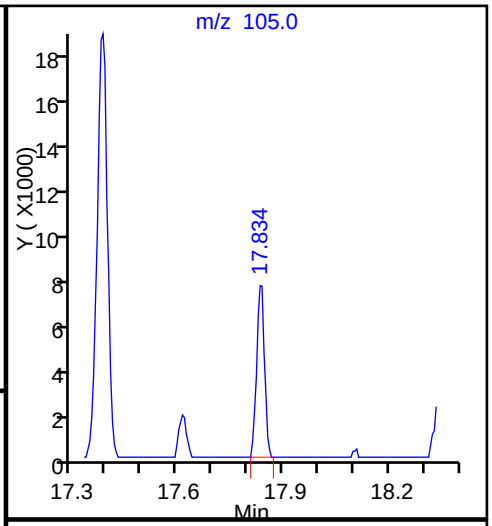


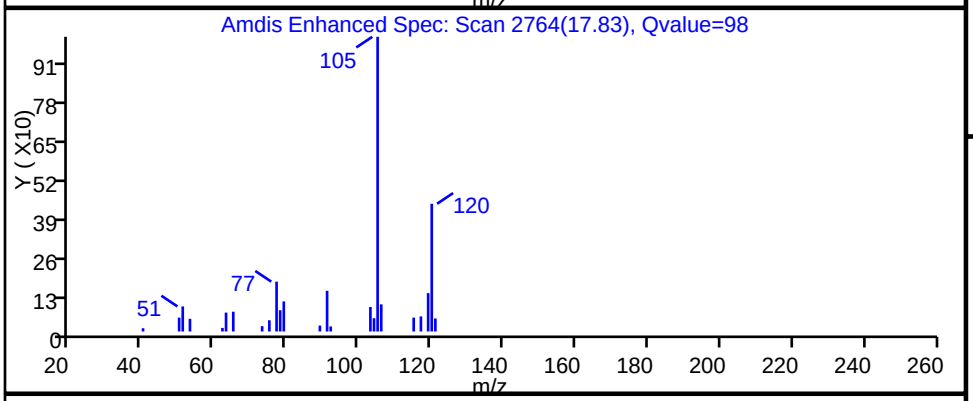
TestAmerica Knoxville

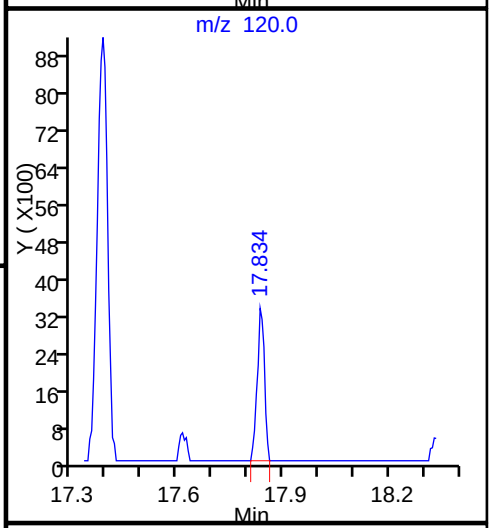
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P115.D				
Injection Date:	20-May-2016 04:18:30	Instrument ID:	ME		
Lims ID:	140-4944-A-5	Lab Sample ID:	140-4944-5		
Client ID:	C-MID-GAC				
Operator ID:	007126	ALS Bottle#:	15	Worklist Smp#:	23
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

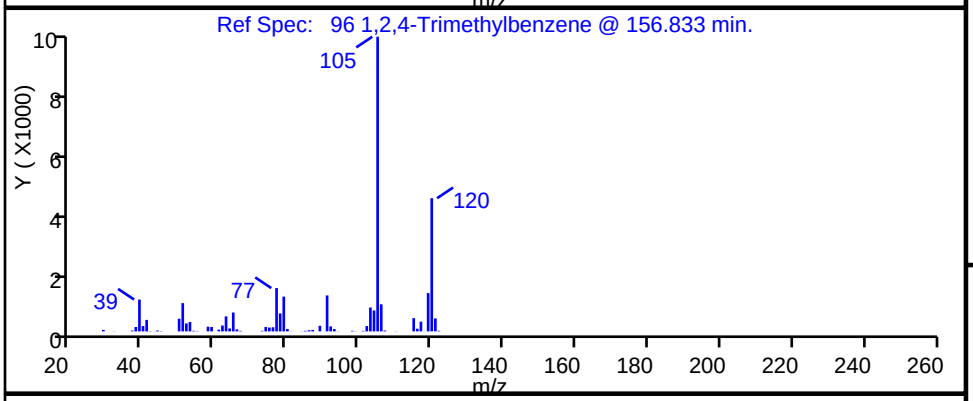
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

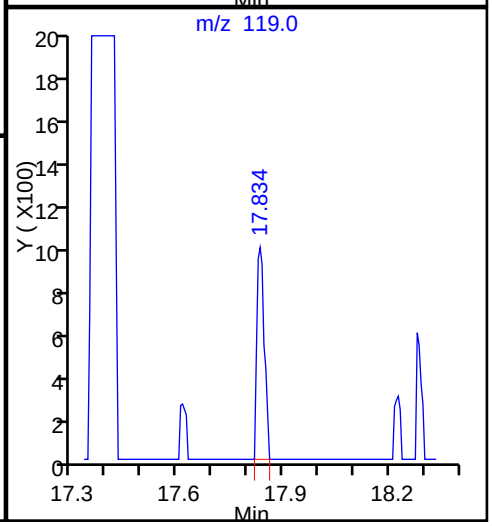


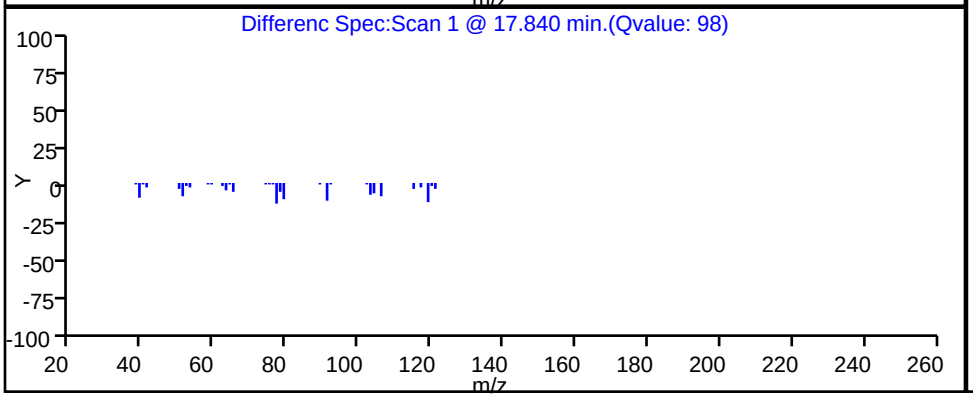












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-4944-6

Matrix: Air | Lab File ID: EE19P116.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 13:45

Sample wt/vol: 100(mL) | Date Analyzed: 05/20/2016 05:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.2		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.9		0.40	0.075
67-66-3	Chloroform	119.38	0.094	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.12	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.70		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.13	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	ND		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	2.2		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	1.3	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.58		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.22	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4944-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-4944-6

Matrix: Air | Lab File ID: EE19P116.D

Analysis Method: TO 15 LL | Date Collected: 05/12/2016 13:45

Sample wt/vol: 100(mL) | Date Analyzed: 05/20/2016 05:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4987 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.9		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	6.8		1.4	0.27
67-66-3	Chloroform	119.38	0.46	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	0.49	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.5		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	0.51	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	ND		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.0		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	8.3		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	7.2	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	2.9		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.1	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Lims ID:	140-4944-A-6				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	20-May-2016 05:50:30	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-4944-a-6				
Misc. Info.:	E051916,TO155,,140-0002879-025				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	23-May-2016 15:31:45	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK031				
First Level Reviewer: liul		Date:	23-May-2016 15:31:45		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.761	7.755	0.006	81	271120	4.00	
* 2 1,4-Difluorobenzene	114	9.988	9.982	0.006	95	1174889	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	90	1053442	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	87	805016	4.08	
6 Chlorodifluoromethane	67	3.053	3.037	0.016	94	13206	0.3824	
8 Dichlorodifluoromethane	85	3.102	3.091	0.011	99	42961	0.1398	
31 Methylene Chloride	84	5.313	5.296	0.017	94	19186	0.2317	
37 1,1-Dichloroethane	63	6.483	6.467	0.016	96	4431	0.0254	
42 cis-1,2-Dichloroethene	96	7.443	7.426	0.017	93	2223	0.0245	
44 Chloroform	83	7.772	7.766	0.006	28	4014	0.0187	
47 1,1,1-Trichloroethane	97	8.780	8.774	0.006	95	61869	0.2654	
51 Benzene	78	9.384	9.378	0.006	98	58418	0.2450	
68 Toluene	91	12.905	12.905	0.000	94	114664	0.4413	
92 1,3,5-Trimethylbenzene	120	17.365	17.365	0.001	90	7492	0.0435	
96 1,2,4-Trimethylbenzene	105	17.834	17.834	0.000	98	34844	0.1162	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

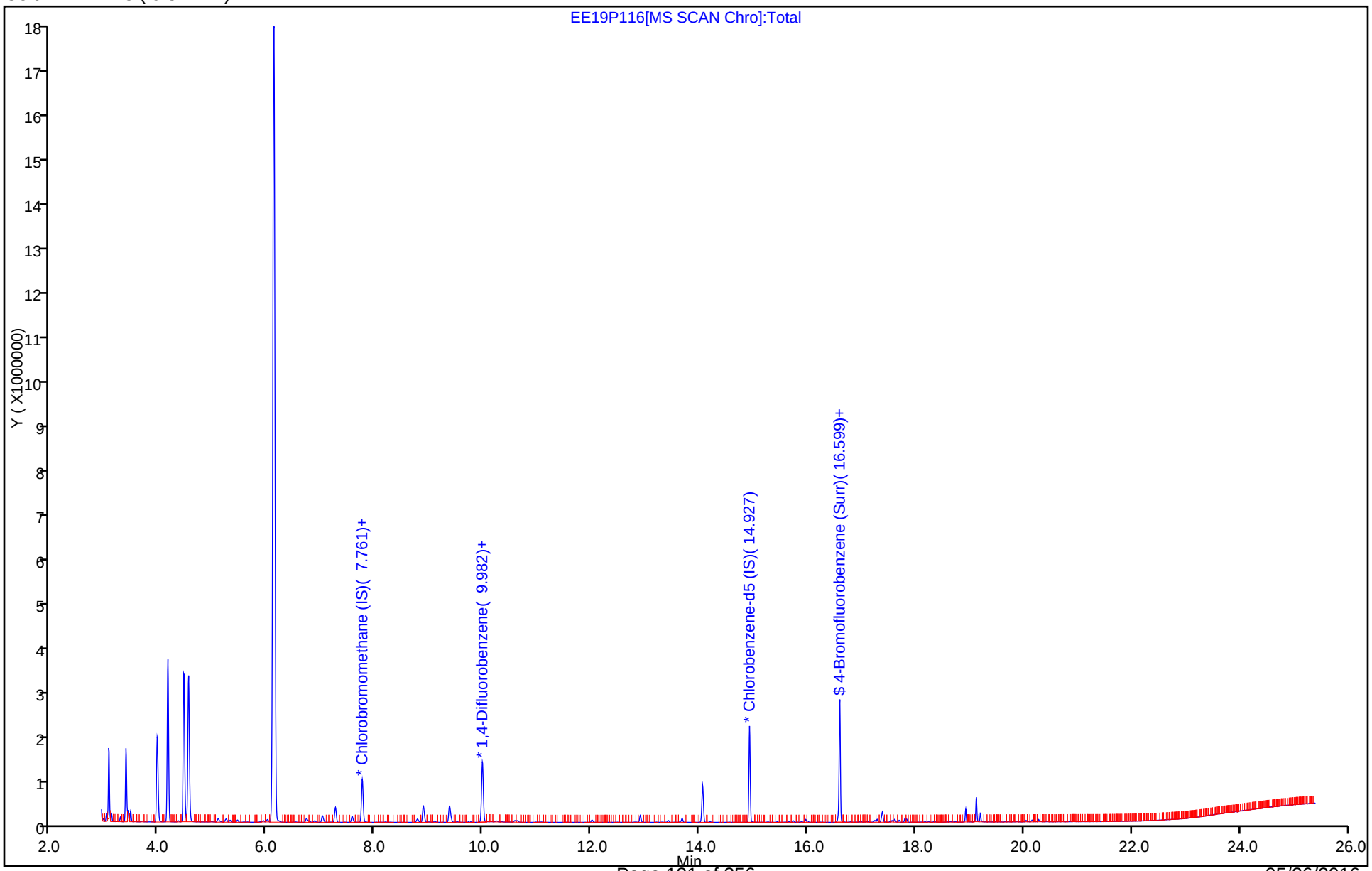
Report Date: 23-May-2016 15:31:49 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D

Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6	Worklist Smp#:	25
Client ID:	C-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

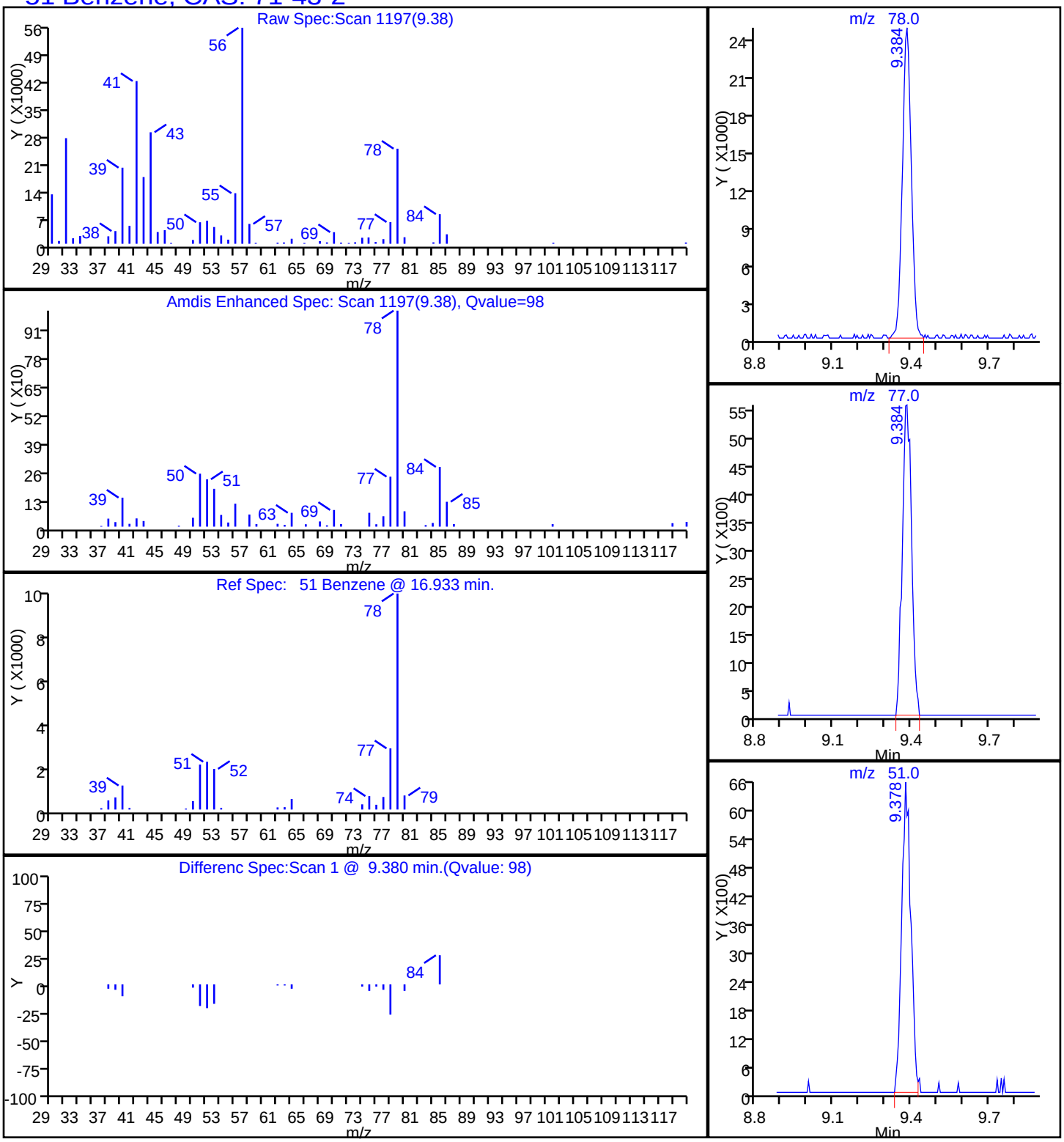
Column: RTX-5 (0.32 mm)



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

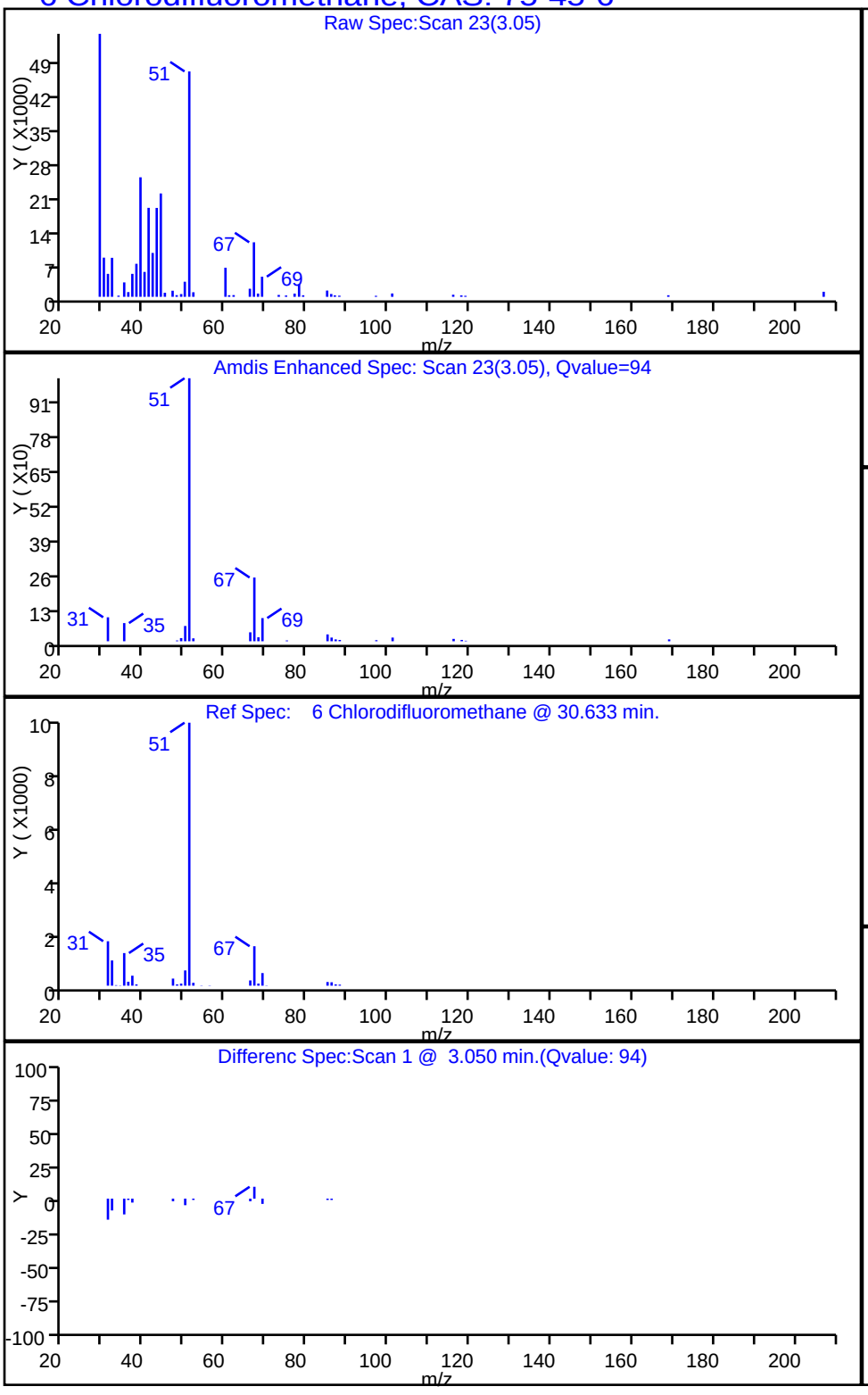
51 Benzene, CAS: 71-43-2

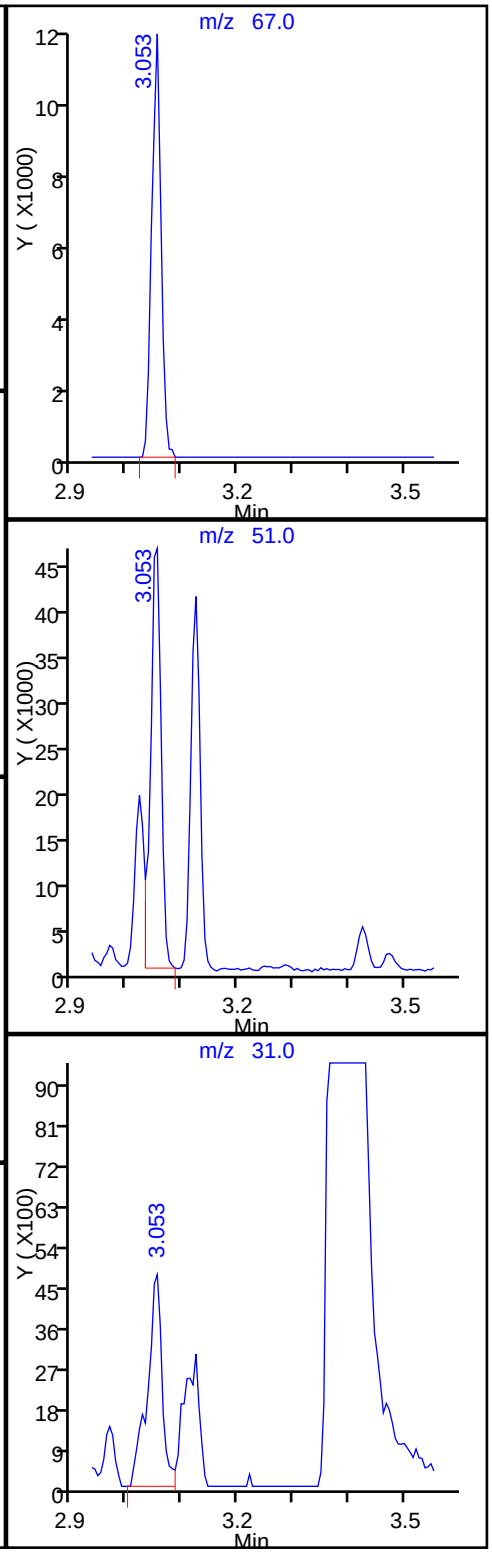


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

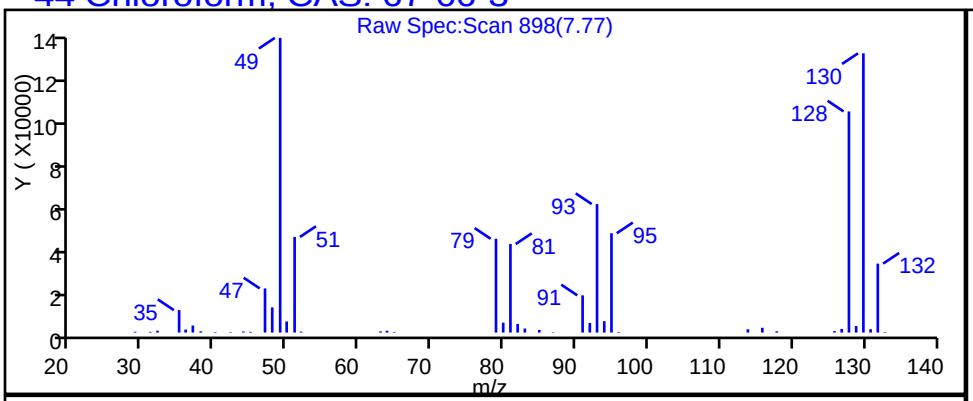


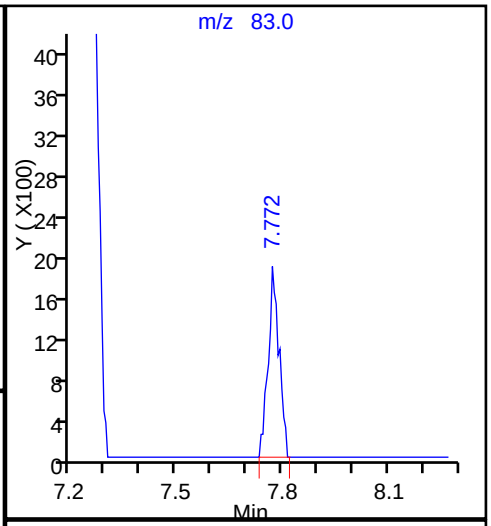


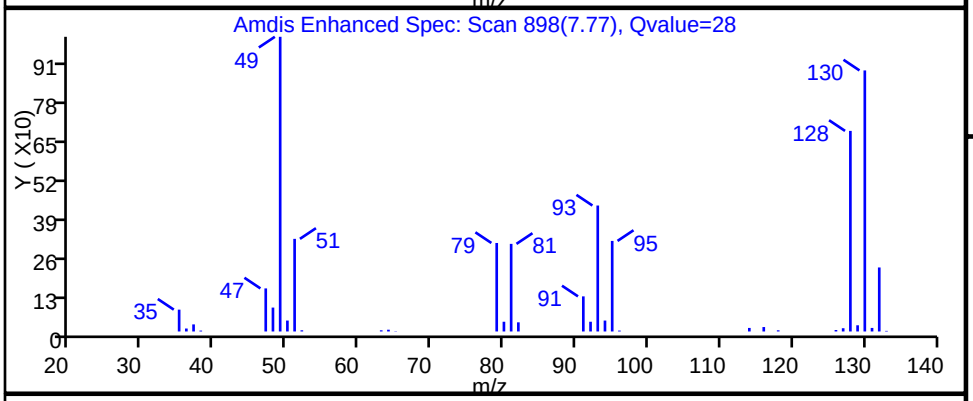
TestAmerica Knoxville

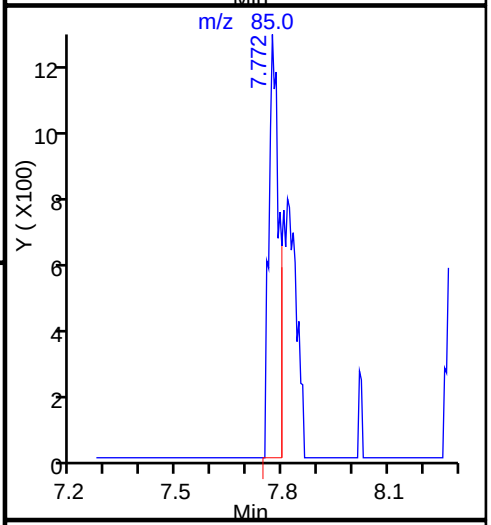
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

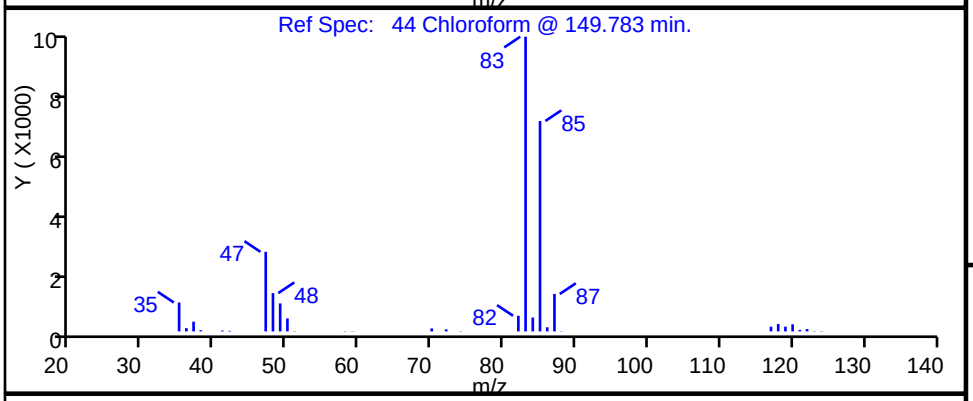
44 Chloroform, CAS: 67-66-3

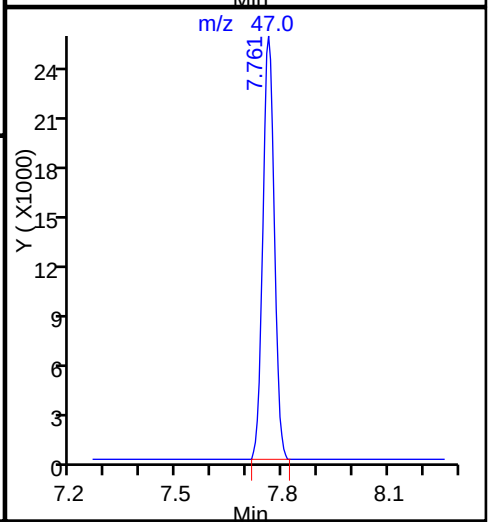


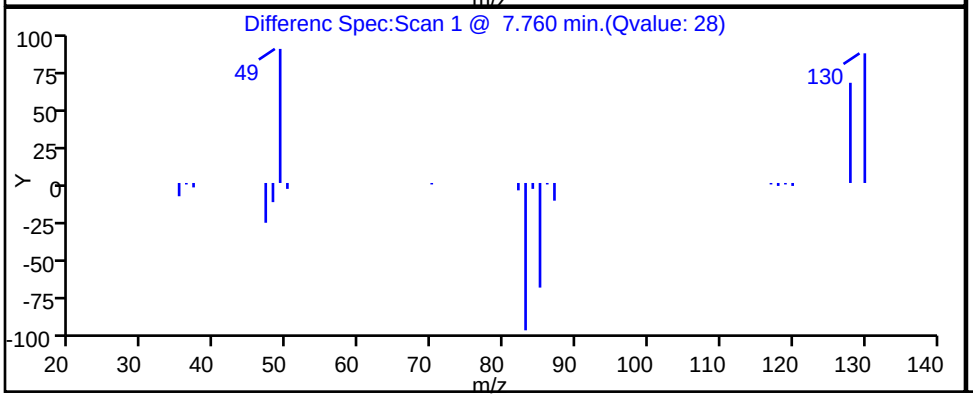








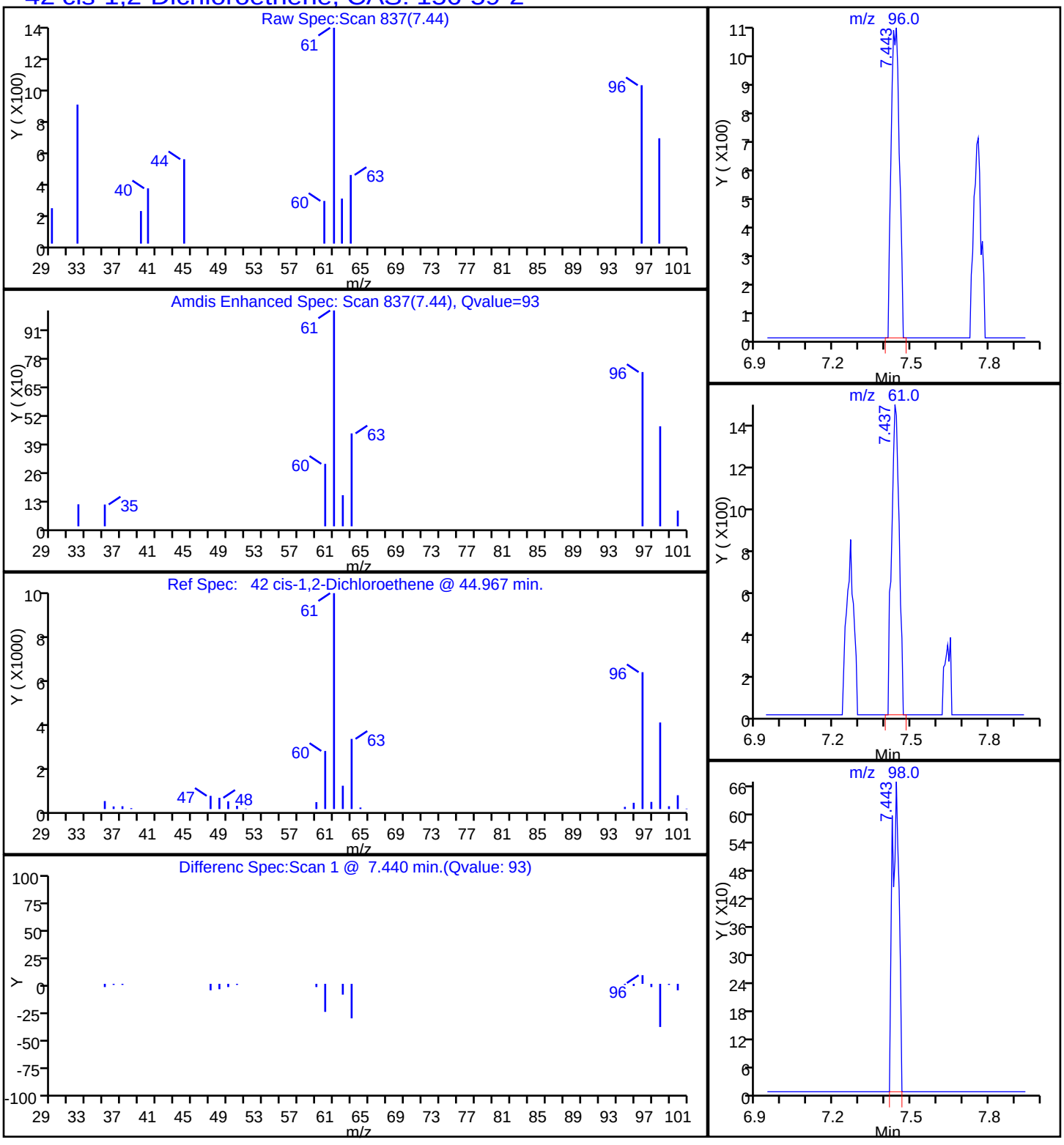




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

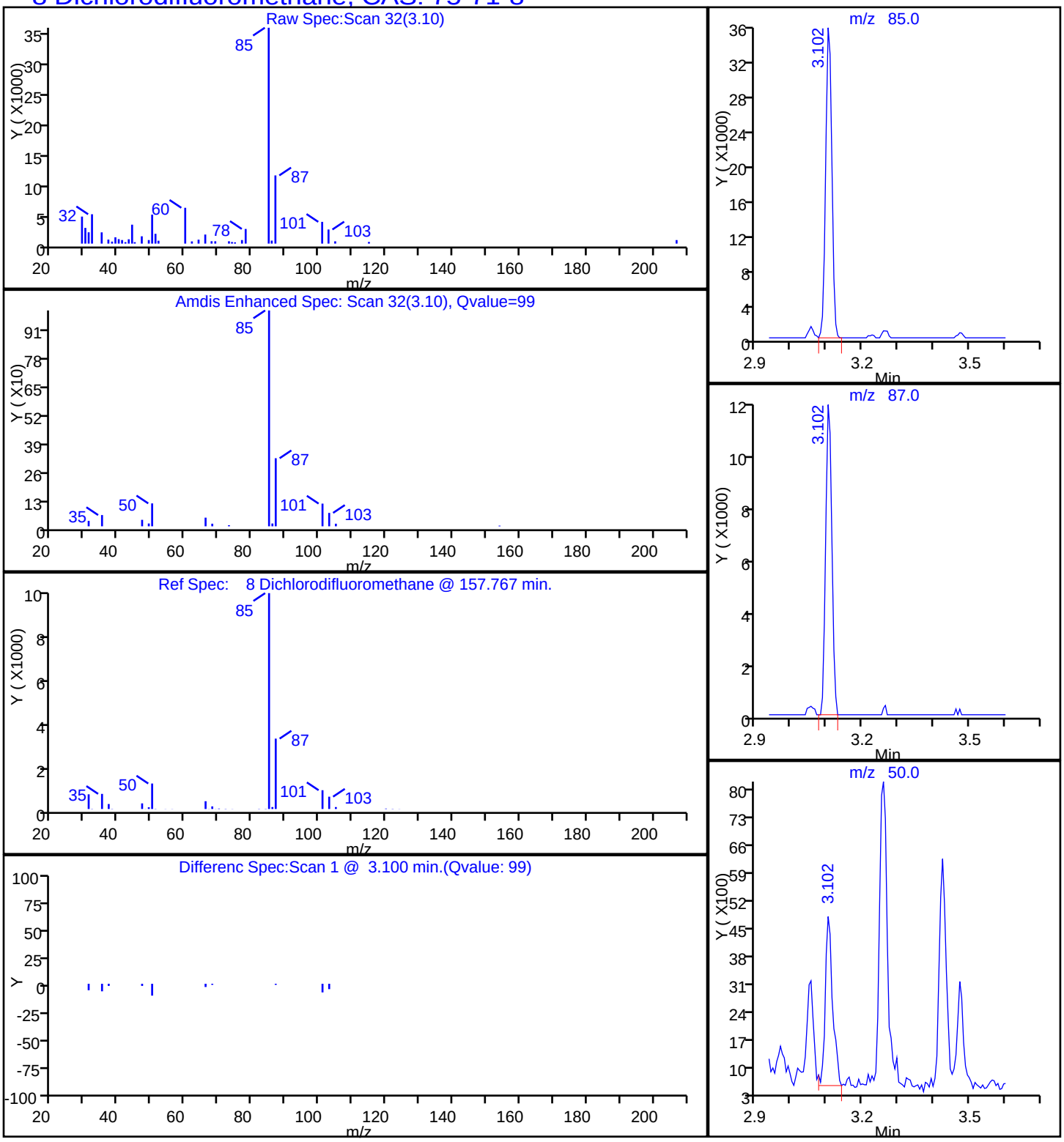
42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

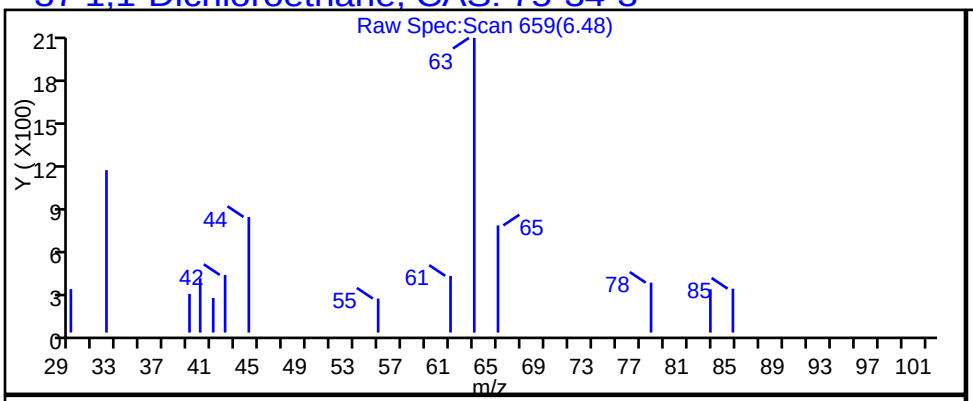
8 Dichlorodifluoromethane, CAS: 75-71-8

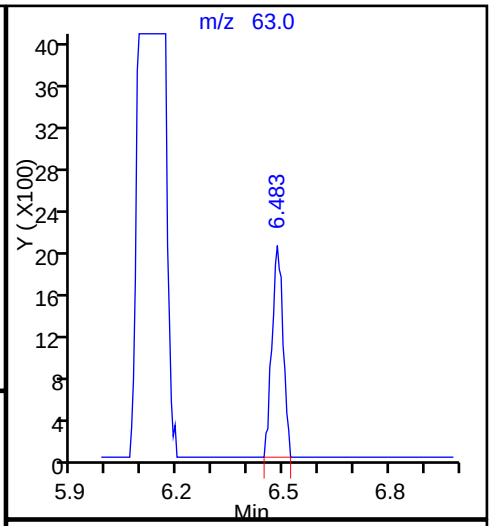


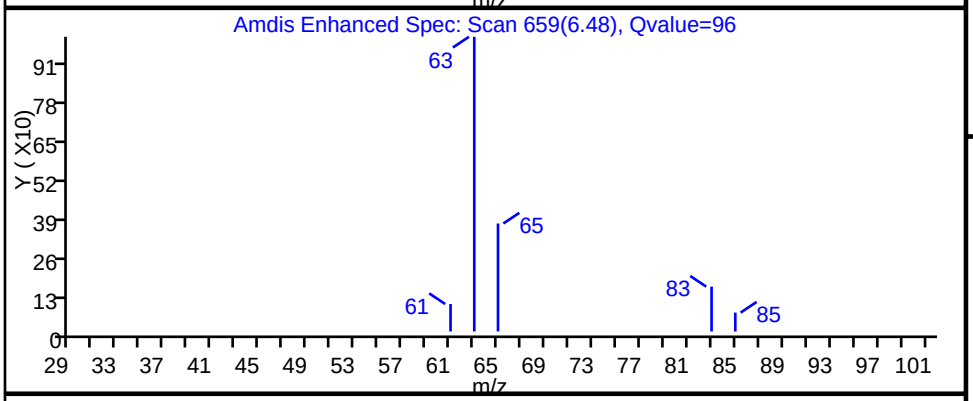
TestAmerica Knoxville

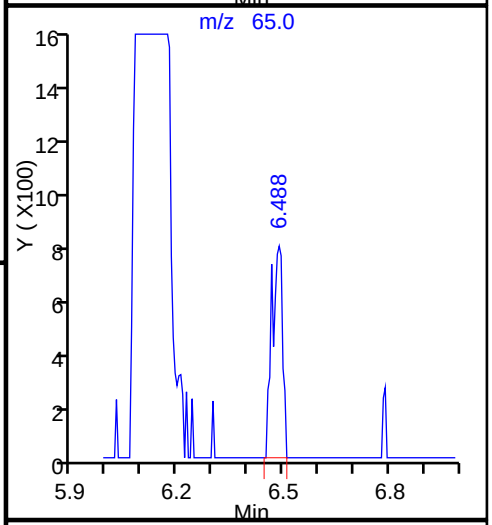
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D		
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6
Client ID:	C-EFFLUENT		
Operator ID:	007126	ALS Bottle#:	16 Worklist Smp#: 25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

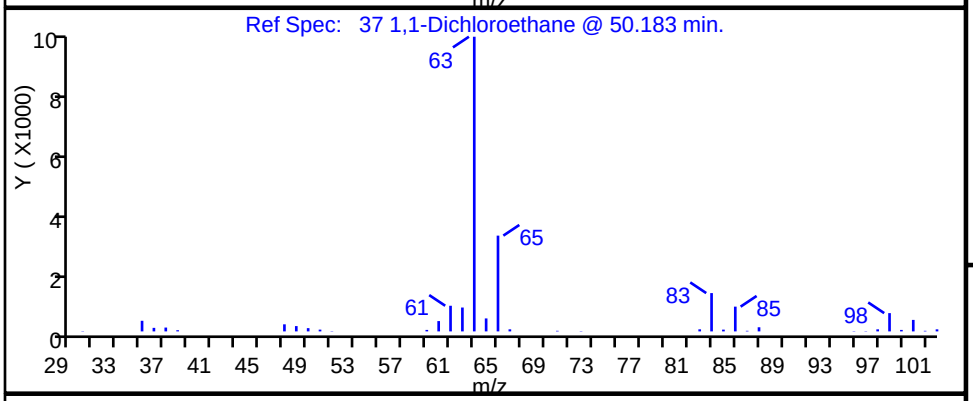
37 1,1-Dichloroethane, CAS: 75-34-3

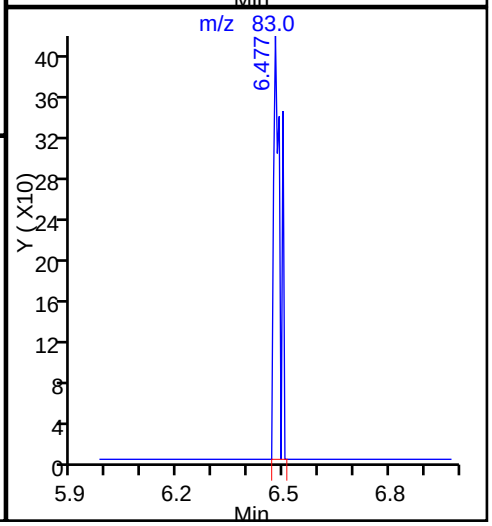


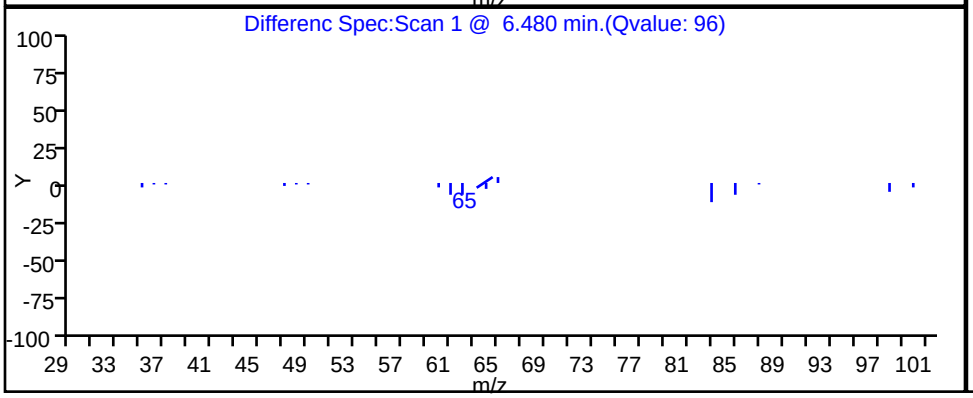








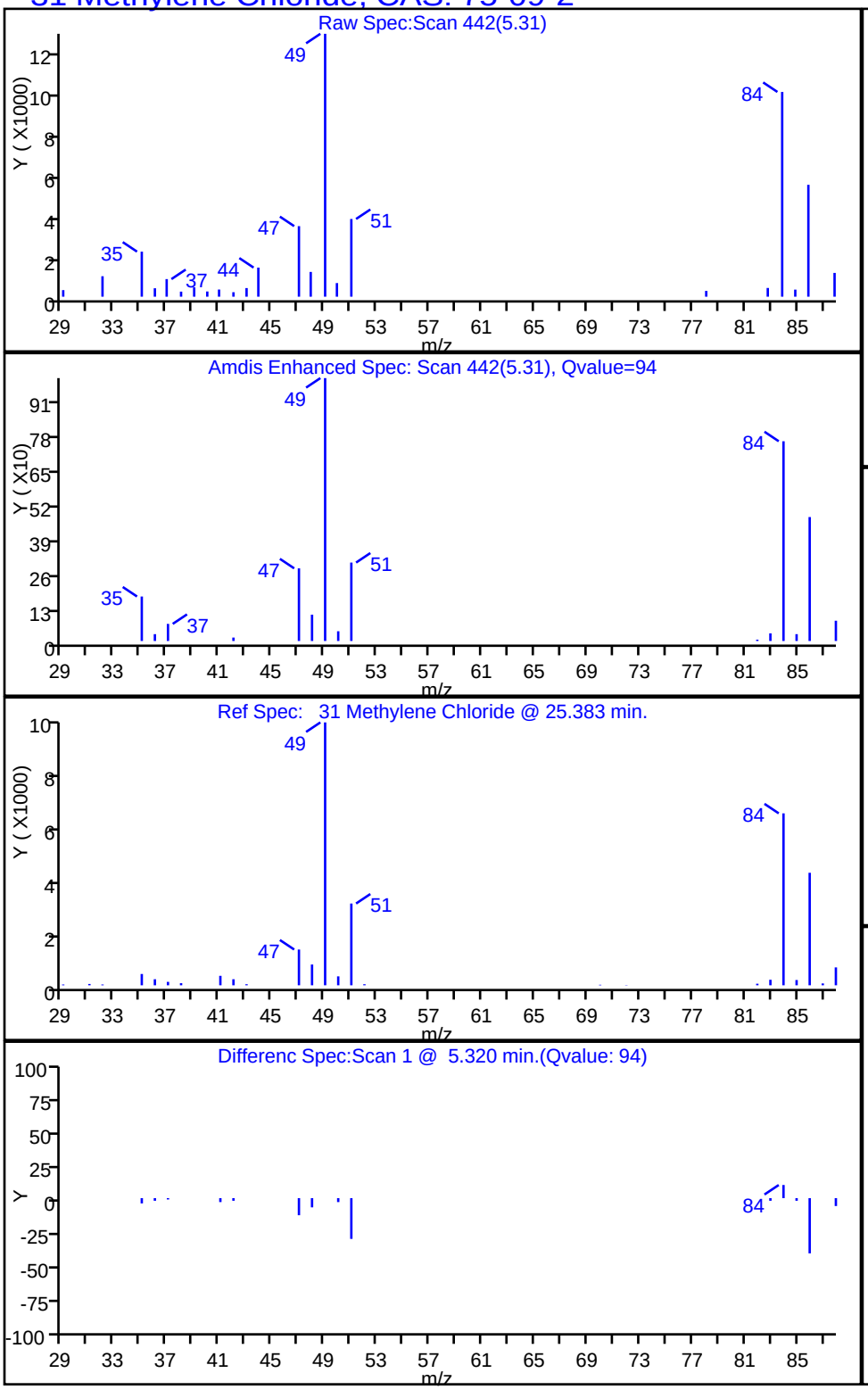


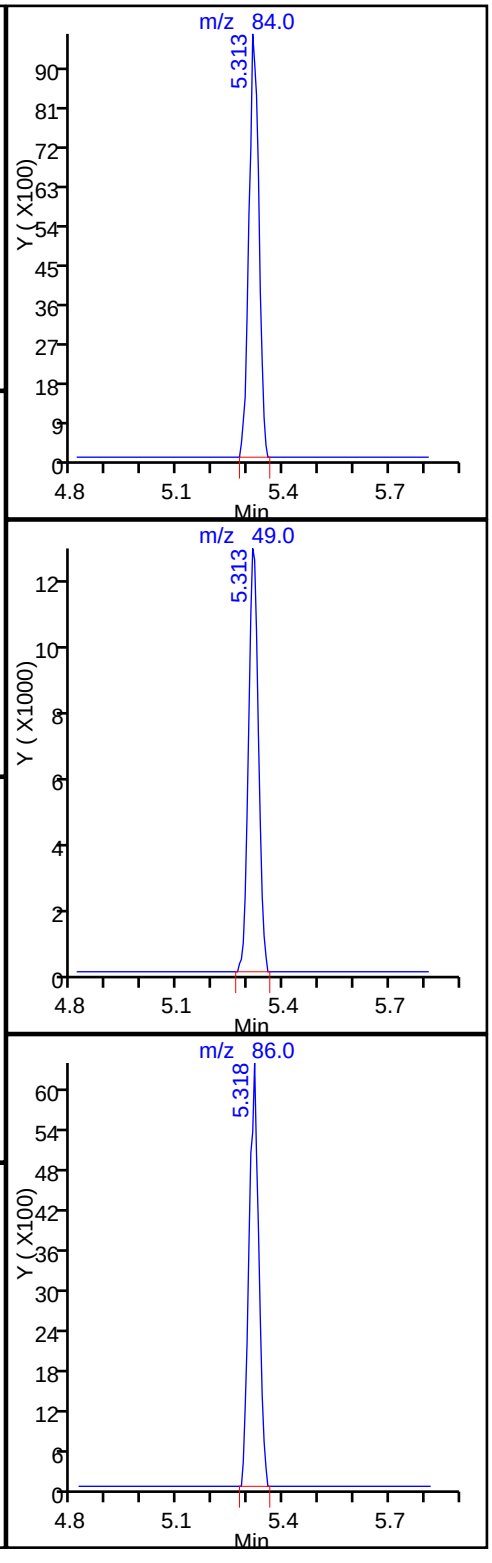


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

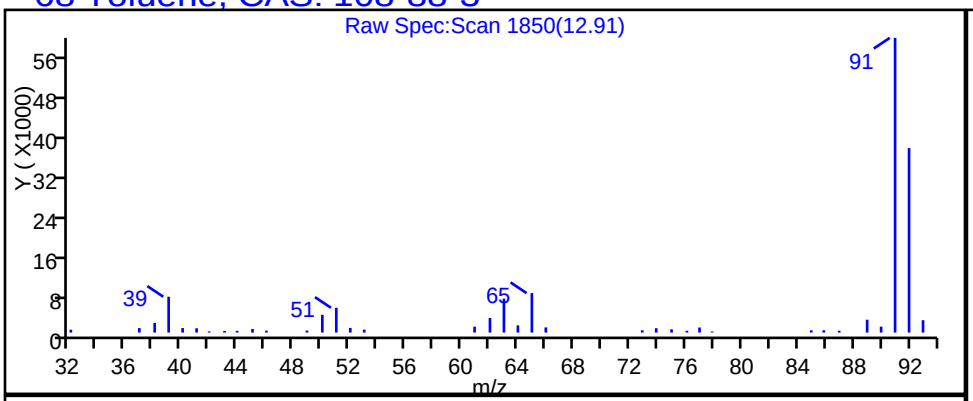


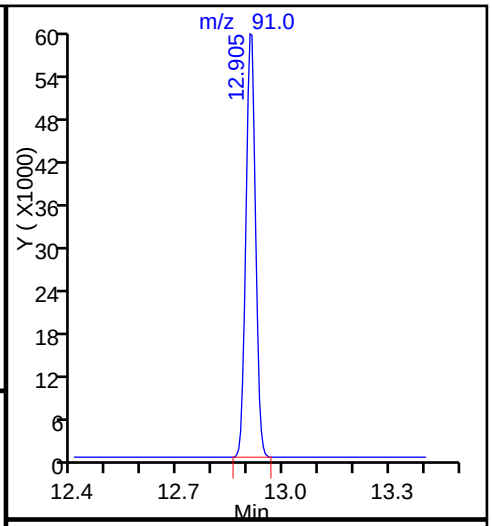


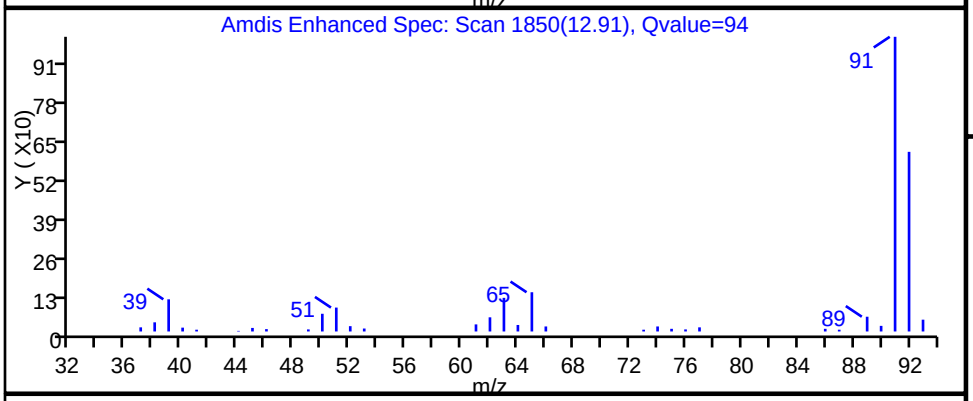
TestAmerica Knoxville

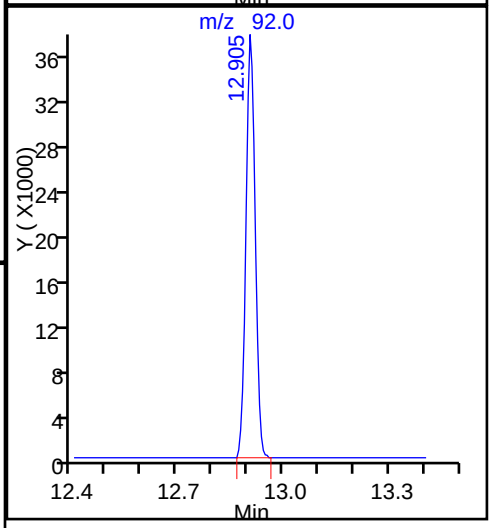
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

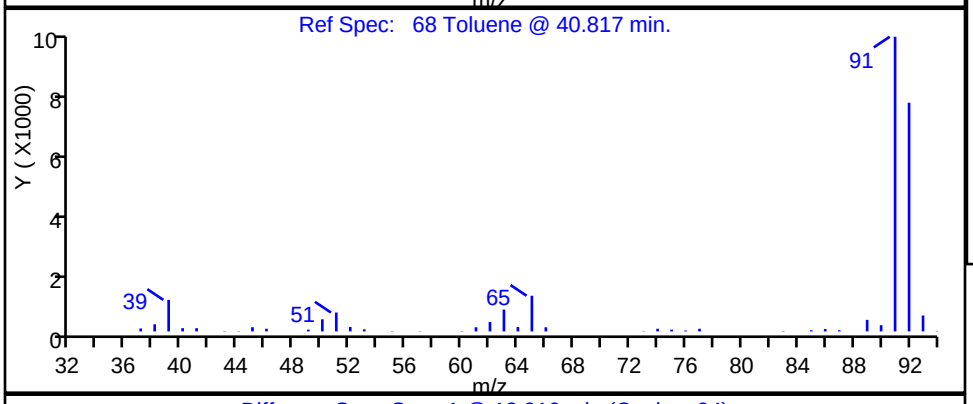
68 Toluene, CAS: 108-88-3

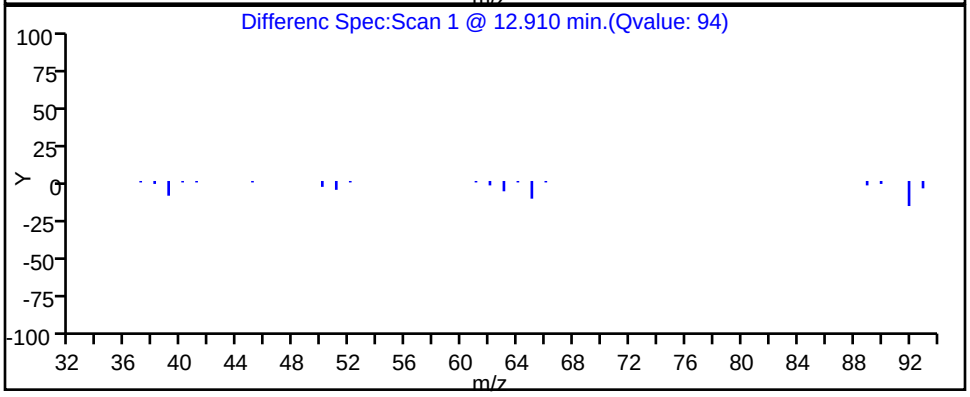








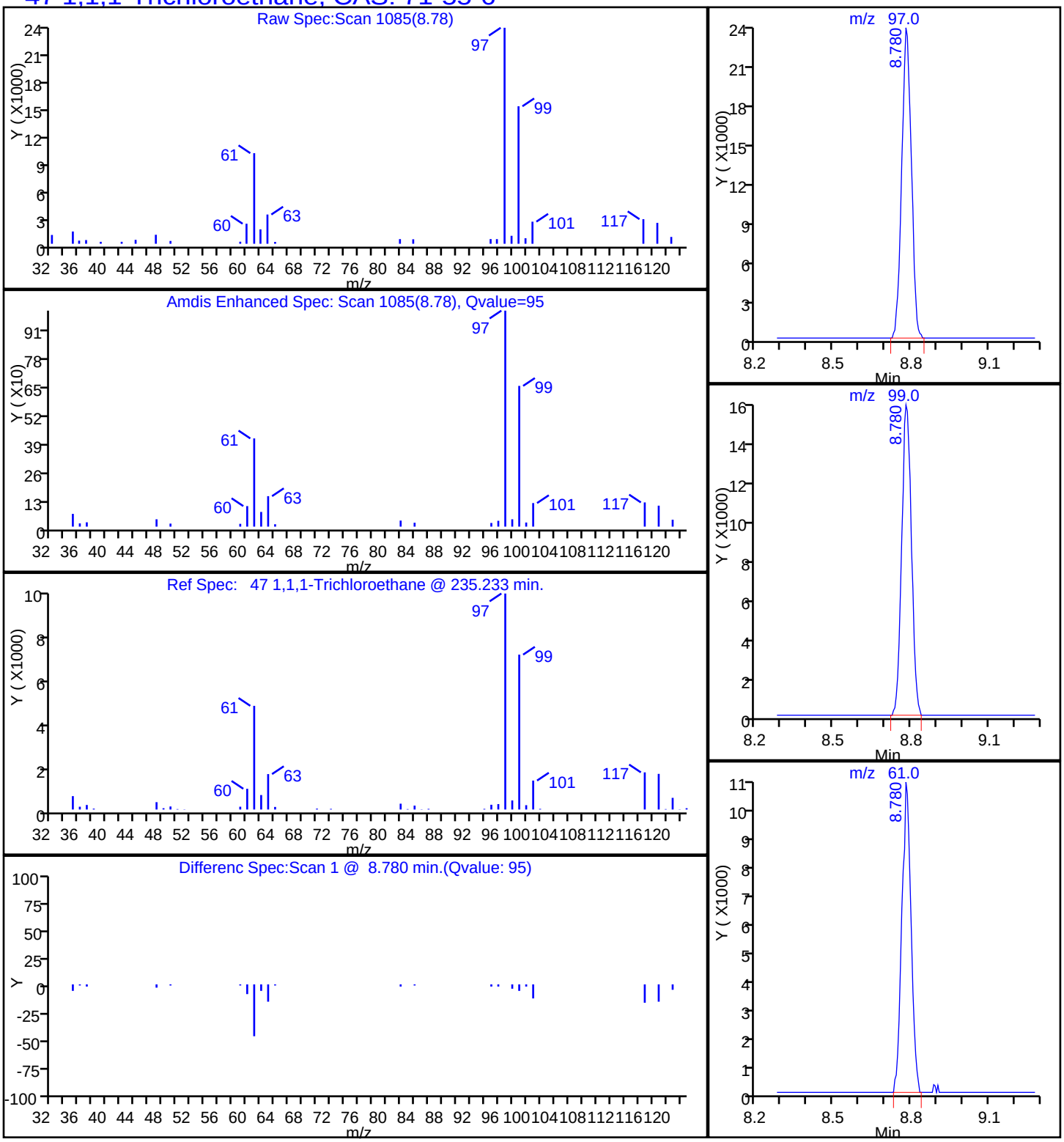




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

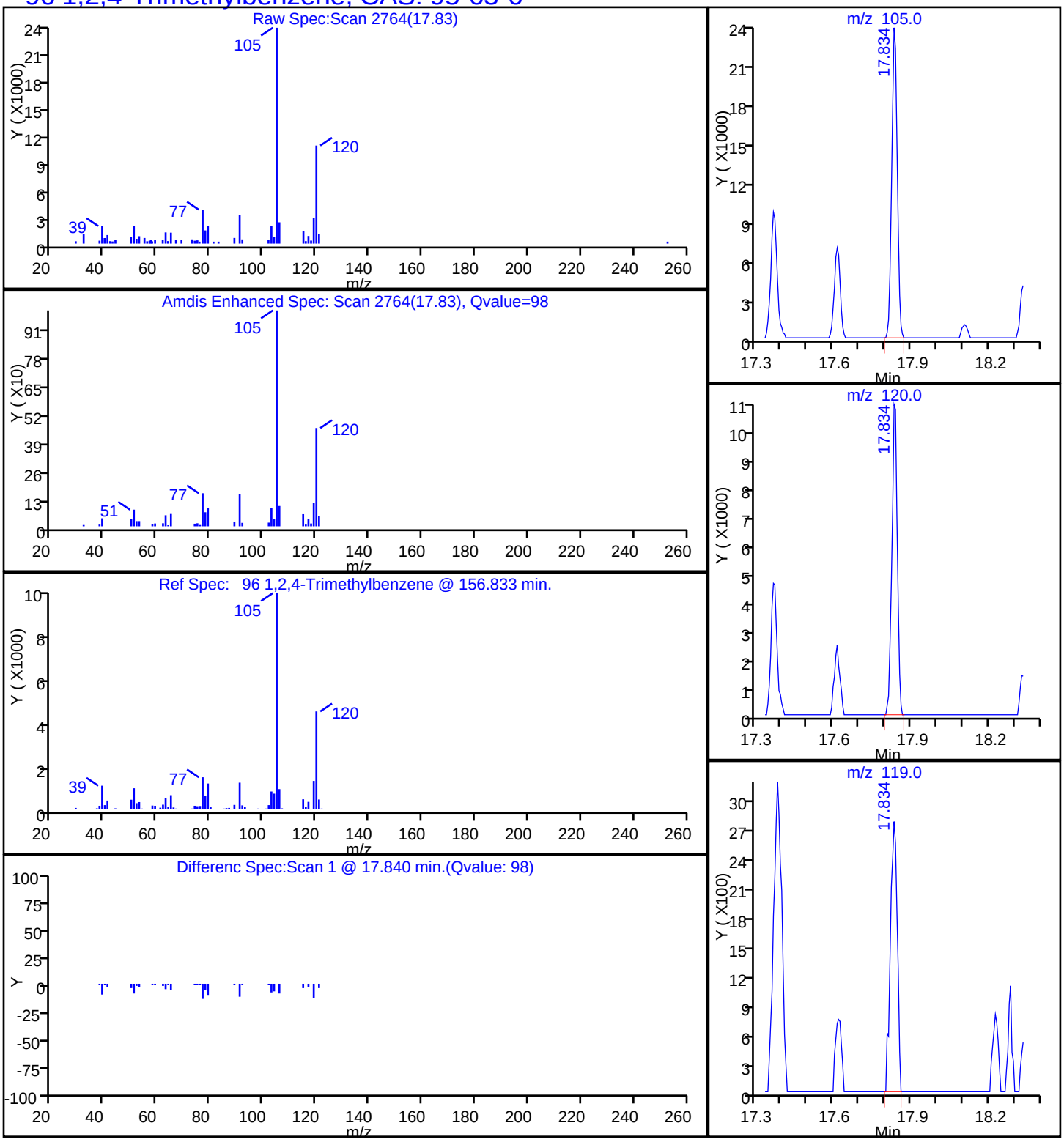
47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

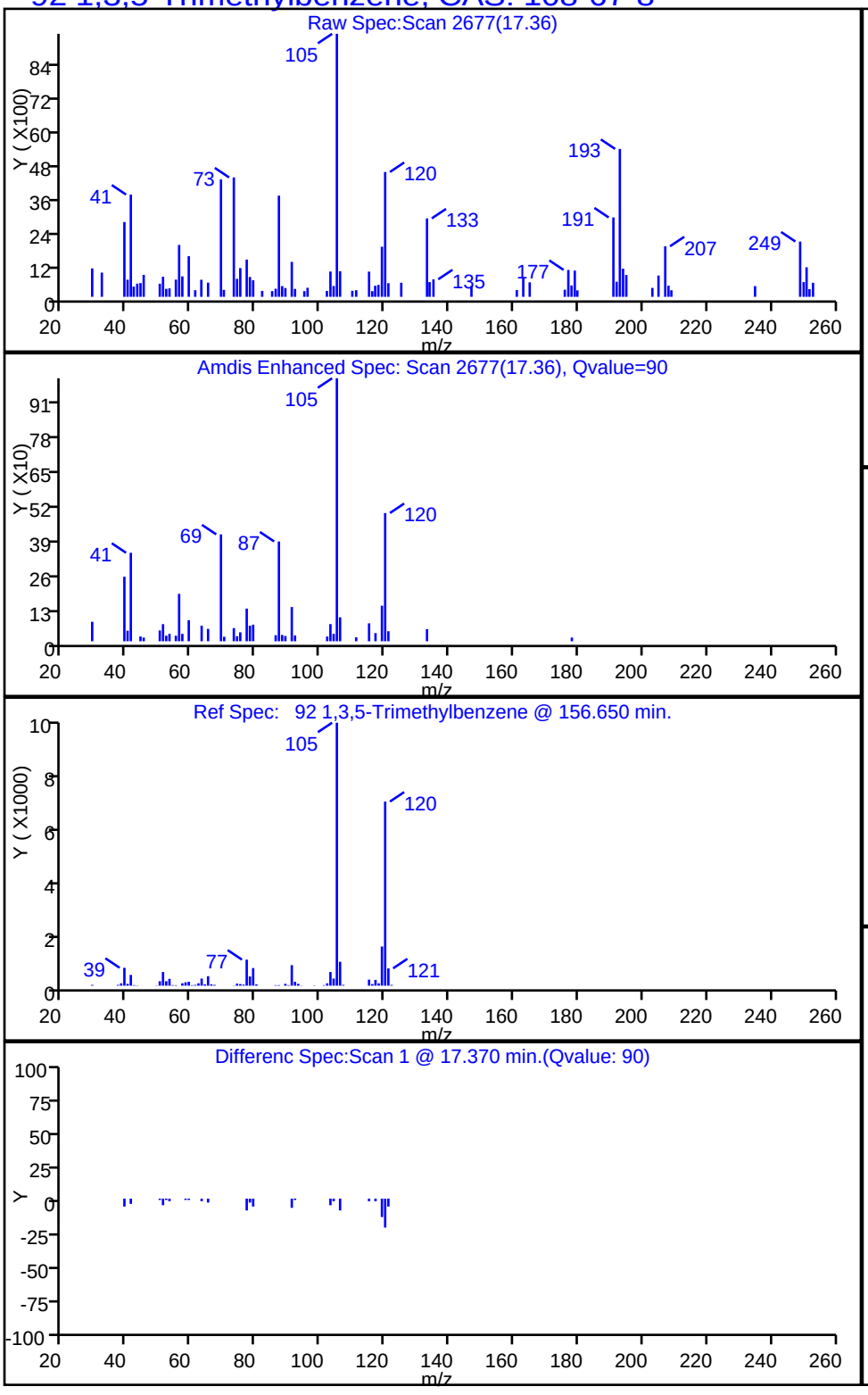
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

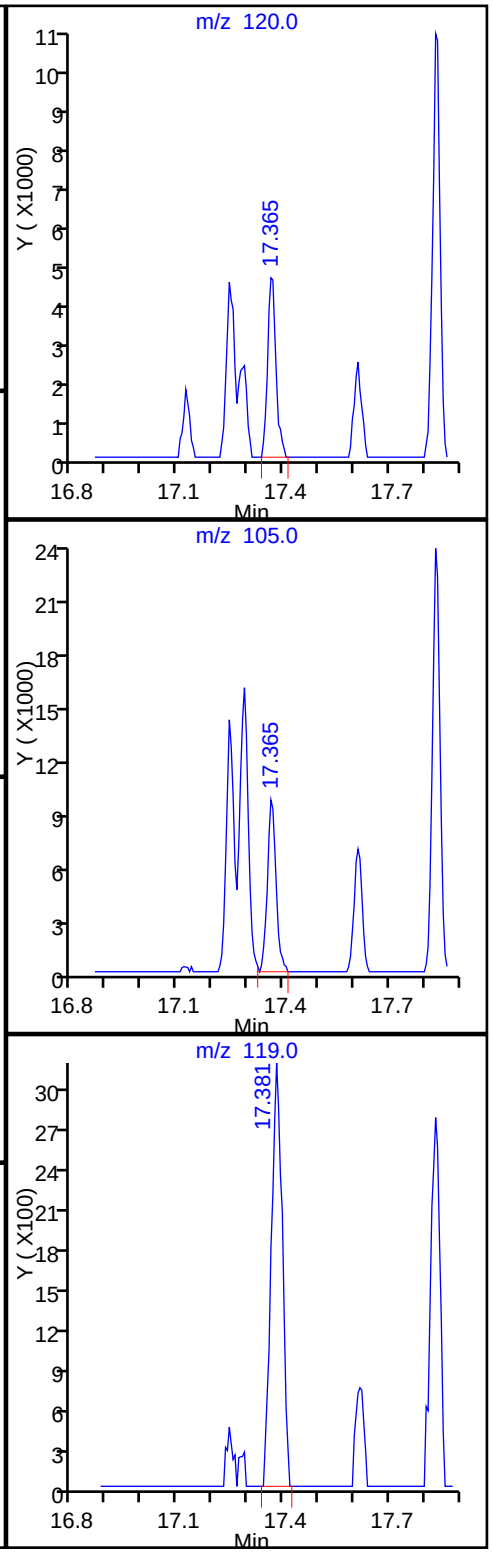


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EE19P116.D				
Injection Date:	20-May-2016 05:50:30	Instrument ID:	ME		
Lims ID:	140-4944-A-6	Lab Sample ID:	140-4944-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	16	Worklist Smp#:	25
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

92 1,3,5-Trimethylbenzene, CAS: 108-67-8





FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-3815/3	EK02IC01.D
Level 2	IC 140-3815/4	EK02IC02.D
Level 3	IC 140-3815/5	EK02IC03.D
Level 4	IC 140-3815/6	EK02IC04.D
Level 5	IC 140-3815/7	EK02IC05.D
Level 6	ICIS 140-3815/8	EK02IC06.D
Level 7	IC 140-3815/9	EK02IC07.D
Level 8	IC 140-3815/19	EK02IC08R.D
Level 9	IC 140-3815/11	EK02IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4692	0.5801 0.4821	0.5532 0.5070	0.5458 0.3918	0.5469	Ave		0.5095				11.9		30.0			
Propene	+++++ 1.2071	+++++ 1.1646	2.3316 1.2014	1.7521 0.8797	1.5229	Ave		1.4371				33.6	*	30.0			
Dichlorodifluoromethane	+++++ 4.3222	5.2128 4.3193	4.8427 4.3243	5.1245 3.0129	5.1007	Ave		4.5324				16.0		30.0			
Chloromethane	+++++ 0.3940	+++++ 0.3826	0.4577 0.3926	0.4910 0.2946	0.4494	Ave		0.4088				15.8		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.6497	3.1123 2.6722	3.0007 2.7970	3.1001 2.0772	3.0555	Ave		2.8081				12.4		30.0			
Acetaldehyde	+++++ 0.4782	+++++ 0.4033	+++++ 0.3738	0.5458 0.2829	0.6004	Ave		0.4474				26.2		30.0			
Vinyl chloride	1.7547 1.3662	1.6193 1.3833	1.4951 1.4064	1.5847 1.0923	1.5861	Ave		1.4765				13.0		30.0			
Butane	+++++ 1.9536	+++++ 1.9427	2.3065 1.9117	2.2784 1.4454	2.2900	Ave		2.0183				15.3		30.0			
1,3-Butadiene	+++++ 1.0123	+++++ 1.0223	1.0771 1.0627	1.1255 0.8135	1.1422	Ave		1.0365				10.6		30.0			
Bromomethane	+++++ 1.2937	1.5400 1.3074	1.4373 1.3591	1.4569 1.0412	1.4697	Ave		1.3632				11.4		30.0			
Chloroethane	+++++ 0.6680	0.7807 0.6556	0.7120 0.6767	0.7435 0.5314	0.7166	Ave		0.6856				10.9		30.0			
Ethanol	+++++ 0.4621	+++++ 0.4085	0.5237 0.3780	0.5007 0.2946	0.4975	Ave		0.4379				18.7		30.0			
Vinyl bromide	+++++ 1.2131	1.3880 1.2325	1.3266 1.2802	1.3560 0.9825	1.3476	Ave		1.2658				10.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.3280	+++++ 1.3079	1.5110 1.3194	1.5552 1.0252	1.5013	Ave		1.3640				13.3		30.0			
Trichlorofluoromethane	+++++ 3.9996	4.5479 3.8837	4.4373 3.8399	4.6039 2.7515	4.5448	Ave		4.0761				15.2		30.0			
Acrolein	+++++ 0.3976	+++++ 0.3427	0.3649 0.3297	0.3700 0.2719	0.3709	Ave		0.3497				11.6		30.0			
Acetonitrile	+++++ 0.4439	+++++ 0.3945	+++++ 0.3642	0.3720 0.3153	0.4511	Ave		0.3902				13.2		30.0			
Acetone	+++++ 0.5184	+++++ 0.4051	+++++ 0.3724	0.5289 0.3283	0.5954	Ave		0.4581				22.8		30.0			
Isopropyl alcohol	+++++ 1.4880	+++++ 1.3691	1.6094 1.2354	1.5843 0.9743	1.6524	Ave		1.4161				17.2		30.0			
Pentane	+++++ 0.2093	+++++ 0.2111	0.2326 0.2144	0.2374 0.1721	0.2339	Ave		0.2158				10.5		30.0			
Ethyl ether	+++++ 1.0395	+++++ 0.9120	0.9765 0.8184	1.0197 0.6910	0.9888	Ave		0.9209				13.7		30.0			
1,1-Dichloroethene	+++++ 1.1232	1.3660 1.1169	1.2018 1.1453	1.2602 0.9007	1.2364	Ave		1.1688				11.7		30.0			
tert-Butyl alcohol	+++++ 2.2387	+++++ 2.2603	2.3604 2.1204	2.3916 1.6628	2.5601	Ave		2.2278				12.8		30.0			
Acrylonitrile	+++++ 0.8353	+++++ 0.7600	0.7660 0.7001	0.7881 0.5846	0.7828	Ave		0.7453				10.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.7521	3.1504 2.7308	2.9927 2.6779	3.1154 2.1132	3.0504	Ave		2.8229				12.1		30.0			
Methylene Chloride	+++++ 1.1192	+++++ 1.1007	1.6749 1.0738	1.4562 0.8458	1.2825	Ave		1.2219				22.5		30.0			
3-Chloropropene	+++++ 1.3827	1.5962 1.3639	1.3674 1.3398	1.5531 1.0145	1.5224	Ave		1.3925				13.1		30.0			
Carbon disulfide	+++++ 3.5325	+++++ 3.5548	3.9373 3.4856	4.0102 2.5879	3.9913	Ave		3.5857				13.8		30.0			
trans-1,2-Dichloroethene	+++++ 1.2893	1.4940 1.2918	1.3652 1.2684	1.4194 0.9923	1.4238	Ave		1.3180				11.6		30.0			
2-Methylpentane	+++++ 2.6566	3.1650 2.6235	2.8382 2.4885	2.9558 1.9073	2.9605	Ave		2.6994				14.3		30.0			
Methyl tert-butyl ether	3.1351 3.5984	3.5076 3.1616	3.1280 2.8907	3.3378 2.5825	3.3537	Ave		3.1884				9.8		30.0			
1,1-Dichloroethane	+++++ 2.5598	2.8793 2.5226	2.6797 2.4021	2.8256 1.8878	2.7998	Ave		2.5696				12.5		30.0			
Vinyl acetate	+++++ 3.3303	3.0214 3.0322	2.5590 2.7664	2.8597 2.3376	2.9992	Ave		2.8632				10.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5736	+++++ 0.4845	0.7047 0.4584	0.5296 0.4294	0.5810	Ave		0.5373				17.3		30.0			
Hexane	1.1505 1.0487	1.1790 1.0547	1.1058 1.0120	1.1561 0.8129	1.1711	Ave		1.0767				10.7		30.0			
Isopropyl ether	3.7267 4.0855	4.0792 3.5854	3.7183 3.2447	3.8178 2.8048	3.8850	Ave		3.6608				11.2		30.0			
cis-1,2-Dichloroethene	+++++ 1.3373	1.4368 1.3517	1.3538 1.2969	1.4002 1.0862	1.4412	Ave		1.3380				8.5		30.0			
Ethyl acetate	2.3050 2.7117	2.5578 2.3072	2.3055 2.1273	2.4959 1.9974	2.4807	Ave		2.3654				9.3		30.0			
Chloroform	+++++ 3.1138	3.6188 3.0917	3.3739 2.8855	3.4407 2.3529	3.4015	Ave		3.1598				12.7		30.0			
Tert-butyl ethyl ether	3.3060 3.8477	3.5980 3.4141	3.2690 3.1246	3.5593 2.7918	3.6032	Ave		3.3904				9.2		30.0			
Tetrahydrofuran	+++++ 1.3452	+++++ 1.1366	1.1582 1.0834	1.1984 1.0374	1.2349	Ave		1.1706				8.7		30.0			
1,1,1-Trichloroethane	+++++ 3.4454	3.7971 3.4342	3.5526 3.2325	3.6852 2.6083	3.7620	Ave		3.4397				11.2		30.0			
1,2-Dichloroethane	0.5367 0.4936	0.5531 0.4959	0.5136 0.4882	0.5687 0.3694	0.5506	Ave		0.5077				11.7		30.0			
1-Butanol	+++++ 0.0863	+++++ 0.0977	0.0878 0.0975	0.0957 0.0659	0.1029	Ave		0.0906				13.6		30.0			
Cyclohexane	+++++ 0.1319	0.1465 0.1355	0.1382 0.1331	0.1516 0.1048	0.1534	Ave		0.1369				11.2		30.0			
Benzene	+++++ 0.7906	0.9836 0.7813	0.8431 0.7612	0.9010 0.5561	0.8767	Ave		0.8117				15.6		30.0			
Carbon tetrachloride	0.8331 0.7891	0.8377 0.8156	0.7626 0.7776	0.9047 0.6157	0.9044	Ave		0.8045				10.8		30.0			
2,3-Dimethylpentane	0.1994 0.1851	0.2042 0.1951	0.1842 0.1908	0.2186 0.1570	0.2119	Ave		0.1940				9.3		30.0			
Thiophene	0.4933 0.4682	0.5227 0.4817	0.4640 0.4725	0.5322 0.3615	0.5249	Ave		0.4801				10.7		30.0			
Tert-amyl methyl ether	+++++ 0.7954	0.7321 0.7409	0.6681 0.6852	0.7924 0.6299	0.8202	Ave		0.7330				9.3		30.0			
2,2,4-Trimethylpentane	+++++ 1.3267	1.4954 1.3545	1.4064 1.2832	1.5576 0.9960	1.5406	Ave		1.3701				13.3		30.0			
Heptane	0.2927 0.2885	0.3127 0.3038	0.2854 0.2926	0.3204 0.2416	0.3260	Ave		0.2960				8.4		30.0			
1,2-Dichloropropane	0.3308 0.3121	0.3332 0.3082	0.3098 0.2927	0.3409 0.2382	0.3358	Ave		0.3113				10.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4654 0.4012	0.4388 0.4259	0.4197 0.4077	0.4551 0.3383	0.4560	Ave		0.4231				9.2		30.0			
Dibromomethane	+++++ 0.3649	+++++ 0.3779	0.3767 0.3681	0.4153 0.2934	0.4142	Ave		0.3729				10.9		30.0			
Bromodichloromethane	0.7055 0.6970	0.7164 0.7229	0.6611 0.6944	0.7620 0.5420	0.7762	Ave		0.6975				9.7		30.0			
1,4-Dioxane	+++++ 0.1138	0.1088 0.1140	0.1067 0.1099	0.1204 0.0955	0.1296	Ave		0.1123				8.9		30.0			
Methyl methacrylate	+++++ 0.3649	+++++ 0.3243	1.7423 0.3139	0.3180 0.2948	1.0687	Ave		0.6324				89.0	*	30.0			
Methylcyclohexane	0.6642 0.6158	0.6768 0.6429	0.6296 0.6096	0.7144 0.4877	0.7119	Ave		0.6392				10.7		30.0			
4-Methyl-2-pentanone (MIBK)	0.5441 0.5412	0.5795 0.5555	0.5072 0.5408	0.5589 0.4806	0.6097	Ave		0.5464				6.9		30.0			
cis-1,3-Dichloropropene	0.4438 0.4955	0.4588 0.5024	0.4271 0.4833	0.4998 0.3958	0.5167	Ave		0.4693				8.6		30.0			
trans-1,3-Dichloropropene	0.4321 0.5011	0.4345 0.5080	0.3960 0.4787	0.4779 0.4106	0.5128	Ave		0.4613				9.5		30.0			
Toluene	+++++ 1.0113	1.0751 1.0027	0.9890 0.8888	1.1021 0.7198	1.1042	Ave		0.9866				13.1		30.0			
Toluene Range	+++++ 2.4065	+++++ 2.3619	+++++ 2.2135	2.5278 1.8253	2.4792	Ave		2.3024				11.2		30.0			
1,1,2-Trichloroethane	0.3126 0.3080	0.3174 0.3095	0.3066 0.2851	0.3460 0.2406	0.3469	Ave		0.3081				10.4		30.0			
2-Methylthiophene	0.8547 0.8671	0.8500 0.8705	0.7925 0.7847	0.9138 0.6352	0.9349	Ave		0.8337				10.7		30.0			
3-Methylthiophene	0.8315 0.8419	0.8264 0.8522	0.7639 0.7651	0.8814 0.6240	0.9209	Ave		0.8119				10.6		30.0			
2-Hexanone	+++++ 0.2765	+++++ 0.2977	0.2506 0.2876	0.2835 0.2640	0.3253	Ave		0.2836				8.5		30.0			
Octane	0.3152 0.3440	0.3218 0.3632	0.3301 0.3376	0.3826 0.2723	0.4093	Ave		0.3418				11.7		30.0			
C8 Range	+++++ 2.9519	+++++ 3.0170	+++++ 2.8938	3.2833 2.2553	3.5760	Ave		2.9962				14.8		30.0			
Dibromochloromethane	0.6531 0.7485	0.6667 0.7911	0.6175 0.7534	0.7703 0.6024	0.8399	Ave		0.7159				11.6		30.0			
1,2-Dibromoethane (EDB)	0.5716 0.5848	0.5688 0.5931	0.5213 0.5503	0.5966 0.4615	0.6253	Ave		0.5637				8.6		30.0			
Tetrachloroethene	0.5079 0.4208	0.4646 0.4415	0.4535 0.4113	0.4991 0.3422	0.5004	Ave		0.4490				11.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	+++++ 0.8500	0.9214 0.8457	0.8600 0.7619	0.9309 0.6189	0.9478	Ave		0.8421				12.9		30.0			
2,3-Dimethylheptane	0.9847 0.9015	0.9892 0.8931	0.9586 0.7973	1.0470 0.6003	1.0850	Ave		0.9174				16.0		30.0			
Ethylbenzene	1.3076 1.3659	1.3702 1.3043	1.2390 1.1333	1.4295 0.9052	1.4616	Ave		1.2796				13.4		30.0			
2-Ethylthiophene	0.9737 1.0826	1.0070 1.0582	0.9551 0.9413	1.1106 0.7671	1.1495	Ave		1.0050				11.4		30.0			
m-Xylene & p-Xylene	0.9834 1.0625	1.0598 0.9951	0.9928 0.8498	1.1477 0.6550	1.1516	Ave		0.9886				15.7		30.0			
Nonane	0.5496 0.6472	0.5785 0.6296	0.5809 0.5560	0.6890 0.4225	0.7297	Ave		0.5981				15.0		30.0			
Bromoform	+++++ 0.6971	0.5361 0.7334	0.4836 0.7056	0.6554 0.5774	0.7414	Ave		0.6412				15.1		30.0			
Styrene	+++++ 0.7890	0.6013 0.7665	0.5930 0.6977	0.7339 0.6025	0.7976	Ave		0.6977				12.6		30.0			
o-Xylene	1.0476 1.1149	1.1260 1.0523	1.0506 0.9235	1.2052 0.7558	1.2108	Ave		1.0541				13.5		30.0			
1,1,2,2-Tetrachloroethane	0.6545 0.7529	0.7248 0.6925	0.6509 0.6326	0.7987 0.5523	0.8082	Ave		0.6964				12.0		30.0			
1,2,3-Trichloropropane	0.2282 0.2533	0.2360 0.2394	0.2287 0.2167	0.2652 0.2044	0.2638	Ave		0.2373				8.7		30.0			
Isopropylbenzene	1.4470 1.5022	1.4679 1.4020	1.3313 1.2245	1.5540 0.9942	1.5805	Ave		1.3893				13.3		30.0			
Propylbenzene	+++++ 0.4238	0.3511 0.4036	0.3286 0.3703	0.4003 0.3412	0.4347	Ave		0.3817				10.4		30.0			
2-Chlorotoluene	0.3751 0.4037	0.3870 0.3945	0.3580 0.3608	0.4307 0.3199	0.4359	Ave		0.3851				9.5		30.0			
4-Ethyltoluene	+++++ 1.4819	1.2588 1.3696	1.1689 1.2033	1.4169 1.0186	1.5340	Ave		1.3065				13.4		30.0			
1,3,5-Trimethylbenzene	+++++ 0.7180	0.6013 0.6773	0.5971 0.6096	0.7211 0.5555	0.7482	Ave		0.6535				10.9		30.0			
Alpha Methyl Styrene	+++++ 0.6142	+++++ 0.6008	0.3552 0.5543	0.4797 0.5125	0.5814	Ave		0.5283				17.1		30.0			
Decane	+++++ 0.7967	0.6217 0.7484	0.6375 0.6582	0.7976 0.5430	0.8527	Ave		0.7070				15.2		30.0			
tert-Butylbenzene	1.1145 1.3733	1.2151 1.2632	1.1768 1.1118	1.3886 0.9563	1.4475	Ave		1.2275				12.9		30.0			
1,2,4-Trimethylbenzene	+++++ 1.2655	1.0964 1.1673	1.0736 1.0263	1.2711 0.8649	1.3447	Ave		1.1387				13.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.7554	1.5349 1.6025	1.4545 1.3803	1.7518 1.1004	1.8578	Ave		1.5547				15.8		30.0			
1,3-Dichlorobenzene	0.7369 0.8410	0.8061 0.8163	0.7746 0.7456	0.8559 0.6471	0.8847	Ave		0.7898				9.2		30.0			
Benzyl chloride	+++++ 1.0753	+++++ 1.0350	0.7444 0.9418	0.9157 0.8082	1.0687	Ave		0.9413				13.7		30.0			
1,4-Dichlorobenzene	0.7752 0.8243	0.7670 0.8058	0.7082 0.7365	0.8328 0.6500	0.8576	Ave		0.7730				8.6		30.0			
4-Isopropyltoluene	+++++ 1.5196	1.1845 1.3857	1.1866 1.2098	1.4551 1.0049	1.5918	Ave		1.3172				15.3		30.0			
1,2,3-Trimethylbenzene	+++++ 0.9725	0.8511 0.8977	0.8357 0.7945	0.9757 0.6937	1.0286	Ave		0.8812				12.5		30.0			
Butylcyclohexane	0.7908 0.9373	0.8770 0.8966	0.8795 0.7879	1.0220 0.6442	1.0636	Ave		0.8777				14.5		30.0			
1,2-Dichlorobenzene	0.7719 0.8283	0.7815 0.7833	0.7423 0.7089	0.8404 0.6146	0.8817	Ave		0.7725				10.2		30.0			
Indane	0.9394 1.1632	0.9932 1.0784	0.9943 0.9549	1.1613 0.7859	1.2270	Ave		1.0331				13.3		30.0			
Indene	+++++ 0.8821	+++++ 0.8278	0.6366 0.7494	0.7787 0.6661	0.8946	Ave		0.7765				12.9		30.0			
Butylbenzene	+++++ 1.4016	1.0593 1.2570	1.0792 1.0940	1.3286 0.8890	1.4557	Ave		1.1956				16.4		30.0			
Undecane	+++++ 0.8234	+++++ 0.7082	+++++ 0.6487	0.6141 0.5545	0.7485	Ave		0.6829				14.2		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.1064	0.7590 1.0237	0.7841 0.9171	0.9638 0.7855	1.1251	Ave		0.9331				15.7		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.3581	0.2305 0.3652	0.2417 0.3526	0.3028 0.3348	0.3730	Ave		0.3198				17.5		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.2819	0.7923 1.2011	0.9129 1.0763	1.0329 0.8784	1.2925	Ave		1.0585				17.9		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.7945	0.5224 0.7483	0.5823 0.6860	0.6547 0.5995	0.8034	Ave		0.6739				15.3		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 1.0368	0.6722 0.9914	0.7725 0.9003	0.8210 0.7563	1.0390	Ave		0.8737				15.9		30.0			
Dodecane	+++++ 0.5051	+++++ 0.6260	0.5736 0.5719	0.5039 0.4900	0.7108	Ave		0.5688				14.0		30.0			
1,2,4-Trichlorobenzene	0.5983 0.5704	0.4889 0.6085	0.5530 0.5790	0.5104 0.5218	0.6489	Ave		0.5644				9.1		30.0			
Naphthalene	1.2651 1.2383	0.9716 1.3195	1.1412 1.2069	1.0717 0.9839	1.4352	Ave		1.1815				13.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.6630	+++++ 0.7956	0.7682 0.7592	0.6841 0.6635	0.8461	Ave		0.7399				9.6		30.0			
Hexachlorobutadiene	0.5984 0.6588	0.5524 0.6251	0.5561 0.5803	0.5765 0.5088	0.7136	Ave		0.5967				10.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.4696	0.4575 0.5469	0.5212 0.5215	0.4488 0.4565	0.6088	Ave		0.5039				11.1		30.0			
2-Methylnaphthalene	+++++ 0.1896	0.2549 0.3061	0.2960 0.3216	0.1780 0.1596	0.3273	Ave		0.2541				27.1		50.0			
1-Methylnaphthalene	+++++ 0.1721	0.2318 0.2719	0.2849 0.2879	0.1519 0.1269	0.2925	Ave		0.2275				29.8		50.0			
4-Bromofluorobenzene (Surr)	0.7304 0.7590	0.7708 0.7386	0.7465 0.7651	0.7515 0.7410	0.7364	Ave		0.7488				1.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-3815/3	EK02IC01.D
Level 2	IC 140-3815/4	EK02IC02.D
Level 3	IC 140-3815/5	EK02IC03.D
Level 4	IC 140-3815/6	EK02IC04.D
Level 5	IC 140-3815/7	EK02IC05.D
Level 6	ICIS 140-3815/8	EK02IC06.D
Level 7	IC 140-3815/9	EK02IC07.D
Level 8	IC 140-3815/19	EK02IC08R.D
Level 9	IC 140-3815/11	EK02IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 77217	3531 150885	6725 314262	16083 561388	39569	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 198671	+++++ 364495	28344 744623	51633 1260560	110186	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 711378	31728 1351817	58869 2680132	151015 4317453	369052	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 64846	+++++ 119747	5564 243324	14470 422145	32512	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroeth ane	CBM	Ave	+++++ 436113	18943 836324	36477 1733517	91359 2976692	221075	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 393509	+++++ 631163	+++++ 1158414	80425 2027102	217212	+++++ 10.0	+++++ 20.0	+++++ 40.0	2.00 80.0	5.00
Vinyl chloride	CBM	Ave	5739 224860	9856 432933	18175 871677	46699 1565247	114761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 321537	+++++ 608016	28039 1184826	67144 2071298	165689	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 166615	+++++ 319966	13093 658631	33168 1165787	82642	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 212920	9373 409183	17472 842377	42935 1492013	106340	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 109941	4752 205174	8655 419417	21910 761537	51847	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 380307	+++++ 639203	31830 1171464	73782 2110943	179962	+++++ 10.0	+++++ 20.0	0.793 40.0	2.00 80.0	5.00
Vinyl bromide	CBM	Ave	+++++ 199655	8448 385732	16126 793439	39959 1407887	97504	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 218569	+++++ 409337	18368 817760	45832 1469091	108622	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 658279	27681 1215483	53941 2379923	135673 3942972	328826	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 65439	+++++ 107251	4436 204318	10903 389565	26838	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 73066	+++++ 123483	+++++ 225708	10964 451834	32639	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 255964	+++++ 380385	+++++ 692456	46763 1411466	129246	+++++ 6.00	+++++ 12.0	+++++ 24.0	1.20 48.0	3.00
Isopropyl alcohol	CBM	Ave	+++++ 734753	+++++ 1285580	58699 2297280	140078 4189046	358686	+++++ 6.00	+++++ 12.0	0.476 24.0	1.20 48.0	3.00
Pentane	CBM	Ave	+++++ 34440	+++++ 66079	2827 132880	6995 246556	16920	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 171084	+++++ 285434	11871 507265	30051 990242	71544	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 184866	8314 349550	14610 709824	37137 1290738	89458	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 368467	+++++ 707426	28694 1314194	70479 2382825	185233	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 137472	+++++ 237848	9312 433906	23226 837700	56636	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++ 452966	19175 854659	36380 1659710	91809 3028279	220703	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 184208	+++++ 344491	20361 665556	42914 1212079	92794	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 227581	9715 426877	16622 830411	45769 1453814	110148	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 581408	+++++ 1112567	47863 2160309	118178 3708553	288784	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 212204	9093 404315	16596 786118	41829 1421955	103012	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 437249	19264 821088	34502 1542322	87105 2733127	214196	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10254 592255	21349 989489	38025 1791594	98363 3700791	242645	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 421315	17525 789523	32575 1488820	83269 2705273	202572	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 548121	18390 948994	31108 1714570	84274 3349852	217000	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 94399	+++++ 151632	8567 284094	15606 615362	42037	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	3763 172595	7176 330079	13443 627200	34068 1164919	84735	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	12189 672427	24828 1122132	45201 2010997	112508 4019362	281087	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 220095	8745 423054	16457 803827	41264 1556479	104278	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	7539 446307	15568 722107	28027 1318445	73552 2862311	179487	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 512494	22026 967614	41014 1788382	101394 3371750	246108	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	10813 633288	21899 1068531	39739 1936566	104889 4000619	260697	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 221409	+++++ 355719	14080 671451	35316 1486599	89346	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 567068	23111 1074811	43187 2003439	108600 3737726	272189	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFB	Ave	8138 381695	15378 705083	28882 1326886	71926 2378947	176803	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFB	Ave	+++++ 66754	+++++ 138947	4939 264998	12103 424645	33037	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFB	Ave	+++++ 101983	4074 192740	7771 361809	19179 674871	49240	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFB	Ave	+++++ 611424	27350 1110926	47416 2069114	113961 3580791	281498	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFB	Ave	12631 610261	23292 1159714	42889 2113582	114430 3964715	290388	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFB	Ave	3024 143140	5678 277469	10358 518712	27654 1011137	68032	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFB	Ave	7480 362115	14533 684954	26097 1284360	67307 2327854	168527	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZ	Ave	+++++ 572390	18900 968376	33811 1779527	89640 3853028	231065	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFB	Ave	+++++ 1025988	41581 1925955	79096 3487887	197009 6413605	494672	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFB	Ave	4438 223118	8695 431948	16052 795335	40519 1555506	104669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFB	Ave	5015 241383	9265 438183	17424 795575	43119 1533971	107819	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFB	Ave	7057 310246	12201 605644	23605 1108215	57555 2178345	146413	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFB	Ave	+++++ 282168	+++++ 537388	21187 1000466	52531 1889039	132981	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFB	Ave	10697 539047	19920 1027900	37181 1887410	96371 3490288	249224	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFB	Ave	+++++ 87975	3026 162072	5999 298631	15225 614985	41607	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFB	Ave	+++++ 282176	+++++ 461189	97985 853110	40224 1898576	343151	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFB	Ave	10070 476267	18819 914113	35409 1656924	90356 3140249	228569	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFB	Ave	8249 418569	16113 789895	28526 1469990	70693 3094762	195766	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFB	Ave	6729 383238	12758 714413	24018 1313661	63220 2548983	165905	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZ	Ave	5835 360568	11218 664043	20037 1243242	54071 2511525	144464	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZ	Ave	+++++ 727749	27755 1310618	50050 2308156	124677 4402810	311072	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFB	Ave	+++++ 1861093	+++++ 3358427	+++++ 6016537	319710 11753847	796028	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZ	Ave	4221 221601	8195 404472	15516 740474	39140 1471537	97733	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZ	Ave	11540 623974	21944 1137800	40103 2037731	103381 3885564	263371	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZ	Ave	11227 605842	21333 1113936	38656 1987004	99713 3816796	259423	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZ	Ave	+++++ 198950	+++++ 389176	12681 746832	32076 1614987	91635	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZ	Ave	4256 247538	8307 474700	16704 876625	43280 1665534	115315	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFB	Ave	+++++ 2282900	+++++ 4289891	+++++ 7865533	415266 14522406	1148198	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZ	Ave	8818 538585	17212 1033996	31246 1956387	87145 3684718	236621	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZ	Ave	7718 420842	14683 775268	26379 1429034	67495 2822797	176150	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZ	Ave	6858 302800	11993 577072	22951 1068099	56469 2092930	140971	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZ	Ave	+++++ 611670	23786 1105359	43521 1978581	105314 3786043	267022	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZ	Ave	13296 648747	25538 1167317	48511 2070422	118451 3671742	305669	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZ	Ave	17656 982934	35373 1704755	62701 2943200	161720 5536748	411754	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZ	Ave	13147 779031	25996 1383182	48333 2444450	125642 4692432	323820	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZ	Ave	26558 1529138	54718 2601289	100478 4413757	259677 8013574	648860	0.0784 4.00	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZ	Ave	7421 465694	14935 822898	29397 1443983	77950 2584672	205578	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZ	Ave	+++++ 501628	13839 958618	24470 1832330	74150 3532001	208852	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZ	Ave	+++++ 567784	15524 1001867	30011 1811971	83030 3685510	224709	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZ	Ave	14145 802291	29068 1375379	53166 2398188	136341 4623403	341099	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZ	Ave	8838 541802	18712 905157	32937 1642804	90358 3378453	227673	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZ	Ave	3081 182280	6092 312934	11575 562657	30003 1250535	74303	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZ	Ave	19538 1080958	37895 1832475	67372 3179929	175801 6081669	445263	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZ	Ave	+++++ 304992	9064 527539	16627 961585	45281 2087357	122448	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZ	Ave	5065 290502	9991 515589	18119 937068	48721 1956924	122798	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZ	Ave	+++++ 1066376	32498 1790093	59150 3124764	160294 6230772	432150	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZ	Ave	+++++ 516660	15522 885263	30214 1583185	81584 3397763	210781	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZ	Ave	+++++ 441984	+++++ 785337	17974 1439352	54265 3135209	163779	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZ	Ave	+++++ 573274	16049 978198	32259 1709301	90238 3321325	240230	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZ	Ave	15049 988258	31369 1651106	59554 2887178	157093 5849564	407795	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZ	Ave	+++++ 910673	28304 1525743	54331 2665142	143798 5290436	378832	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZ	Ave	+++++ 1263164	39626 2094566	73606 3584597	198185 6731328	523362	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZ	Ave	9950 605199	20811 1066988	39199 1936145	96834 3958231	249235	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZ	Ave	+++++ 773806	+++++ 1352772	37669 2445848	103592 4943647	301068	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZ	Ave	10467 593199	19800 1053206	35839 1912667	94216 3976009	241601	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZ	Ave	+++++ 1093486	30578 1811142	60050 3141630	164619 6147104	448442	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZ	Ave	+++++ 699839	21973 1173371	42288 2063325	110381 4243511	289765	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZ	Ave	10678 674502	22640 1171920	44505 2046156	115621 3940521	299620	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZ	Ave	10422 596060	20175 1023788	37566 1840986	95071 3759539	248391	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZ	Ave	12684 837064	25640 1409534	50314 2479827	131377 4807440	345657	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZ	Ave	+++++ 634787	+++++ 1081973	32217 1946193	88091 4074465	252022	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZ	Ave	+++++ 1008610	27347 1642952	54613 2841009	150302 5438096	410106	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZ	Ave	+++++ 592546	+++++ 925675	+++++ 1684649	69469 3391969	210865	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZ	Ave	+++++ 796167	19593 1338038	39681 2381594	109041 4805136	316971	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZ	Ave	+++++ 257722	5950 477369	12230 915680	34259 2048143	105078	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZ	Ave	+++++ 922484	20453 1569955	46195 2795083	116856 5372844	364109	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZ	Ave	+++++ 571694	13485 978121	29466 1781518	74070 3667016	226331	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZ	Ave	+++++ 746045	17353 1295852	39090 2338088	92886 4626407	292693	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZ	Ave	+++++ 363445	+++++ 818238	29026 1485299	57011 2997328	200229	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZ	Ave	8079 410458	12622 795330	27984 1503610	57748 3191884	182794	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZ	Ave	17082 891077	25084 1724666	57751 3134334	121238 6018522	404308	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZ	Ave	+++++ 477077	+++++ 1039883	38875 1971522	77396 4058307	238356	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZ	Ave	8080 474107	14261 817015	28141 1506909	65226 3112006	201026	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZ	Ave	+++++ 337959	11810 714810	26373 1354271	50778 2792196	171520	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZ	Ave	+++++ 426303	20562 1250335	46806 2609701	62925 3051243	288150	+++++ 6.25	0.245 12.5	0.496 25.0	1.25 50.0	3.12
1-Methylnaphthalene	CBZ	Ave	+++++ 387084	18697 1110339	45046 2336446	53703 2424851	257510	+++++ 6.25	0.245 12.5	0.496 25.0	1.25 50.0	3.12
4-Bromofluorobenzene (Surr)	CBZ	Ave	1006350 1092382	1015192 965402	952365 993477	849912 1133197	829810	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1 Analy Batch No.: 3815

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 12/02/2015 20:13 Calibration End Date: 12/03/2015 09:19 Calibration ID: 418

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 02-Dec-2015 20:13:30 ALS Bottle#: 7 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-003
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:37:34 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 11:15:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.064	8.072	-0.008	91	333748	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.308	10.312	-0.004	96	1547141	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.215	15.215	0.000	89	1377808	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	88	1006350	4.00	3.90	
6 Chlorodifluoromethane	67	3.200	3.204	-0.004	96	2030	0.0392	0.0478	
7 Propene	41	3.217	3.217	0.000	92	17696	0.0392	0.1476	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	100	18276	0.0392	0.0483	
9 Chloromethane	52	3.416	3.421	-0.005	59	1944	0.0392	0.0570	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.421	3.425	-0.004	89	11282	0.0392	0.0482	
11 Acetaldehyde	44	3.556	3.555	0.001	94	19485	0.1960	0.5220	
12 Vinyl chloride	62	3.572	3.572	0.000	98	5739	0.0392	0.0466	
13 Butane	43	3.648	3.649	-0.001	84	8576	0.0392	0.0509	
14 Butadiene	54	3.648	3.649	-0.001	69	3985	0.0392	0.0461	
15 Bromomethane	94	3.934	3.936	-0.002	96	5870	0.0392	0.0516	
16 Chloroethane	64	4.058	4.060	-0.002	92	2653	0.0392	0.0464	
17 Ethanol	31	4.133	4.141	-0.008	99	10604	0.1960	0.2902	
18 Vinyl bromide	106	4.327	4.331	-0.004	95	4911	0.0392	0.0465	
19 2-Methylbutane	43	4.365	4.370	-0.005	89	6688	0.0392	0.0588	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	16372	0.0392	0.0481	
21 Acrolein	56	4.575	4.578	-0.003	30	2063	0.0392	0.0707	
23 Acetone	58	4.683	4.681	0.002	100	11501	0.1176	0.3009	
24 Isopropyl alcohol	45	4.764	4.758	0.006	86	18905	0.1176	0.1600	
25 Pentane	72	4.770	4.770	0.000	83	790	0.0392	0.0439	
26 Ethyl ether	31	4.926	4.923	0.003	96	3385	0.0392	0.0441	
27 1,1-Dichloroethene	96	5.233	5.231	0.002	97	4710	0.0392	0.0483	
28 2-Methyl-2-propanol	59	5.341	5.327	0.014	95	8685	0.0392	0.0467	
29 Acrylonitrile	53	5.330	5.334	-0.004	91	2996	0.0392	0.0482	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.396	-0.001	93	10770	0.0392	0.0457	
31 Methylene Chloride	84	5.562	5.567	-0.005	95	10301	0.0392	0.1010	
32 3-Chloro-1-propene	39	5.573	5.580	-0.007	97	7095	0.0392	0.0611	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.719	5.719	0.000	99	14316	0.0392	0.0479	
34 trans-1,2-Dichloroethene	96	6.350	6.352	-0.002	95	4880	0.0392	0.0444	
35 2-Methylpentane	43	6.360	6.365	-0.005	92	10661	0.0392	0.0473	
36 Methyl tert-butyl ether	73	6.484	6.478	0.006	94	10254	0.0392	0.0385	
37 1,1-Dichloroethane	63	6.765	6.767	-0.002	99	10001	0.0392	0.0466	
38 Vinyl acetate	43	6.873	6.872	0.001	99	8638	0.0392	0.0362	
39 2-Butanone (MEK)	72	7.331	7.318	0.013	87	2307	0.0392	0.0515	
40 Hexane	56	7.326	7.332	-0.006	68	3763	0.0392	0.0419	
41 Isopropyl ether	45	7.503	7.497	0.006	92	12189	0.0392	0.0399	
42 cis-1,2-Dichloroethene	96	7.741	7.741	0.000	95	5022	0.0392	0.0450	
43 Ethyl acetate	43	7.940	7.935	0.005	97	7539	0.0392	0.0382	
44 Chloroform	83	8.075	8.083	-0.008	88	12364	0.0392	0.0469	
45 Tert-butyl ethyl ether	59	8.183	8.174	0.009	97	10813	0.0392	0.0382	
46 Tetrahydrofuran	42	8.512	8.488	0.024	84	3936	0.0392	0.0403	
47 1,1,1-Trichloroethane	97	9.100	9.105	-0.005	97	12777	0.0392	0.0445	
48 1,2-Dichloroethane	62	9.218	9.222	-0.004	96	8138	0.0392	0.0414	
49 n-Butanol	31	9.709	9.697	0.012	52	1671	0.0392	0.0477	
50 Cyclohexane	69	9.709	9.709	0.000	73	2264	0.0392	0.0428	
51 Benzene	78	9.714	9.716	-0.002	96	15784	0.0392	0.0503	
52 Carbon tetrachloride	117	9.736	9.739	-0.003	95	12631	0.0392	0.0406	
53 2,3-Dimethylpentane	71	9.844	9.845	-0.001	88	3024	0.0392	0.0403	
54 Thiophene	84	10.006	10.006	0.000	95	7480	0.0392	0.0403	
55 Tert-amyl methyl ether	73	10.243	10.237	0.006	89	8237	0.0392	0.0326	
56 Isooctane	57	10.529	10.533	-0.004	96	23387	0.0392	0.0441	
57 n-Heptane	71	10.944	10.944	0.000	89	4438	0.0392	0.0388	
58 1,2-Dichloropropane	63	11.019	11.023	-0.004	80	5015	0.0392	0.0417	
59 Trichloroethene	130	11.062	11.060	0.002	95	7057	0.0392	0.0431	
60 Dibromomethane	93	11.143	11.149	-0.006	96	6642	0.0392	0.0460	
61 Dichlorobromomethane	83	11.300	11.304	-0.004	97	10697	0.0392	0.0397	
62 1,4-Dioxane	88	11.343	11.332	0.011	54	1469	0.0392	0.0338	
63 Methyl methacrylate	41	11.386	11.403	-0.017	63	35210	0.0392	0.1439	
64 Methylcyclohexane	83	11.861	11.861	0.000	90	10070	0.0392	0.0407	
65 4-Methyl-2-pentanone (MIBK	43	12.313	12.307	0.006	95	8249	0.0392	0.0390	
66 cis-1,3-Dichloropropene	75	12.362	12.361	0.001	96	6729	0.0392	0.0371	
67 trans-1,3-Dichloropropene	75	13.090	13.087	0.003	96	5835	0.0392	0.0367	
68 Toluene	91	13.192	13.198	-0.006	94	15367	0.0392	0.0452	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	94	4221	0.0392	0.0398	
70 2-Methylthiophene	97	13.354	13.355	-0.001	97	11540	0.0392	0.0402	
71 3-Methylthiophene	97	13.559	13.562	-0.003	99	11227	0.0392	0.0401	
72 2-Hexanone	58	13.699	13.693	0.006	91	2856	0.0392	0.0292	
73 n-Octane	85	13.920	13.922	-0.002	91	4256	0.0392	0.0362	
74 Chlorodibromomethane	129	14.001	13.997	0.004	97	8818	0.0392	0.0358	
75 Ethylene Dibromide	107	14.292	14.293	-0.001	95	7718	0.0392	0.0397	
76 Tetrachloroethene	129	14.368	14.369	-0.001	95	6858	0.0392	0.0443	
77 Chlorobenzene	112	15.263	15.264	-0.001	93	12816	0.0392	0.0442	
78 2,3-Dimethylheptane	43	15.295	15.296	-0.001	92	13296	0.0392	0.0421	
79 Ethylbenzene	91	15.560	15.560	0.000	98	17656	0.0392	0.0401	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	13147	0.0392	0.0380	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	99	26558	0.0784	0.0780	
82 n-Nonane	57	16.164	16.164	0.000	90	7421	0.0392	0.0360	
83 Bromoform	173	16.169	16.174	-0.005	85	6845	0.0392	0.0310	
84 Styrene	104	16.196	16.197	-0.001	98	7150	0.0392	0.0298	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.255	16.256	-0.001	98	14145	0.0392	0.0390	
86 1,1,2,2-Tetrachloroethane	83	16.595	16.591	0.004	96	8838	0.0392	0.0368	
87 1,2,3-Trichloropropane	110	16.757	16.753	0.004	93	3081	0.0392	0.0377	
88 Isopropylbenzene	105	16.854	16.855	-0.001	97	19538	0.0392	0.0408	
89 N-Propylbenzene	120	17.409	17.410	-0.001	99	4028	0.0392	0.0306	
90 2-Chlorotoluene	126	17.452	17.451	0.001	96	5065	0.0392	0.0382	
91 4-Ethyltoluene	105	17.571	17.570	0.001	97	15344	0.0392	0.0341	
92 1,3,5-Trimethylbenzene	120	17.647	17.649	-0.002	92	7102	0.0392	0.0316	
93 Alpha Methyl Styrene	118	17.889	17.893	-0.004	88	3934	0.0392	0.0216	
94 n-Decane	57	17.965	17.964	0.001	94	6903	0.0392	0.0283	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	15049	0.0392	0.0356	
96 1,2,4-Trimethylbenzene	105	18.105	18.109	-0.004	96	12206	0.0392	0.0311	
97 sec-Butylbenzene	105	18.375	18.375	0.000	97	17375	0.0392	0.0324	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	96	9950	0.0392	0.0366	
99 Benzyl chloride	91	18.466	18.467	-0.001	96	9649	0.0392	0.0298	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	91	10467	0.0392	0.0393	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	95	12864	0.0392	0.0284	
102 1,2,3-Trimethylbenzene	105	18.601	18.598	0.003	97	9569	0.0392	0.0315	
103 Butylcyclohexane	83	18.655	18.656	-0.001	90	10678	0.0392	0.0353	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	87	10422	0.0392	0.0392	
105 2,3-Dihydroindene	117	18.854	18.850	0.004	90	12684	0.0392	0.0356	
106 Indene	116	18.984	18.985	-0.001	90	7758	0.0392	0.0290	
107 n-Butylbenzene	91	19.000	18.996	0.004	98	12763	0.0392	0.0310	
108 Undecane	57	19.329	19.328	0.001	92	7047	0.0392	0.0300	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.378	19.379	-0.001	96	9799	0.0392	0.0305	
110 1,2-Dibromo-3-Chloropropan	157	19.475	19.475	0.000	90	3263	0.0392	0.0296	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	97	11210	0.0392	0.0307	
112 1,2,3,5-Tetramethylbenzene	119	19.830	19.826	0.004	93	7287	0.0392	0.0314	
113 1,2,3,4-Tetramethylbenzene	119	20.224	20.220	0.004	96	10312	0.0392	0.0343	
114 Dodecane	57	20.391	20.391	0.000	92	7316	0.0392	0.0373	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	93	8079	0.0392	0.0416	
116 Naphthalene	128	20.704	20.704	0.000	99	17082	0.0392	0.0420	
117 Benzo(b)thiophene	134	20.806	20.807	-0.001	99	11188	0.0392	0.0439	
118 Hexachlorobutadiene	225	20.925	20.922	0.003	76	8080	0.0392	0.0393	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	93	7772	0.0392	0.0448	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	99	14368	0.1225	0.1641	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	99	13573	0.1225	0.1732	
A 124 Toluene Range	1	13.192	(13.162-13.222)		0	38567	0.0392	0.0433	
A 125 C8 Range	1	13.920	(13.890-13.950)		0	45502	0.0392	0.0393	
S 126 Xylenes, Total	100				0		0.1176	0.1169	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0894	

Reagents:

40L12DNP_00001	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

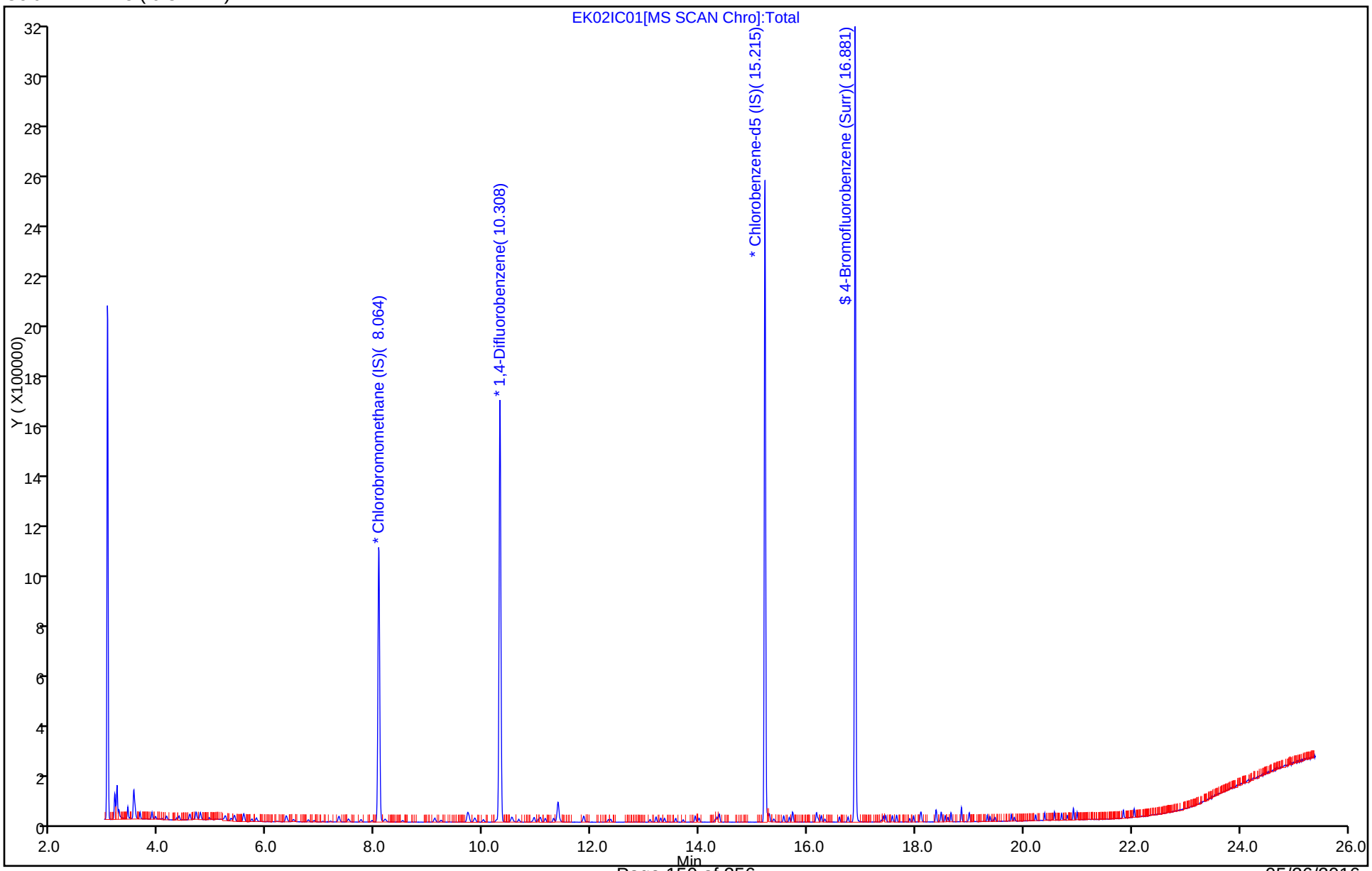
Report Date: 10-Dec-2015 15:37:35 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC01.D

Injection Date:	02-Dec-2015 20:13:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

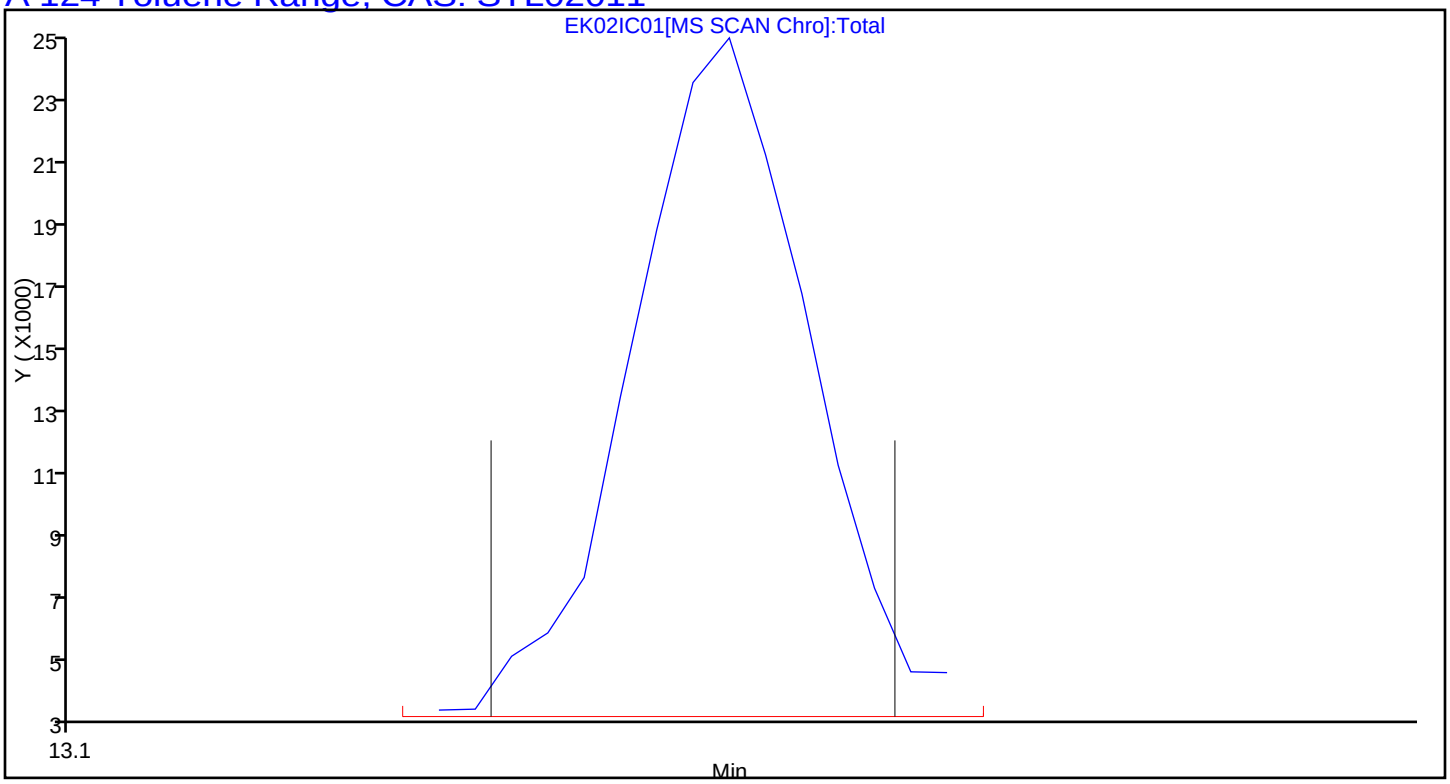


Report Date: 10-Dec-2015 15:37:35 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC01.D				
Injection Date:	02-Dec-2015 20:13:30	Instrument ID:	ME		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

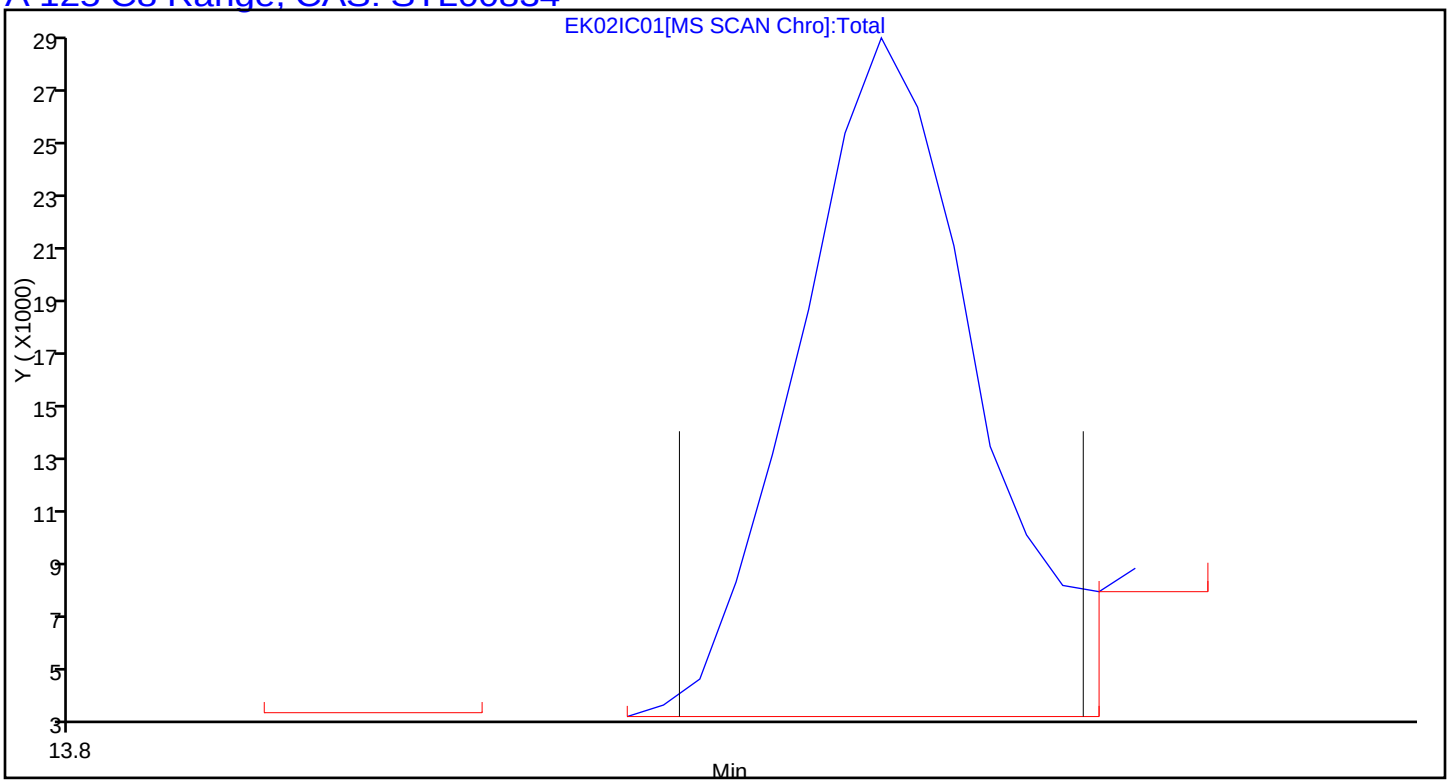


Report Date: 10-Dec-2015 15:37:35 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC01.D				
Injection Date:	02-Dec-2015 20:13:30	Instrument ID:	ME		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 02-Dec-2015 20:59:30 ALS Bottle#: 7 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-004
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:37:41 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 10:07:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.070	8.072	-0.002	91	310536	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.308	10.312	-0.004	96	1418656	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.215	15.215	0.000	89	1317137	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	88	1015192	4.00	4.12	
6 Chlorodifluoromethane	67	3.200	3.204	-0.004	97	3531	0.0784	0.0893	
7 Propene	41	3.222	3.217	0.005	85	21043	0.0784	0.1886	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	100	31728	0.0784	0.0902	
9 Chloromethane	52	3.422	3.421	0.001	59	3817	0.0784	0.1203	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.422	3.425	-0.003	90	18943	0.0784	0.0869	
11 Acetaldehyde	44	3.551	3.555	-0.004	96	32554	0.3920	0.9372	
12 Vinyl chloride	62	3.573	3.572	0.001	99	9856	0.0784	0.0860	
13 Butane	43	3.648	3.649	-0.001	84	14852	0.0784	0.0948	
14 Butadiene	54	3.648	3.649	-0.001	68	7122	0.0784	0.0885	
15 Bromomethane	94	3.934	3.936	-0.002	97	9373	0.0784	0.0886	
16 Chloroethane	64	4.058	4.060	-0.002	88	4752	0.0784	0.0893	
17 Ethanol	31	4.139	4.141	-0.002	98	20610	0.3920	0.6063	
18 Vinyl bromide	106	4.327	4.331	-0.004	96	8448	0.0784	0.0860	
19 2-Methylbutane	43	4.365	4.370	-0.005	90	9853	0.0784	0.0930	
20 Trichlorofluoromethane	101	4.565	4.570	-0.005	99	27681	0.0784	0.0875	
21 Acrolein	56	4.576	4.578	-0.002	33	3650	0.0784	0.1345	
23 Acetone	58	4.683	4.681	0.002	100	22570	0.2352	0.6347	
24 Isopropyl alcohol	45	4.753	4.758	-0.005	93	33884	0.2352	0.3082	
25 Pentane	72	4.770	4.770	0.000	98	1542	0.0784	0.0920	
26 Ethyl ether	31	4.926	4.923	0.003	92	6600	0.0784	0.0923	
27 1,1-Dichloroethene	96	5.228	5.231	-0.003	97	8314	0.0784	0.0916	
28 2-Methyl-2-propanol	59	5.336	5.327	0.009	96	16020	0.0784	0.0926	
29 Acrylonitrile	53	5.330	5.334	-0.004	56	5411	0.0784	0.0935	
30 1,1,2-Trichloro-1,2,2-trif	101	5.390	5.396	-0.006	95	19175	0.0784	0.0875	
31 Methylene Chloride	84	5.562	5.567	-0.005	97	13838	0.0784	0.1459	
32 3-Chloro-1-propene	39	5.573	5.580	-0.007	95	9715	0.0784	0.0899	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.719	5.719	0.000	100	25478	0.0784	0.0915	
34 trans-1,2-Dichloroethene	96	6.350	6.352	-0.002	96	9093	0.0784	0.0889	
35 2-Methylpentane	43	6.366	6.365	0.001	92	19264	0.0784	0.0919	
36 Methyl tert-butyl ether	73	6.484	6.478	0.006	96	21349	0.0784	0.0862	
37 1,1-Dichloroethane	63	6.765	6.767	-0.002	99	17525	0.0784	0.0878	
38 Vinyl acetate	43	6.867	6.872	-0.005	99	18390	0.0784	0.0827	
39 2-Butanone (MEK)	72	7.320	7.318	0.002	91	5436	0.0784	0.1303	
40 Hexane	56	7.326	7.332	-0.006	66	7176	0.0784	0.0858	
41 Isopropyl ether	45	7.498	7.497	0.001	94	24828	0.0784	0.0874	
42 cis-1,2-Dichloroethene	96	7.735	7.741	-0.006	96	8745	0.0784	0.0842	
43 Ethyl acetate	43	7.935	7.935	0.000	98	15568	0.0784	0.0848	
44 Chloroform	83	8.081	8.083	-0.002	92	22026	0.0784	0.0898	
45 Tert-butyl ethyl ether	59	8.178	8.174	0.004	97	21899	0.0784	0.0832	
46 Tetrahydrofuran	42	8.496	8.488	0.008	91	8112	0.0784	0.0893	
47 1,1,1-Trichloroethane	97	9.105	9.105	0.000	96	23111	0.0784	0.0865	
48 1,2-Dichloroethane	62	9.218	9.222	-0.004	98	15378	0.0784	0.0854	
49 n-Butanol	31	9.704	9.697	0.007	51	3301	0.0784	0.1028	
50 Cyclohexane	69	9.709	9.709	0.000	73	4074	0.0784	0.0839	
51 Benzene	78	9.709	9.716	-0.007	97	27350	0.0784	0.0950	
52 Carbon tetrachloride	117	9.736	9.739	-0.003	95	23292	0.0784	0.0816	
53 2,3-Dimethylpentane	71	9.838	9.845	-0.007	88	5678	0.0784	0.0825	
54 Thiophene	84	10.000	10.006	-0.006	97	14533	0.0784	0.0853	
55 Tert-amyl methyl ether	73	10.237	10.237	0.000	93	18900	0.0784	0.0783	
56 Isooctane	57	10.529	10.533	-0.004	96	41581	0.0784	0.0856	
57 n-Heptane	71	10.944	10.944	0.000	88	8695	0.0784	0.0828	
58 1,2-Dichloropropane	63	11.019	11.023	-0.004	83	9265	0.0784	0.0839	
59 Trichloroethene	130	11.057	11.060	-0.003	96	12201	0.0784	0.0813	
60 Dibromomethane	93	11.149	11.149	0.000	90	12072	0.0784	0.0913	
61 Dichlorobromomethane	83	11.305	11.304	0.001	99	19920	0.0784	0.0805	
62 1,4-Dioxane	88	11.343	11.332	0.011	56	3026	0.0784	0.0760	
63 Methyl methacrylate	41	11.381	11.403	-0.022	88	69330	0.0784	0.3091	
64 Methylcyclohexane	83	11.861	11.861	0.000	93	18819	0.0784	0.0830	
65 4-Methyl-2-pentanone (MIBK	43	12.314	12.307	0.007	96	16113	0.0784	0.0831	
66 cis-1,3-Dichloropropene	75	12.357	12.361	-0.004	97	12758	0.0784	0.0767	
67 trans-1,3-Dichloropropene	75	13.079	13.087	-0.008	97	11218	0.0784	0.0738	
68 Toluene	91	13.198	13.198	0.000	95	27755	0.0784	0.0854	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	96	8195	0.0784	0.0808	
70 2-Methylthiophene	97	13.354	13.355	-0.001	97	21944	0.0784	0.0799	
71 3-Methylthiophene	97	13.559	13.562	-0.003	99	21333	0.0784	0.0798	
72 2-Hexanone	58	13.699	13.693	0.006	92	6158	0.0784	0.0659	
73 n-Octane	85	13.920	13.922	-0.002	90	8307	0.0784	0.0738	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	97	17212	0.0784	0.0730	
75 Ethylene Dibromide	107	14.293	14.293	0.000	98	14683	0.0784	0.0791	
76 Tetrachloroethene	129	14.368	14.369	-0.001	92	11993	0.0784	0.0811	
77 Chlorobenzene	112	15.263	15.264	-0.001	95	23786	0.0784	0.0858	
78 2,3-Dimethylheptane	43	15.296	15.296	0.000	93	25538	0.0784	0.0845	
79 Ethylbenzene	91	15.560	15.560	0.000	99	35373	0.0784	0.0839	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	25996	0.0784	0.0786	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	98	54718	0.1568	0.1681	
82 n-Nonane	57	16.164	16.164	0.000	87	14935	0.0784	0.0758	
83 Bromoform	173	16.169	16.174	-0.005	94	13839	0.0784	0.0655	
84 Styrene	104	16.196	16.197	-0.001	98	15524	0.0784	0.0676	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.255	16.256	-0.001	98	29068	0.0784	0.0837	
86 1,1,2,2-Tetrachloroethane	83	16.590	16.591	-0.001	97	18712	0.0784	0.0816	
87 1,2,3-Trichloropropane	110	16.751	16.753	-0.002	95	6092	0.0784	0.0780	
88 Isopropylbenzene	105	16.854	16.855	-0.001	98	37895	0.0784	0.0828	
89 N-Propylbenzene	120	17.409	17.410	-0.001	99	9064	0.0784	0.0721	
90 2-Chlorotoluene	126	17.452	17.451	0.001	97	9991	0.0784	0.0788	
91 4-Ethyltoluene	105	17.571	17.570	0.001	98	32498	0.0784	0.0755	
92 1,3,5-Trimethylbenzene	120	17.652	17.649	0.003	92	15522	0.0784	0.0721	
93 Alpha Methyl Styrene	118	17.889	17.893	-0.004	86	9508	0.0784	0.0547	
94 n-Decane	57	17.959	17.964	-0.005	94	16049	0.0784	0.0689	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	31369	0.0784	0.0776	
96 1,2,4-Trimethylbenzene	105	18.110	18.109	0.001	96	28304	0.0784	0.0755	
97 sec-Butylbenzene	105	18.375	18.375	0.000	98	39626	0.0784	0.0774	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	97	20811	0.0784	0.0800	
99 Benzyl chloride	91	18.466	18.467	-0.001	95	18645	0.0784	0.0602	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	92	19800	0.0784	0.0778	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	96	30578	0.0784	0.0705	
102 1,2,3-Trimethylbenzene	105	18.596	18.598	-0.002	98	21973	0.0784	0.0757	
103 Butylcyclohexane	83	18.655	18.656	-0.001	90	22640	0.0784	0.0783	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	85	20175	0.0784	0.0793	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	92	25640	0.0784	0.0754	
106 Indene	116	18.984	18.985	-0.001	91	16203	0.0784	0.0634	
107 n-Butylbenzene	91	18.995	18.996	-0.001	98	27347	0.0784	0.0695	
108 Undecane	57	19.329	19.328	0.001	93	12009	0.0784	0.0534	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.383	19.379	0.004	97	19593	0.0784	0.0638	
110 1,2-Dibromo-3-Chloropropan	157	19.475	19.475	0.000	88	5950	0.0784	0.0565	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	97	20453	0.0784	0.0587	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	94	13485	0.0784	0.0608	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.220	-0.001	97	17353	0.0784	0.0603	
114 Dodecane	57	20.391	20.391	0.000	93	10929	0.0784	0.0584	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	93	12622	0.0784	0.0679	
116 Naphthalene	128	20.704	20.704	0.000	99	25084	0.0784	0.0645	
117 Benzo(b)thiophene	134	20.807	20.807	0.000	98	16504	0.0784	0.0677	
118 Hexachlorobutadiene	225	20.920	20.922	-0.002	93	14261	0.0784	0.0726	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	94	11810	0.0784	0.0712	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	100	20562	0.2450	0.2457	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	99	18697	0.2450	0.2496	
A 124 Toluene Range	1	13.198	(13.168-13.228)		0	73138	0.0784	0.0896	
A 125 C8 Range	1	13.914	(13.890-13.950)		0	84812	0.0784	0.0798	
S 126 Xylenes, Total	100				0		0.2352	0.2518	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1731	

Reagents:

40L12DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

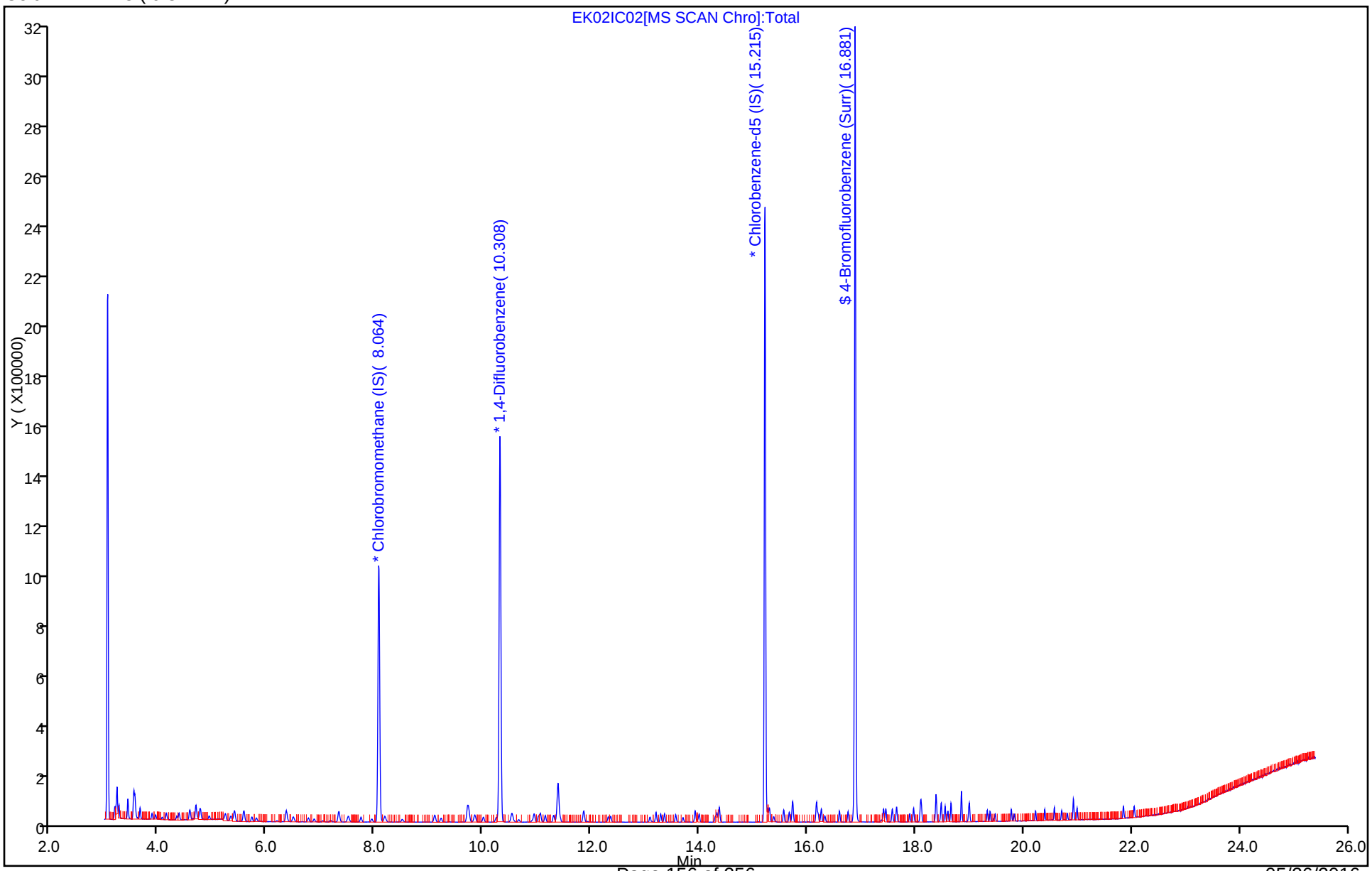
Report Date: 10-Dec-2015 15:37:43 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC02.D

Injection Date:	02-Dec-2015 20:59:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

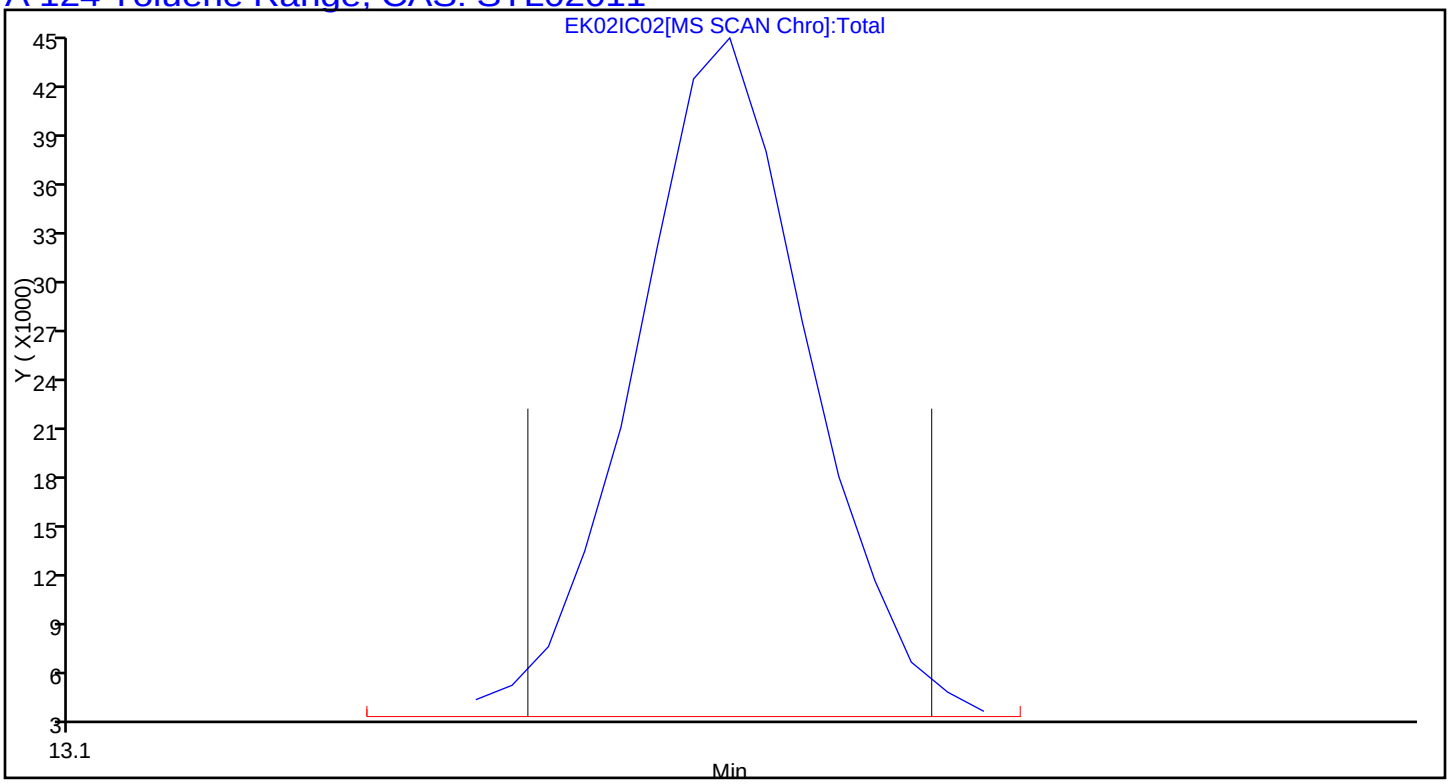


Report Date: 10-Dec-2015 15:37:43 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC02.D				
Injection Date:	02-Dec-2015 20:59:30	Instrument ID:	ME		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

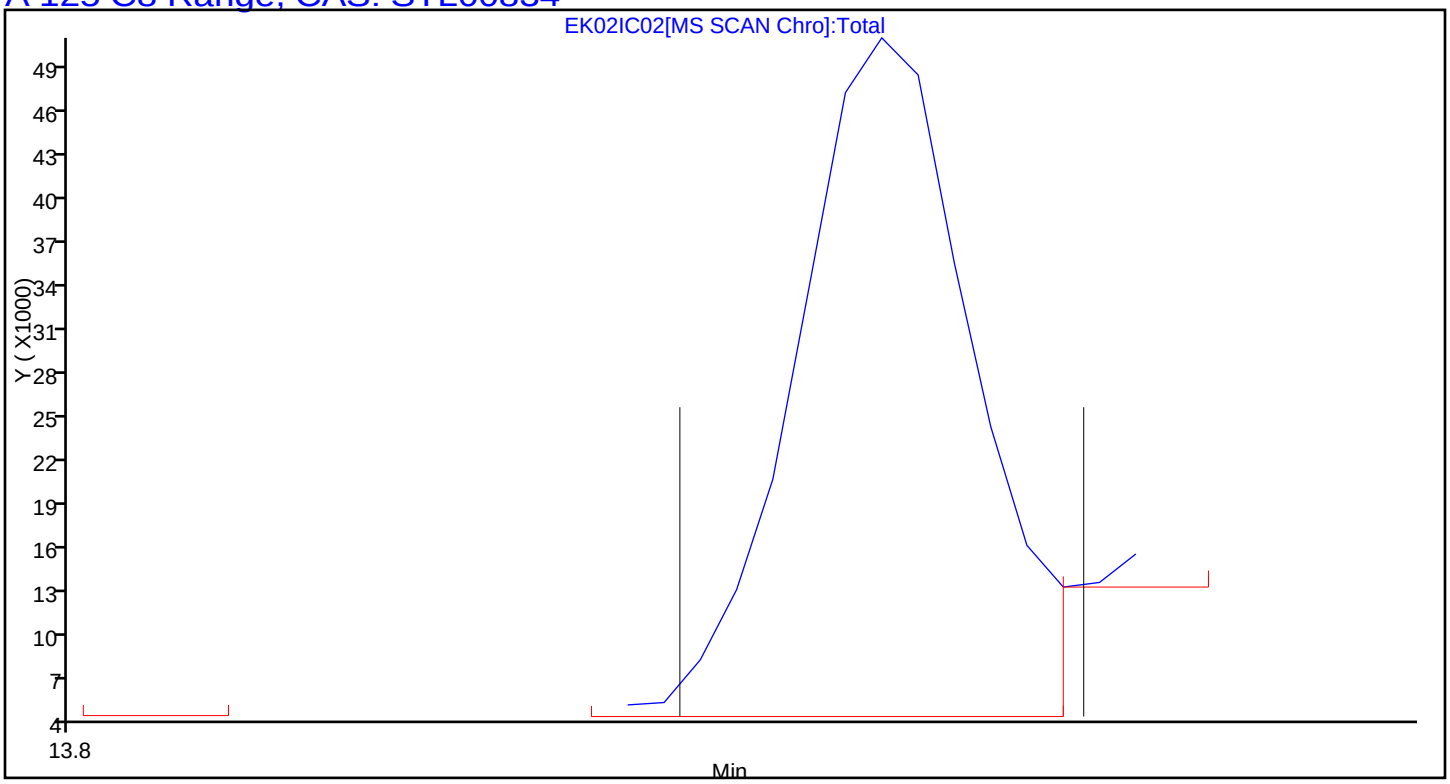


Report Date: 10-Dec-2015 15:37:43 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC02.D				
Injection Date:	02-Dec-2015 20:59:30	Instrument ID:	ME		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 02-Dec-2015 21:45:30 ALS Bottle#: 8 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-005
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:37:48 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 10:10:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.070	8.072	-0.002	91	306462	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.307	10.312	-0.005	96	1417789	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.214	15.215	-0.001	89	1275753	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	87	952365	4.00	3.99	
6 Chlorodifluoromethane	67	3.206	3.204	0.002	97	6725	0.1587	0.1723	
7 Propene	41	3.216	3.217	-0.001	95	28344	0.1587	0.2574	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	100	58869	0.1587	0.1695	
9 Chloromethane	52	3.421	3.421	0.000	58	5564	0.1587	0.1776	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.427	3.425	0.002	90	36477	0.1587	0.1695	
11 Acetaldehyde	44	3.556	3.555	0.001	98	62016	0.7933	1.81	
12 Vinyl chloride	62	3.572	3.572	0.000	99	18175	0.1587	0.1607	
13 Butane	43	3.648	3.649	-0.001	84	28039	0.1587	0.1813	
14 Butadiene	54	3.648	3.649	-0.001	69	13093	0.1587	0.1649	
15 Bromomethane	94	3.934	3.936	-0.002	98	17472	0.1587	0.1673	
16 Chloroethane	64	4.058	4.060	-0.002	93	8655	0.1587	0.1648	
17 Ethanol	31	4.133	4.141	-0.008	99	31830	0.7933	0.9488	
18 Vinyl bromide	106	4.333	4.331	0.002	98	16126	0.1587	0.1663	
19 2-Methylbutane	43	4.370	4.370	0.000	89	18368	0.1587	0.1758	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	53941	0.1587	0.1727	
21 Acrolein	56	4.581	4.578	0.003	31	4436	0.1587	0.1656	
22 Acetonitrile	40	4.640	4.639	0.001	95	5459	0.1587	0.1826	
23 Acetone	58	4.683	4.681	0.002	99	38784	0.4760	1.11	
24 Isopropyl alcohol	45	4.753	4.758	-0.005	96	58699	0.4760	0.5410	
25 Pentane	72	4.769	4.770	-0.001	98	2827	0.1587	0.1710	
26 Ethyl ether	31	4.926	4.923	0.003	95	11871	0.1587	0.1683	
27 1,1-Dichloroethene	96	5.228	5.231	-0.003	95	14610	0.1587	0.1632	
28 2-Methyl-2-propanol	59	5.325	5.327	-0.002	95	28694	0.1587	0.1681	
29 Acrylonitrile	53	5.336	5.334	0.002	59	9312	0.1587	0.1631	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.396	-0.001	95	36380	0.1587	0.1682	
31 Methylene Chloride	84	5.562	5.567	-0.005	98	20361	0.1587	0.2175	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.578	5.580	-0.002	94	16622	0.1587	0.1558	
33 Carbon disulfide	76	5.719	5.719	-0.001	100	47863	0.1587	0.1742	
34 trans-1,2-Dichloroethene	96	6.344	6.352	-0.008	96	16596	0.1587	0.1643	
35 2-Methylpentane	43	6.366	6.365	0.001	92	34502	0.1587	0.1668	
36 Methyl tert-butyl ether	73	6.484	6.478	0.006	96	38025	0.1587	0.1557	
37 1,1-Dichloroethane	63	6.759	6.767	-0.008	100	32575	0.1587	0.1655	
38 Vinyl acetate	43	6.867	6.872	-0.005	100	31108	0.1587	0.1418	
39 2-Butanone (MEK)	72	7.320	7.318	0.002	96	8567	0.1587	0.2081	
40 Hexane	56	7.331	7.332	-0.001	75	13443	0.1587	0.1630	
41 Isopropyl ether	45	7.498	7.497	0.001	94	45201	0.1587	0.1612	
42 cis-1,2-Dichloroethene	96	7.741	7.741	0.000	97	16457	0.1587	0.1605	
43 Ethyl acetate	43	7.935	7.935	0.000	99	28027	0.1587	0.1547	
44 Chloroform	83	8.080	8.083	-0.003	95	41014	0.1587	0.1694	
45 Tert-butyl ethyl ether	59	8.172	8.174	-0.002	97	39739	0.1587	0.1530	
46 Tetrahydrofuran	42	8.496	8.488	0.008	88	14080	0.1587	0.1570	
47 1,1,1-Trichloroethane	97	9.105	9.105	0.000	96	43187	0.1587	0.1639	
48 1,2-Dichloroethane	62	9.218	9.222	-0.004	99	28882	0.1587	0.1605	
49 n-Butanol	31	9.709	9.697	0.012	49	4939	0.1587	0.1539	
50 Cyclohexane	69	9.709	9.709	0.000	73	7771	0.1587	0.1602	
51 Benzene	78	9.714	9.716	-0.002	96	47416	0.1587	0.1648	
52 Carbon tetrachloride	117	9.736	9.739	-0.003	96	42889	0.1587	0.1504	
53 2,3-Dimethylpentane	71	9.844	9.845	-0.001	89	10358	0.1587	0.1506	
54 Thiophene	84	10.000	10.006	-0.006	97	26097	0.1587	0.1534	
55 Tert-amyl methyl ether	73	10.243	10.237	0.006	95	33811	0.1587	0.1446	
56 Isooctane	57	10.534	10.533	0.001	97	79096	0.1587	0.1629	
57 n-Heptane	71	10.944	10.944	0.000	91	16052	0.1587	0.1530	
58 1,2-Dichloropropane	63	11.025	11.023	0.002	82	17424	0.1587	0.1579	
59 Trichloroethene	130	11.057	11.060	-0.003	95	23605	0.1587	0.1574	
60 Dibromomethane	93	11.149	11.149	0.000	96	21187	0.1587	0.1603	
61 Dichlorobromomethane	83	11.300	11.304	-0.004	99	37181	0.1587	0.1504	
62 1,4-Dioxane	88	11.343	11.332	0.011	85	5999	0.1587	0.1507	
63 Methyl methacrylate	41	11.381	11.403	-0.023	52	97985	0.1587	0.4371	
64 Methylcyclohexane	83	11.860	11.861	-0.001	93	35409	0.1587	0.1563	
65 4-Methyl-2-pentanone (MIBK	43	12.308	12.307	0.001	96	28526	0.1587	0.1473	
66 cis-1,3-Dichloropropene	75	12.357	12.361	-0.004	97	24018	0.1587	0.1444	
67 trans-1,3-Dichloropropene	75	13.084	13.087	-0.003	97	20037	0.1587	0.1362	
68 Toluene	91	13.198	13.198	0.000	93	50050	0.1587	0.1591	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	96	15516	0.1587	0.1579	
70 2-Methylthiophene	97	13.354	13.355	-0.001	98	40103	0.1587	0.1508	
71 3-Methylthiophene	97	13.559	13.562	-0.003	99	38656	0.1587	0.1493	
72 2-Hexanone	58	13.694	13.693	0.001	92	12681	0.1587	0.1402	
73 n-Octane	85	13.920	13.922	-0.002	92	16704	0.1587	0.1532	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	97	31246	0.1587	0.1369	
75 Ethylene Dibromide	107	14.292	14.293	-0.001	99	26379	0.1587	0.1467	
76 Tetrachloroethene	129	14.368	14.369	-0.001	93	22951	0.1587	0.1603	
77 Chlorobenzene	112	15.263	15.264	-0.001	93	43521	0.1587	0.1620	
78 2,3-Dimethylheptane	43	15.295	15.296	-0.001	94	48511	0.1587	0.1658	
79 Ethylbenzene	91	15.560	15.560	0.000	99	62701	0.1587	0.1536	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	48333	0.1587	0.1508	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	99	100478	0.3173	0.3187	
82 n-Nonane	57	16.164	16.164	0.000	90	29397	0.1587	0.1541	
83 Bromoform	173	16.174	16.174	0.000	95	24470	0.1587	0.1196	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.196	16.197	-0.001	98	30011	0.1587	0.1349	
85 o-Xylene	91	16.255	16.256	-0.001	98	53166	0.1587	0.1581	
86 1,1,2,2-Tetrachloroethane	83	16.590	16.591	-0.001	97	32937	0.1587	0.1483	
87 1,2,3-Trichloropropane	110	16.751	16.753	-0.002	95	11575	0.1587	0.1529	
88 Isopropylbenzene	105	16.854	16.855	-0.001	97	67372	0.1587	0.1520	
89 N-Propylbenzene	120	17.409	17.410	-0.001	99	16627	0.1587	0.1366	
90 2-Chlorotoluene	126	17.447	17.451	-0.004	96	18119	0.1587	0.1475	
91 4-Ethyltoluene	105	17.571	17.570	0.001	98	59150	0.1587	0.1420	
92 1,3,5-Trimethylbenzene	120	17.646	17.649	-0.003	92	30214	0.1587	0.1450	
93 Alpha Methyl Styrene	118	17.894	17.893	0.001	86	17974	0.1587	0.1067	
94 n-Decane	57	17.965	17.964	0.001	93	32259	0.1587	0.1431	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	59554	0.1587	0.1521	
96 1,2,4-Trimethylbenzene	105	18.105	18.109	-0.004	95	54331	0.1587	0.1496	
97 sec-Butylbenzene	105	18.374	18.375	-0.001	97	73606	0.1587	0.1484	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	97	39199	0.1587	0.1556	
99 Benzyl chloride	91	18.466	18.467	-0.001	97	37669	0.1587	0.1255	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	90	35839	0.1587	0.1454	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	97	60050	0.1587	0.1429	
102 1,2,3-Trimethylbenzene	105	18.596	18.598	-0.002	98	42288	0.1587	0.1505	
103 Butylcyclohexane	83	18.655	18.656	-0.001	91	44505	0.1587	0.1590	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	84	37566	0.1587	0.1525	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	92	50314	0.1587	0.1527	
106 Indene	116	18.984	18.985	-0.001	90	32217	0.1587	0.1301	
107 n-Butylbenzene	91	18.995	18.996	-0.001	99	54613	0.1587	0.1432	
108 Undecane	57	19.329	19.328	0.001	94	27260	0.1587	0.1252	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.377	19.379	-0.002	98	39681	0.1587	0.1333	
110 1,2-Dibromo-3-Chloropropan	157	19.474	19.475	-0.001	91	12230	0.1587	0.1199	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	97	46195	0.1587	0.1368	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	95	29466	0.1587	0.1371	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.220	-0.001	97	39090	0.1587	0.1403	
114 Dodecane	57	20.391	20.391	0.000	94	29026	0.1587	0.1600	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	94	27984	0.1587	0.1555	
116 Naphthalene	128	20.704	20.704	0.000	99	57751	0.1587	0.1533	
117 Benzo(b)thiophene	134	20.806	20.807	-0.001	99	38875	0.1587	0.1647	
118 Hexachlorobutadiene	225	20.920	20.922	-0.002	93	28141	0.1587	0.1479	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	95	26373	0.1587	0.1641	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	99	46806	0.4958	0.5774	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	100	45046	0.4958	0.6209	
A 124 Toluene Range	1	13.198	(13.168-13.228)		0	125175	0.1587	0.1534	
A 125 C8 Range	1	13.914	(13.890-13.950)		0	162506	0.1587	0.1530	
S 126 Xylenes, Total	100				0		0.4760	0.4768	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3249	

Reagents:

40L3DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

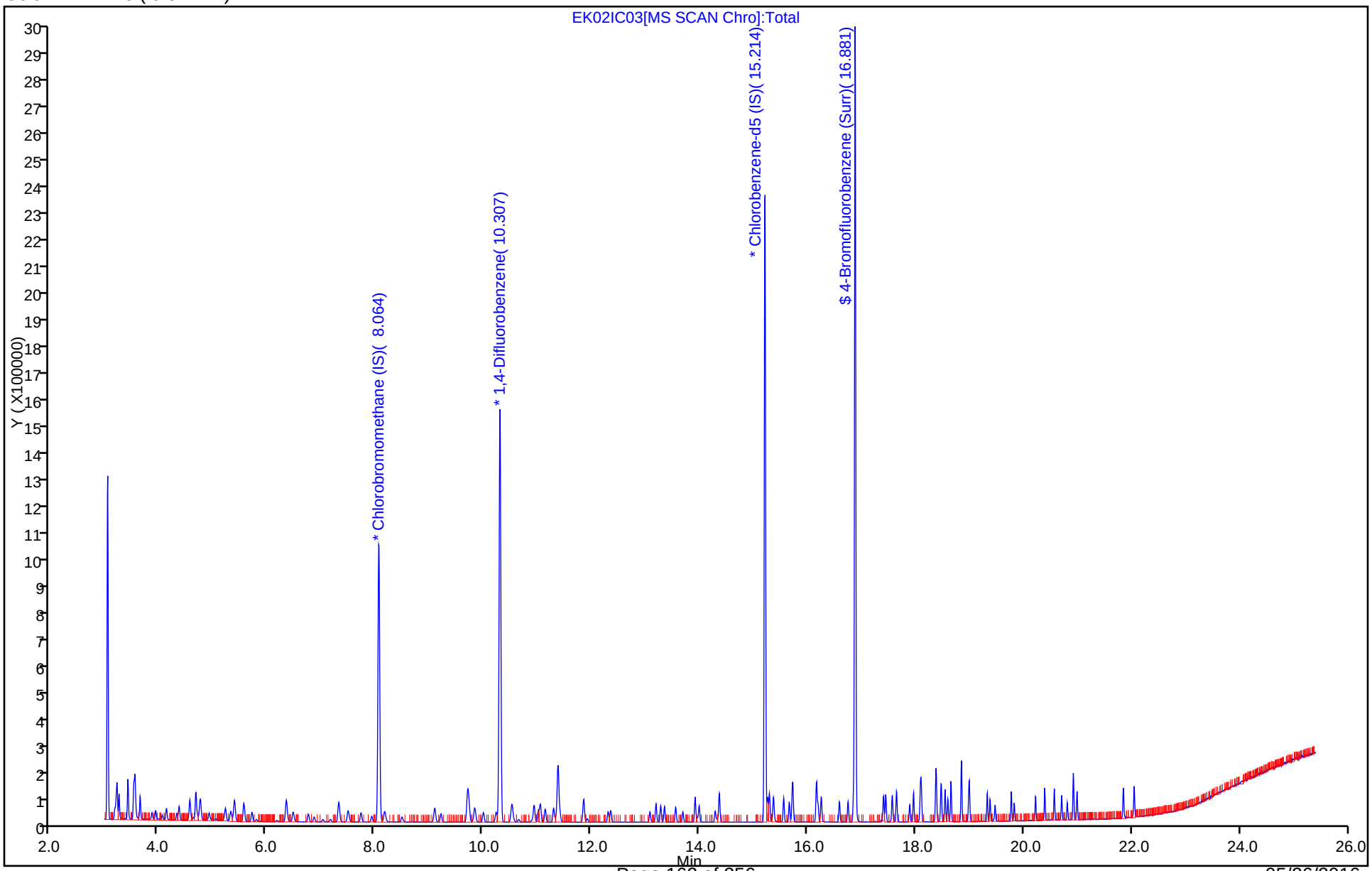
Report Date: 10-Dec-2015 15:37:49 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC03.D

Injection Date:	02-Dec-2015 21:45:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

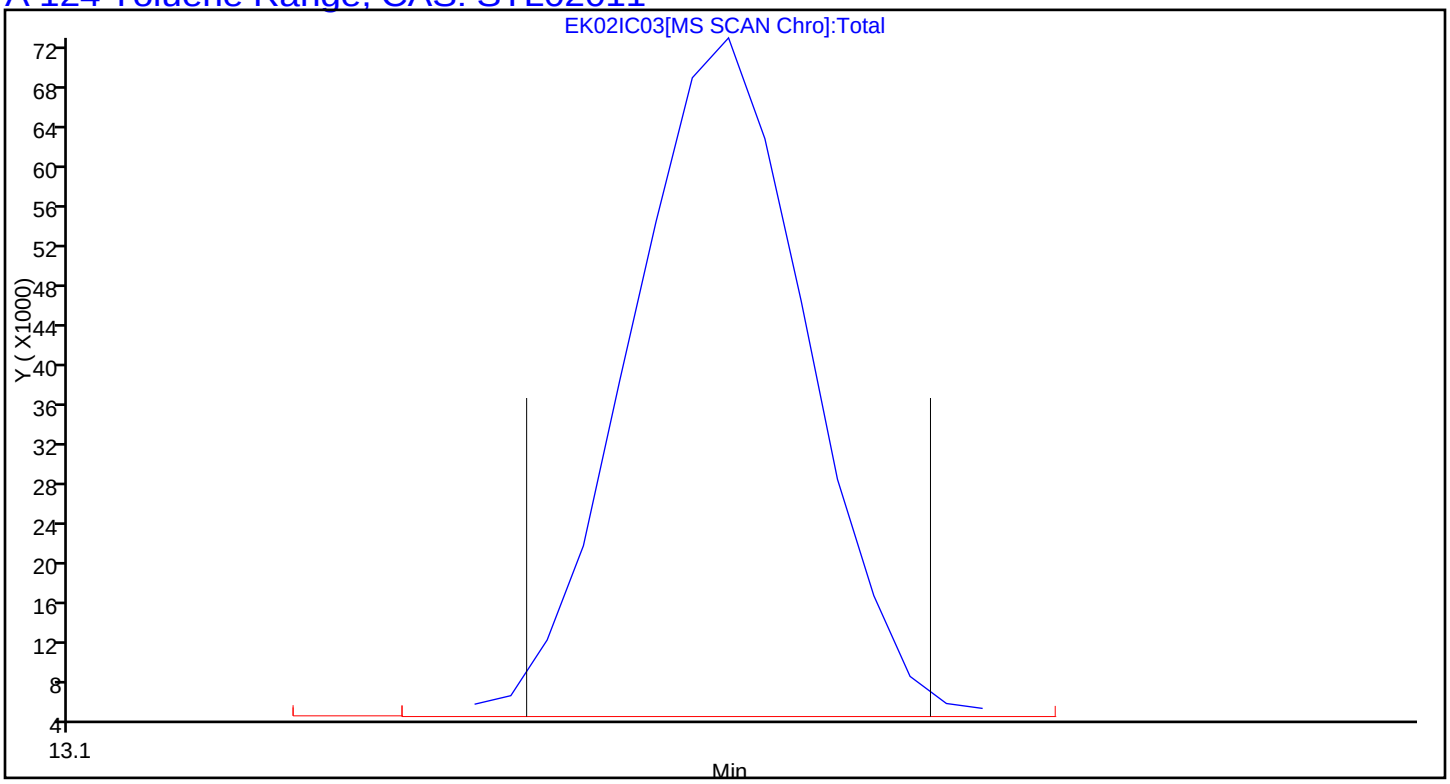


Report Date: 10-Dec-2015 15:37:49 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC03.D				
Injection Date:	02-Dec-2015 21:45:30	Instrument ID:	ME		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

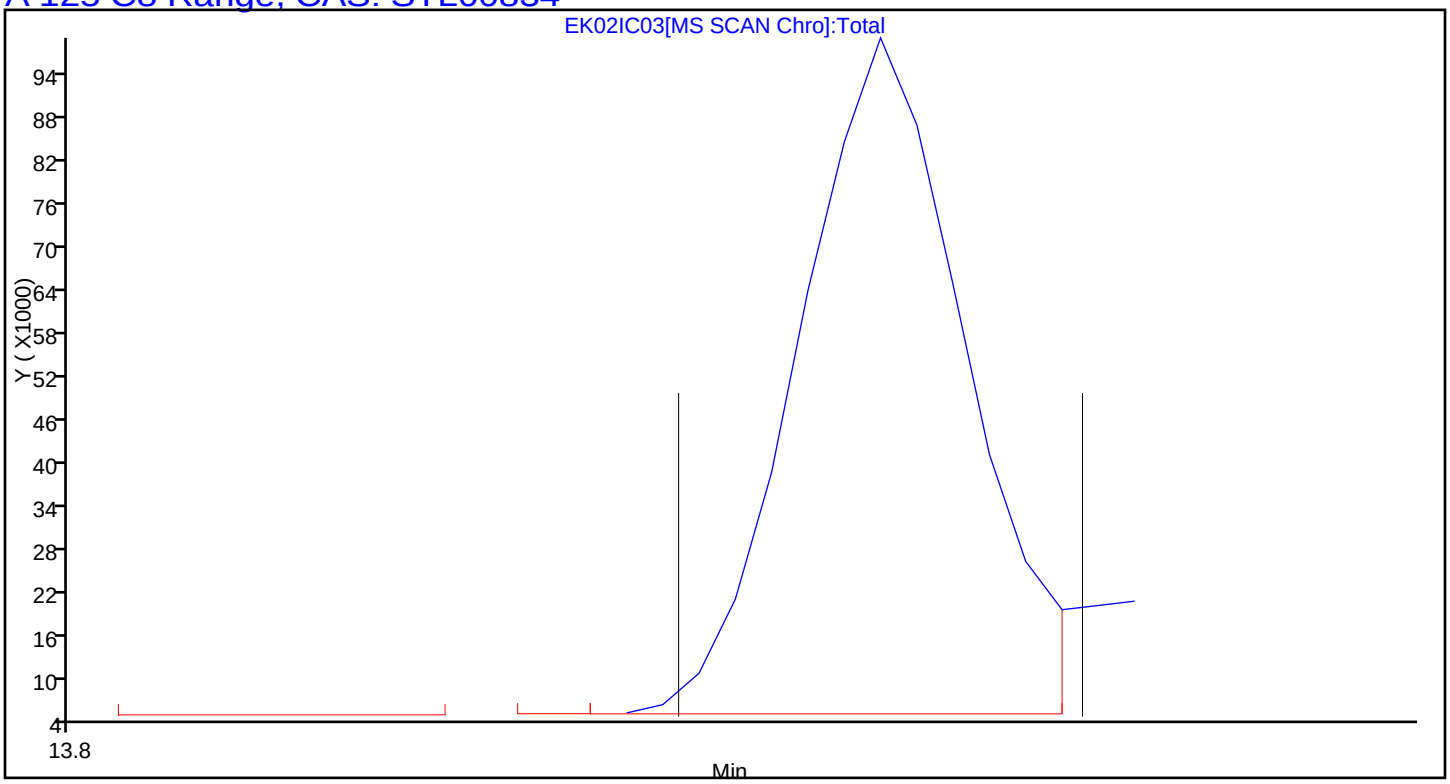


Report Date: 10-Dec-2015 15:37:49 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC03.D				
Injection Date:	02-Dec-2015 21:45:30	Instrument ID:	ME		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 02-Dec-2015 22:31:30 ALS Bottle#: 9 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-006
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:37:55 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 11:23:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.070	8.072	-0.002	94	294614	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.308	10.312	-0.004	96	1264448	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.215	15.215	0.000	89	1131014	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	87	849912	4.00	4.01	
6 Chlorodifluoromethane	67	3.206	3.204	0.002	97	16083	0.4001	0.4286	
7 Propene	41	3.217	3.217	0.000	96	51633	0.4001	0.4878	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	100	151015	0.4001	0.4524	
9 Chloromethane	52	3.421	3.421	0.000	57	14470	0.4001	0.4805	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.421	3.425	-0.004	89	91359	0.4001	0.4417	
11 Acetaldehyde	44	3.551	3.555	-0.004	99	80425	2.00	2.44	
12 Vinyl chloride	62	3.572	3.572	0.000	99	46699	0.4001	0.4294	
13 Butane	43	3.648	3.649	-0.001	83	67144	0.4001	0.4517	
14 Butadiene	54	3.648	3.649	-0.001	70	33168	0.4001	0.4345	
15 Bromomethane	94	3.934	3.936	-0.002	97	42935	0.4001	0.4276	
16 Chloroethane	64	4.058	4.060	-0.002	92	21910	0.4001	0.4339	
17 Ethanol	31	4.133	4.141	-0.008	99	73782	2.00	2.29	
18 Vinyl bromide	106	4.327	4.331	-0.004	98	39959	0.4001	0.4286	
19 2-Methylbutane	43	4.371	4.370	0.000	90	45832	0.4001	0.4562	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	135673	0.4001	0.4519	
21 Acrolein	56	4.575	4.578	-0.003	96	10903	0.4001	0.4234	
22 Acetonitrile	40	4.640	4.639	0.001	98	10964	0.4001	0.3815	
23 Acetone	58	4.678	4.681	-0.003	99	46763	1.20	1.39	
24 Isopropyl alcohol	45	4.748	4.758	-0.010	94	140078	1.20	1.34	
25 Pentane	72	4.764	4.770	-0.006	96	6995	0.4001	0.4401	
26 Ethyl ether	31	4.921	4.923	-0.002	94	30051	0.4001	0.4431	
27 1,1-Dichloroethene	96	5.228	5.231	-0.003	96	37137	0.4001	0.4314	
28 2-Methyl-2-propanol	59	5.320	5.327	-0.007	97	70479	0.4001	0.4295	
29 Acrylonitrile	53	5.330	5.334	-0.004	91	23226	0.4001	0.4231	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.396	-0.001	95	91809	0.4001	0.4416	
31 Methylene Chloride	84	5.568	5.567	0.001	98	42914	0.4001	0.4768	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.578	5.580	-0.002	95	45769	0.4001	0.4463	
33 Carbon disulfide	76	5.719	5.719	0.000	99	118178	0.4001	0.4475	
34 trans-1,2-Dichloroethene	96	6.350	6.352	-0.002	97	41829	0.4001	0.4309	
35 2-Methylpentane	43	6.360	6.365	-0.005	94	87105	0.4001	0.4381	
36 Methyl tert-butyl ether	73	6.479	6.478	0.001	96	98363	0.4001	0.4189	
37 1,1-Dichloroethane	63	6.765	6.767	-0.002	100	83269	0.4001	0.4400	
38 Vinyl acetate	43	6.867	6.872	-0.005	99	84274	0.4001	0.3996	
39 2-Butanone (MEK)	72	7.315	7.318	-0.003	96	15606	0.4001	0.3943	
40 Hexane	56	7.331	7.332	-0.001	86	34068	0.4001	0.4296	
41 Isopropyl ether	45	7.498	7.497	0.001	94	112508	0.4001	0.4173	
42 cis-1,2-Dichloroethene	96	7.735	7.741	-0.006	98	41264	0.4001	0.4187	
43 Ethyl acetate	43	7.929	7.935	-0.006	98	73552	0.4001	0.4222	
44 Chloroform	83	8.080	8.083	-0.003	96	101394	0.4001	0.4357	
45 Tert-butyl ethyl ether	59	8.172	8.174	-0.002	96	104889	0.4001	0.4200	
46 Tetrahydrofuran	42	8.485	8.488	-0.003	89	35316	0.4001	0.4096	
47 1,1,1-Trichloroethane	97	9.105	9.105	0.000	97	108600	0.4001	0.4287	
48 1,2-Dichloroethane	62	9.218	9.222	-0.004	98	71926	0.4001	0.4481	
49 n-Butanol	31	9.698	9.697	0.001	65	12103	0.4001	0.4228	
50 Cyclohexane	69	9.704	9.709	-0.005	81	19179	0.4001	0.4433	
51 Benzene	78	9.714	9.716	-0.002	97	113961	0.4001	0.4441	
52 Carbon tetrachloride	117	9.736	9.739	-0.003	97	114430	0.4001	0.4500	
53 2,3-Dimethylpentane	71	9.844	9.845	-0.001	89	27654	0.4001	0.4508	
54 Thiophene	84	10.006	10.006	0.000	97	67307	0.4001	0.4435	
55 Tert-amyl methyl ether	73	10.237	10.237	0.000	96	89640	0.4001	0.4325	
56 Isooctane	57	10.534	10.533	0.001	98	197009	0.4001	0.4549	
57 n-Heptane	71	10.944	10.944	0.000	91	40519	0.4001	0.4331	
58 1,2-Dichloropropane	63	11.019	11.023	-0.004	84	43119	0.4001	0.4382	
59 Trichloroethene	130	11.057	11.060	-0.003	95	57555	0.4001	0.4303	
60 Dibromomethane	93	11.143	11.149	-0.006	95	52531	0.4001	0.4456	
61 Dichlorobromomethane	83	11.300	11.304	-0.004	99	96371	0.4001	0.4371	
62 1,4-Dioxane	88	11.332	11.332	0.000	97	15225	0.4001	0.4288	
63 Methyl methacrylate	41	11.418	11.403	0.015	91	40224	0.4001	0.2012	
64 Methylcyclohexane	83	11.855	11.861	-0.006	94	90356	0.4001	0.4472	
65 4-Methyl-2-pentanone (MIBK	43	12.308	12.307	0.001	98	70693	0.4001	0.4093	
66 cis-1,3-Dichloropropene	75	12.362	12.361	0.001	99	63220	0.4001	0.4262	
67 trans-1,3-Dichloropropene	75	13.085	13.087	-0.002	97	54071	0.4001	0.4145	
68 Toluene	91	13.198	13.198	0.000	93	124677	0.4001	0.4469	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	96	39140	0.4001	0.4493	
70 2-Methylthiophene	97	13.354	13.355	-0.001	97	103381	0.4001	0.4386	
71 3-Methylthiophene	97	13.559	13.562	-0.003	99	99713	0.4001	0.4343	
72 2-Hexanone	58	13.689	13.693	-0.004	92	32076	0.4001	0.4000	
73 n-Octane	85	13.920	13.922	-0.002	93	43280	0.4001	0.4479	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	98	87145	0.4001	0.4305	
75 Ethylene Dibromide	107	14.292	14.293	-0.001	98	67495	0.4001	0.4235	
76 Tetrachloroethene	129	14.368	14.369	-0.001	93	56469	0.4001	0.4448	
77 Chlorobenzene	112	15.263	15.264	-0.001	93	105314	0.4001	0.4423	
78 2,3-Dimethylheptane	43	15.295	15.296	-0.001	94	118451	0.4001	0.4566	
79 Ethylbenzene	91	15.560	15.560	0.000	99	161720	0.4001	0.4470	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	125642	0.4001	0.4421	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	98	259677	0.8002	0.9289	
82 n-Nonane	57	16.164	16.164	0.000	90	77950	0.4001	0.4609	
83 Bromoform	173	16.174	16.174	0.000	95	74150	0.4001	0.4090	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.196	16.197	-0.001	99	83030	0.4001	0.4209	
85 o-Xylene	91	16.255	16.256	-0.001	99	136341	0.4001	0.4575	
86 1,1,2,2-Tetrachloroethane	83	16.590	16.591	-0.001	98	90358	0.4001	0.4589	
87 1,2,3-Trichloropropane	110	16.751	16.753	-0.002	96	30003	0.4001	0.4472	
88 Isopropylbenzene	105	16.854	16.855	-0.001	97	175801	0.4001	0.4475	
89 N-Propylbenzene	120	17.409	17.410	-0.001	99	45281	0.4001	0.4196	
90 2-Chlorotoluene	126	17.452	17.451	0.001	98	48721	0.4001	0.4475	
91 4-Ethyltoluene	105	17.571	17.570	0.001	98	160294	0.4001	0.4339	
92 1,3,5-Trimethylbenzene	120	17.647	17.649	-0.002	92	81584	0.4001	0.4415	
93 Alpha Methyl Styrene	118	17.895	17.893	0.002	86	54265	0.4001	0.3633	
94 n-Decane	57	17.965	17.964	0.001	92	90238	0.4001	0.4514	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	157093	0.4001	0.4526	
96 1,2,4-Trimethylbenzene	105	18.110	18.109	0.001	96	143798	0.4001	0.4466	
97 sec-Butylbenzene	105	18.375	18.375	-0.001	99	198185	0.4001	0.4508	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	98	96834	0.4001	0.4336	
99 Benzyl chloride	91	18.466	18.467	-0.001	97	103592	0.4001	0.3892	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	92	94216	0.4001	0.4310	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	96	164619	0.4001	0.4420	
102 1,2,3-Trimethylbenzene	105	18.596	18.598	-0.002	99	110381	0.4001	0.4430	
103 Butylcyclohexane	83	18.655	18.656	-0.001	92	115621	0.4001	0.4659	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	82	95071	0.4001	0.4352	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	92	131377	0.4001	0.4498	
106 Indene	116	18.984	18.985	-0.001	90	88091	0.4001	0.4012	
107 n-Butylbenzene	91	18.995	18.996	-0.001	98	150302	0.4001	0.4446	
108 Undecane	57	19.329	19.328	0.001	95	69469	0.4001	0.3598	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.377	19.379	-0.002	98	109041	0.4001	0.4133	
110 1,2-Dibromo-3-Chloropropan	157	19.475	19.475	0.000	92	34259	0.4001	0.3788	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	96	116856	0.4001	0.3904	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	95	74070	0.4001	0.3887	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.220	-0.001	97	92886	0.4001	0.3760	
114 Dodecane	57	20.391	20.391	0.000	94	57011	0.4001	0.3545	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	94	57748	0.4001	0.3619	
116 Naphthalene	128	20.704	20.704	0.000	99	121238	0.4001	0.3629	
117 Benzo(b)thiophene	134	20.806	20.807	-0.001	99	77396	0.4001	0.3699	
118 Hexachlorobutadiene	225	20.920	20.922	-0.002	94	65226	0.4001	0.3866	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	94	50778	0.4001	0.3564	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	100	62925	1.25	0.8757	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	99	53703	1.25	0.8349	
A 124 Toluene Range	1	13.198	(13.168-13.228)		0	319710	0.4001	0.4393	
A 125 C8 Range	1	13.920	(13.890-13.950)		0	415266	0.4001	0.4384	
S 126 Xylenes, Total	100				0		1.20	1.39	
S 127 1,2-Dichloroethene, Total	1				0		0.8002	0.8496	

Reagents:

40L4DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

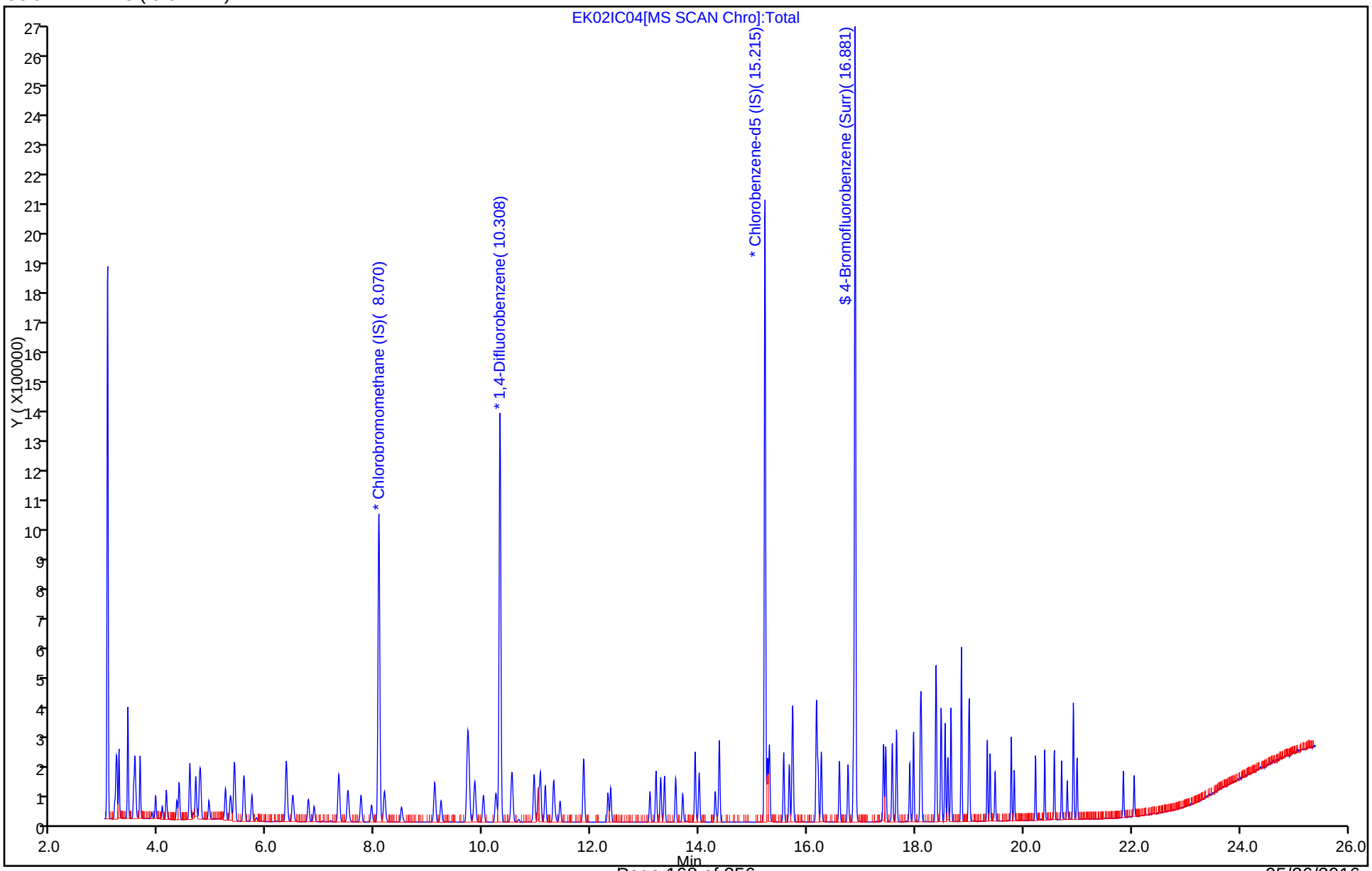
Report Date: 10-Dec-2015 15:37:56 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC04.D

Injection Date:	02-Dec-2015 22:31:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

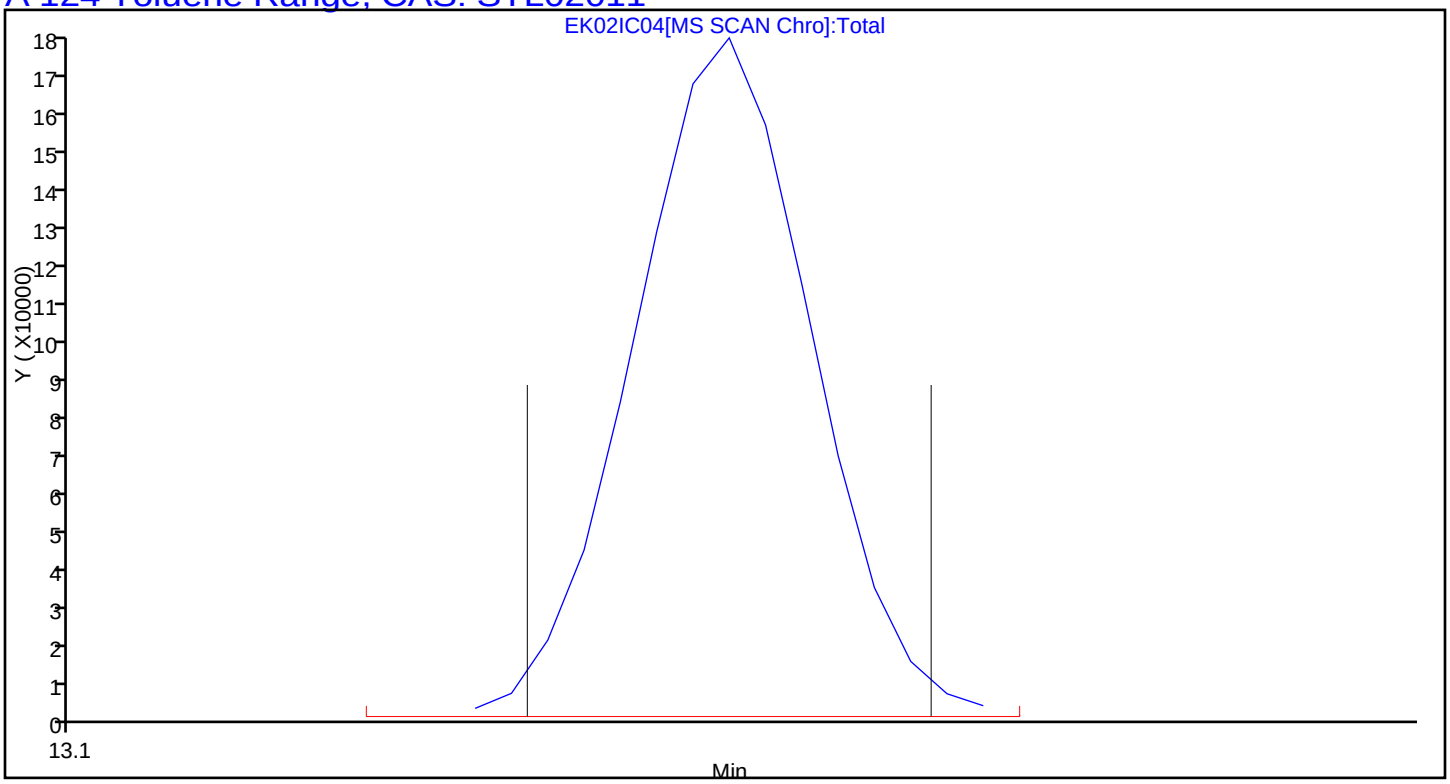


Report Date: 10-Dec-2015 15:37:56 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC04.D				
Injection Date:	02-Dec-2015 22:31:30	Instrument ID:	ME		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

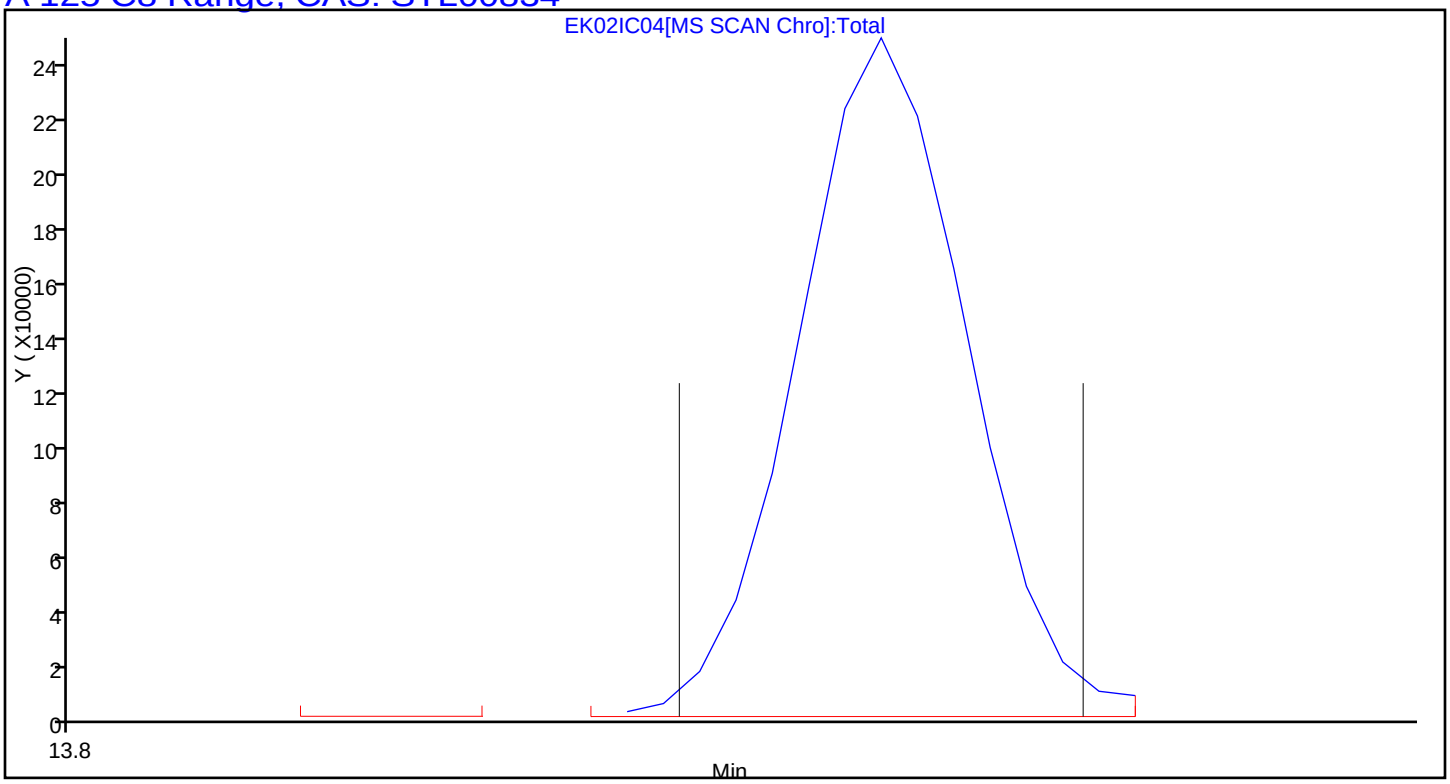


Report Date: 10-Dec-2015 15:37:57 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC04.D				
Injection Date:	02-Dec-2015 22:31:30	Instrument ID:	ME		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 02-Dec-2015 23:17:30 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-007
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:38:01 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 11:25:32

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.070	8.072	-0.002	96	289410	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.313	10.312	0.001	96	1284341	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.215	15.215	0.000	89	1126860	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	88	829810	4.00	3.93	
6 Chlorodifluoromethane	67	3.206	3.204	0.002	97	39569	1.00	1.07	
7 Propene	41	3.217	3.217	0.000	95	110186	1.00	1.06	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	100	369052	1.00	1.13	
9 Chloromethane	52	3.422	3.421	0.001	58	32512	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.427	3.425	0.002	90	221075	1.00	1.09	
11 Acetaldehyde	44	3.556	3.555	0.001	95	217212	5.00	6.71	
12 Vinyl chloride	62	3.572	3.572	0.000	99	114761	1.00	1.07	
13 Butane	43	3.648	3.649	-0.001	84	165689	1.00	1.13	
14 Butadiene	54	3.648	3.649	-0.001	70	82642	1.00	1.10	
15 Bromomethane	94	3.939	3.936	0.003	98	106340	1.00	1.08	
16 Chloroethane	64	4.063	4.060	0.003	94	51847	1.00	1.05	
17 Ethanol	31	4.139	4.141	-0.002	99	179962	5.00	5.68	
18 Vinyl bromide	106	4.327	4.331	-0.004	97	97504	1.00	1.06	
19 2-Methylbutane	43	4.371	4.370	0.001	88	108622	1.00	1.10	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	328826	1.00	1.11	
21 Acrolein	56	4.575	4.578	-0.003	97	26838	1.00	1.06	
22 Acetonitrile	40	4.635	4.639	-0.004	97	32639	1.00	1.16	
23 Acetone	58	4.678	4.681	-0.003	100	129246	3.00	3.90	
24 Isopropyl alcohol	45	4.748	4.758	-0.010	98	358686	3.00	3.50	
25 Pentane	72	4.770	4.770	0.000	96	16920	1.00	1.08	
26 Ethyl ether	31	4.921	4.923	-0.002	95	71544	1.00	1.07	
27 1,1-Dichloroethene	96	5.228	5.231	-0.003	95	89458	1.00	1.06	
28 2-Methyl-2-propanol	59	5.314	5.327	-0.013	96	185233	1.00	1.15	
29 Acrylonitrile	53	5.330	5.334	-0.004	94	56636	1.00	1.05	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.396	-0.001	95	220703	1.00	1.08	
31 Methylene Chloride	84	5.568	5.567	0.001	98	92794	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.578	5.580	-0.002	95	110148	1.00	1.09	
33 Carbon disulfide	76	5.719	5.719	0.000	99	288784	1.00	1.11	
34 trans-1,2-Dichloroethene	96	6.350	6.352	-0.002	96	103012	1.00	1.08	
35 2-Methylpentane	43	6.366	6.365	0.001	94	214196	1.00	1.10	
36 Methyl tert-butyl ether	73	6.474	6.478	-0.004	97	242645	1.00	1.05	
37 1,1-Dichloroethane	63	6.765	6.767	-0.002	100	202572	1.00	1.09	
38 Vinyl acetate	43	6.873	6.872	0.001	100	217000	1.00	1.05	
39 2-Butanone (MEK)	72	7.315	7.318	-0.003	97	42037	1.00	1.08	
40 Hexane	56	7.331	7.332	-0.001	89	84735	1.00	1.09	
41 Isopropyl ether	45	7.493	7.497	-0.004	95	281087	1.00	1.06	
42 cis-1,2-Dichloroethene	96	7.741	7.741	0.000	97	104278	1.00	1.08	
43 Ethyl acetate	43	7.930	7.935	-0.005	98	179487	1.00	1.05	
44 Chloroform	83	8.081	8.083	-0.002	96	246108	1.00	1.08	
45 Tert-butyl ethyl ether	59	8.167	8.174	-0.007	96	260697	1.00	1.06	
46 Tetrahydrofuran	42	8.480	8.488	-0.008	91	89346	1.00	1.05	
47 1,1,1-Trichloroethane	97	9.105	9.105	0.000	96	272189	1.00	1.09	
48 1,2-Dichloroethane	62	9.218	9.222	-0.004	99	176803	1.00	1.08	
49 n-Butanol	31	9.693	9.697	-0.004	78	33037	1.00	1.14	
50 Cyclohexane	69	9.709	9.709	0.000	84	49240	1.00	1.12	
51 Benzene	78	9.714	9.716	-0.002	98	281498	1.00	1.08	
52 Carbon tetrachloride	117	9.736	9.739	-0.003	97	290388	1.00	1.12	
53 2,3-Dimethylpentane	71	9.844	9.845	-0.001	90	68032	1.00	1.09	
54 Thiophene	84	10.006	10.006	0.000	97	168527	1.00	1.09	
55 Tert-amyl methyl ether	73	10.232	10.237	-0.005	96	231065	1.00	1.12	
56 Isooctane	57	10.529	10.533	-0.004	98	494672	1.00	1.12	
57 n-Heptane	71	10.944	10.944	0.000	91	104669	1.00	1.10	
58 1,2-Dichloropropane	63	11.019	11.023	-0.004	85	107819	1.00	1.08	
59 Trichloroethene	130	11.057	11.060	-0.003	96	146413	1.00	1.08	
60 Dibromomethane	93	11.149	11.149	0.000	95	132981	1.00	1.11	
61 Dichlorobromomethane	83	11.305	11.304	0.001	99	249224	1.00	1.11	
62 1,4-Dioxane	88	11.327	11.332	-0.005	90	41607	1.00	1.15	
63 Methyl methacrylate	41	11.381	11.403	-0.022	47	343151	1.00	1.69	
64 Methylcyclohexane	83	11.861	11.861	0.000	94	228569	1.00	1.11	
65 4-Methyl-2-pentanone (MIBK	43	12.303	12.307	-0.004	98	195766	1.00	1.12	
66 cis-1,3-Dichloropropene	75	12.362	12.361	0.001	98	165905	1.00	1.10	
67 trans-1,3-Dichloropropene	75	13.085	13.087	-0.002	97	144464	1.00	1.11	
68 Toluene	91	13.198	13.198	0.000	94	311072	1.00	1.12	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	98	97733	1.00	1.13	
70 2-Methylthiophene	97	13.354	13.355	-0.001	97	263371	1.00	1.12	
71 3-Methylthiophene	97	13.559	13.562	-0.003	99	259423	1.00	1.13	
72 2-Hexanone	58	13.689	13.693	-0.004	93	91635	1.00	1.15	
73 n-Octane	85	13.920	13.922	-0.002	92	115315	1.00	1.20	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	98	236621	1.00	1.17	
75 Ethylene Dibromide	107	14.293	14.293	0.000	98	176150	1.00	1.11	
76 Tetrachloroethene	129	14.368	14.369	-0.001	94	140971	1.00	1.11	
77 Chlorobenzene	112	15.263	15.264	-0.001	93	267022	1.00	1.13	
78 2,3-Dimethylheptane	43	15.296	15.296	0.000	94	305669	1.00	1.18	
79 Ethylbenzene	91	15.560	15.560	0.000	99	411754	1.00	1.14	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	323820	1.00	1.14	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	98	648860	2.00	2.33	
82 n-Nonane	57	16.164	16.164	0.000	91	205578	1.00	1.22	
83 Bromoform	173	16.174	16.174	0.000	96	208852	1.00	1.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.196	16.197	-0.001	99	224709	1.00	1.14	
85 o-Xylene	91	16.255	16.256	-0.001	99	341099	1.00	1.15	
86 1,1,2,2-Tetrachloroethane	83	16.590	16.591	-0.001	98	227673	1.00	1.16	
87 1,2,3-Trichloropropane	110	16.751	16.753	-0.002	96	74303	1.00	1.11	
88 Isopropylbenzene	105	16.854	16.855	-0.001	97	445263	1.00	1.14	
89 N-Propylbenzene	120	17.409	17.410	-0.001	99	122448	1.00	1.14	
90 2-Chlorotoluene	126	17.447	17.451	-0.004	97	122798	1.00	1.13	
91 4-Ethyltoluene	105	17.566	17.570	-0.004	98	432150	1.00	1.17	
92 1,3,5-Trimethylbenzene	120	17.647	17.649	-0.002	92	210781	1.00	1.14	
93 Alpha Methyl Styrene	118	17.895	17.893	0.002	87	163779	1.00	1.10	
94 n-Decane	57	17.959	17.964	-0.005	92	240230	1.00	1.21	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	407795	1.00	1.18	
96 1,2,4-Trimethylbenzene	105	18.105	18.109	-0.004	96	378832	1.00	1.18	
97 sec-Butylbenzene	105	18.375	18.375	0.000	97	523362	1.00	1.19	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	97	249235	1.00	1.12	
99 Benzyl chloride	91	18.466	18.467	-0.001	97	301068	1.00	1.14	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	95	241601	1.00	1.11	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	96	448442	1.00	1.21	
102 1,2,3-Trimethylbenzene	105	18.596	18.598	-0.002	98	289765	1.00	1.17	
103 Butylcyclohexane	83	18.655	18.656	-0.001	92	299620	1.00	1.21	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	82	248391	1.00	1.14	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	92	345657	1.00	1.19	
106 Indene	116	18.984	18.985	-0.001	93	252022	1.00	1.15	
107 n-Butylbenzene	91	18.995	18.996	-0.001	98	410106	1.00	1.22	
108 Undecane	57	19.324	19.328	-0.004	95	210865	1.00	1.10	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.378	19.379	-0.001	98	316971	1.00	1.21	
110 1,2-Dibromo-3-Chloropropan	157	19.475	19.475	0.000	95	105078	1.00	1.17	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	97	364109	1.00	1.22	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	95	226331	1.00	1.19	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.220	-0.001	97	292693	1.00	1.19	
114 Dodecane	57	20.391	20.391	0.000	95	200229	1.00	1.25	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	94	182794	1.00	1.15	
116 Naphthalene	128	20.704	20.704	0.000	99	404308	1.00	1.21	
117 Benzo(b)thiophene	134	20.807	20.807	0.000	99	238356	1.00	1.14	
118 Hexachlorobutadiene	225	20.920	20.922	-0.002	94	201026	1.00	1.20	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	95	171520	1.00	1.21	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	100	288150	3.12	4.02	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	100	257510	3.12	4.02	
A 124 Toluene Range	1	13.198	(13.168-13.228)		0	796028	1.00	1.08	
A 125 C8 Range	1	13.920	(13.890-13.950)		0	1148198	1.00	1.19	
S 126 Xylenes, Total	100				0		3.00	3.48	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.16	

Reagents:

40L5DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

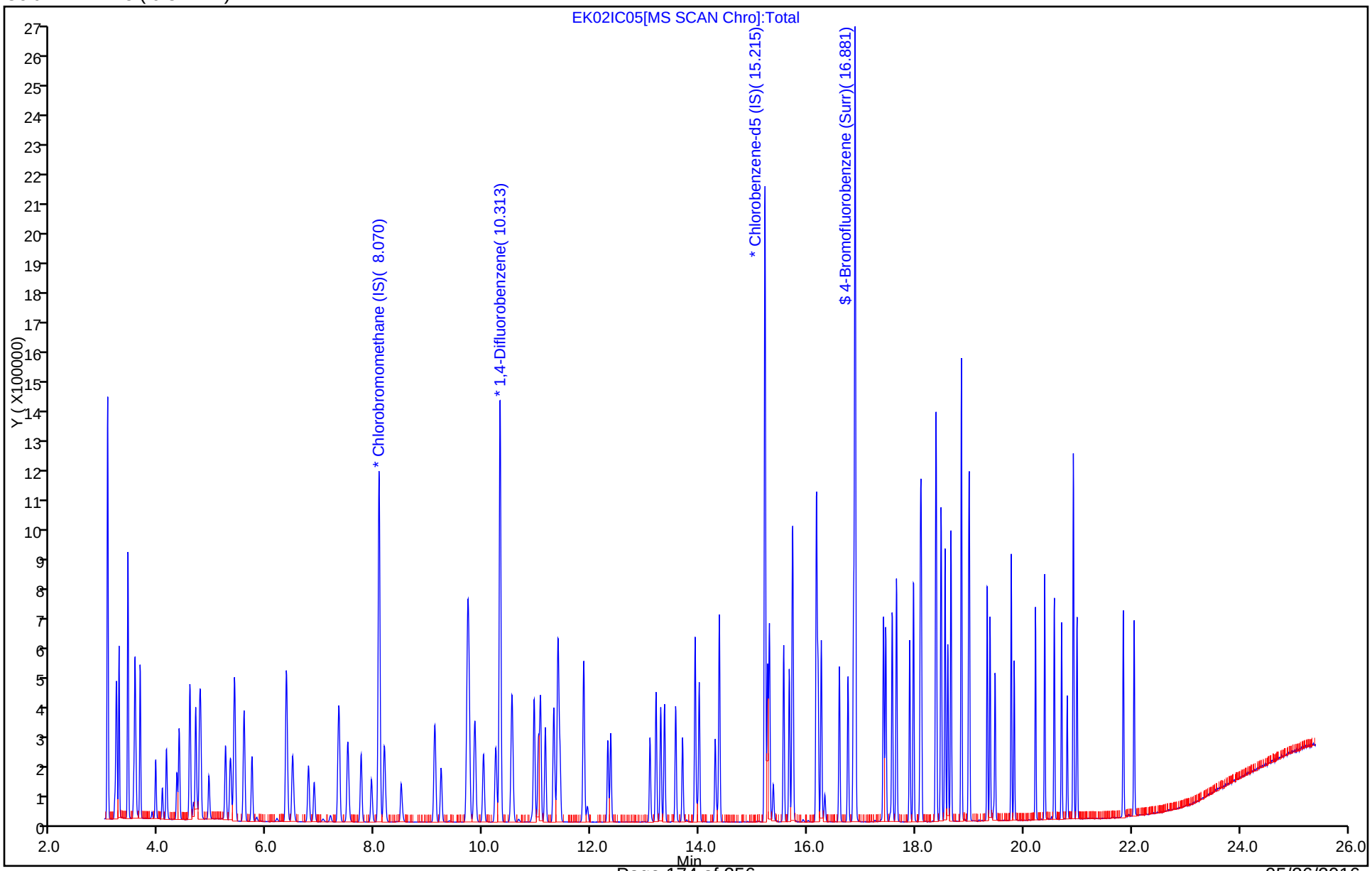
Report Date: 10-Dec-2015 15:38:01 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC05.D

Injection Date:	02-Dec-2015 23:17:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

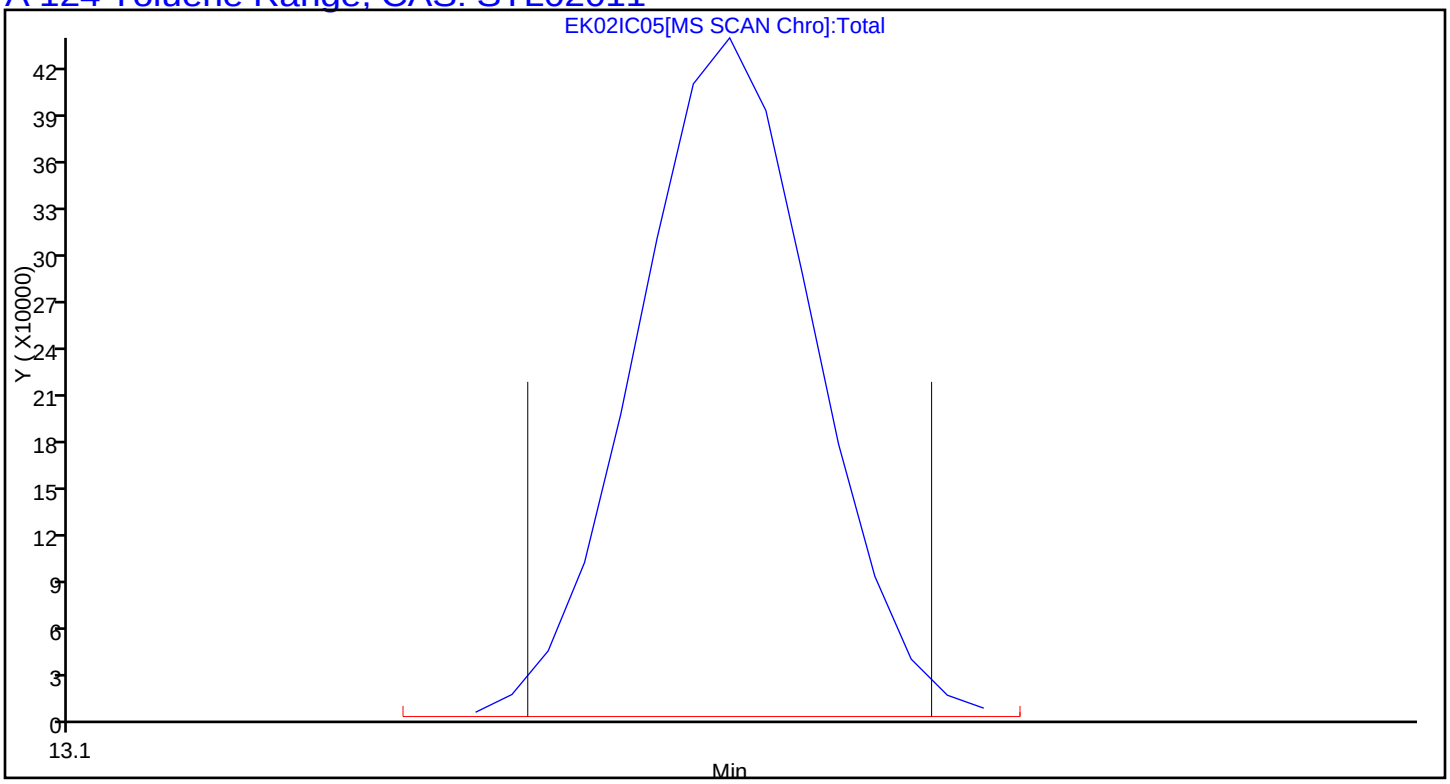


Report Date: 10-Dec-2015 15:38:02 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC05.D				
Injection Date:	02-Dec-2015 23:17:30	Instrument ID:	ME		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

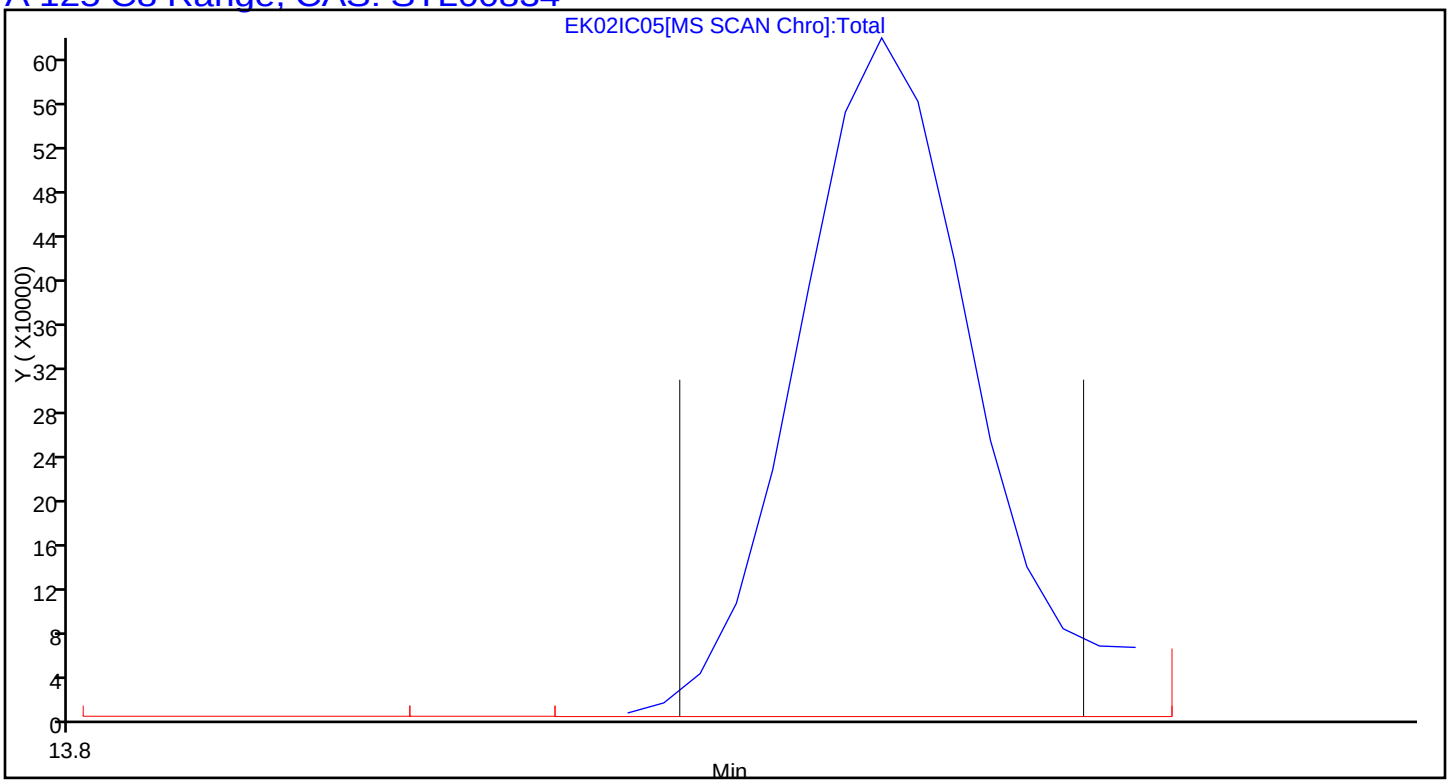


Report Date: 10-Dec-2015 15:38:02 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC05.D				
Injection Date:	02-Dec-2015 23:17:30	Instrument ID:	ME		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 03-Dec-2015 00:02:30 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-008
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:38:05 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 09:02:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.075	8.072	0.003	91	329174	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.313	10.312	0.001	96	1546721	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.214	15.215	-0.001	89	1439198	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	88	1092382	4.00	4.05	
6 Chlorodifluoromethane	67	3.206	3.204	0.002	97	77217	2.00	1.84	
7 Propene	41	3.216	3.217	-0.001	97	198671	2.00	1.68	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	100	711378	2.00	1.91	
9 Chloromethane	52	3.421	3.421	0.000	58	64846	2.00	1.93	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.427	3.425	0.002	90	436113	2.00	1.89	
11 Acetaldehyde	44	3.556	3.555	0.001	95	393509	10.0	10.7	
12 Vinyl chloride	62	3.572	3.572	0.000	99	224860	2.00	1.85	
13 Butane	43	3.648	3.649	-0.001	84	321537	2.00	1.94	
14 Butadiene	54	3.653	3.649	0.004	71	166615	2.00	1.95	
15 Bromomethane	94	3.939	3.936	0.003	98	212920	2.00	1.90	
16 Chloroethane	64	4.063	4.060	0.003	95	109941	2.00	1.95	
17 Ethanol	31	4.144	4.141	0.003	99	380307	10.0	10.6	
18 Vinyl bromide	106	4.333	4.331	0.002	98	199655	2.00	1.92	
19 2-Methylbutane	43	4.370	4.370	0.000	88	218569	2.00	1.95	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	658279	2.00	1.96	
21 Acrolein	56	4.575	4.578	-0.003	96	65439	2.00	2.27	
22 Acetonitrile	40	4.640	4.639	0.001	98	73066	2.00	2.28	
23 Acetone	58	4.678	4.681	-0.003	99	255964	6.00	6.79	
24 Isopropyl alcohol	45	4.759	4.758	0.001	95	734753	6.00	6.30	
25 Pentane	72	4.769	4.770	-0.001	94	34440	2.00	1.94	
26 Ethyl ether	31	4.920	4.923	-0.003	94	171084	2.00	2.26	
27 1,1-Dichloroethene	96	5.233	5.231	0.002	96	184866	2.00	1.92	
28 2-Methyl-2-propanol	59	5.319	5.327	-0.008	95	368467	2.00	2.01	
29 Acrylonitrile	53	5.336	5.334	0.002	92	137472	2.00	2.24	
30 1,1,2-Trichloro-1,2,2-trif	101	5.400	5.396	0.004	96	452966	2.00	1.95	
31 Methylene Chloride	84	5.567	5.567	0.000	98	184208	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.584	5.580	0.004	96	227581	2.00	1.99	
33 Carbon disulfide	76	5.718	5.719	-0.001	99	581408	2.00	1.97	
34 trans-1,2-Dichloroethene	96	6.355	6.352	0.003	96	212204	2.00	1.96	
35 2-Methylpentane	43	6.366	6.365	0.001	93	437249	2.00	1.97	
36 Methyl tert-butyl ether	73	6.473	6.478	-0.005	96	592255	2.00	2.26	
37 1,1-Dichloroethane	63	6.770	6.767	0.003	100	421315	2.00	1.99	
38 Vinyl acetate	43	6.872	6.872	0.000	100	548121	2.00	2.33	
39 2-Butanone (MEK)	72	7.315	7.318	-0.003	98	94399	2.00	2.13	
40 Hexane	56	7.336	7.332	0.004	90	172595	2.00	1.95	
41 Isopropyl ether	45	7.493	7.497	-0.004	95	672427	2.00	2.23	
42 cis-1,2-Dichloroethene	96	7.741	7.741	0.000	97	220095	2.00	2.00	
43 Ethyl acetate	43	7.935	7.935	0.000	98	446307	2.00	2.29	
44 Chloroform	83	8.086	8.083	0.003	97	512494	2.00	1.97	
45 Tert-butyl ethyl ether	59	8.172	8.174	-0.002	96	633288	2.00	2.27	
46 Tetrahydrofuran	42	8.479	8.488	-0.009	91	221409	2.00	2.30	
47 1,1,1-Trichloroethane	97	9.105	9.105	0.000	96	567068	2.00	2.00	
48 1,2-Dichloroethane	62	9.224	9.222	0.002	99	381695	2.00	1.94	
49 n-Butanol	31	9.693	9.697	-0.004	77	66754	2.00	1.91	
50 Cyclohexane	69	9.709	9.709	0.000	84	101983	2.00	1.93	
51 Benzene	78	9.720	9.716	0.004	98	611424	2.00	1.95	
52 Carbon tetrachloride	117	9.741	9.739	0.002	98	610261	2.00	1.96	
53 2,3-Dimethylpentane	71	9.844	9.845	-0.001	90	143140	2.00	1.91	
54 Thiophene	84	10.005	10.006	-0.001	98	362115	2.00	1.95	
55 Tert-amyl methyl ether	73	10.232	10.237	-0.005	97	572390	2.00	2.17	
56 Isooctane	57	10.534	10.533	0.001	98	1025988	2.00	1.94	
57 n-Heptane	71	10.944	10.944	0.000	91	223118	2.00	1.95	
58 1,2-Dichloropropane	63	11.025	11.023	0.002	86	241383	2.00	2.01	
59 Trichloroethene	130	11.062	11.060	0.002	96	310246	2.00	1.90	
60 Dibromomethane	93	11.149	11.149	0.000	96	282168	2.00	1.96	
61 Dichlorobromomethane	83	11.305	11.304	0.001	99	539047	2.00	2.00	
62 1,4-Dioxane	88	11.321	11.332	-0.011	94	87975	2.00	2.03	
63 Methyl methacrylate	41	11.424	11.403	0.021	91	282176	2.00	1.15	
64 Methylcyclohexane	83	11.860	11.861	-0.001	94	476267	2.00	1.93	
65 4-Methyl-2-pentanone (MIBK	43	12.303	12.307	-0.004	98	418569	2.00	1.98	
66 cis-1,3-Dichloropropene	75	12.362	12.361	0.001	98	383238	2.00	2.11	
67 trans-1,3-Dichloropropene	75	13.084	13.087	-0.003	98	360568	2.00	2.17	
68 Toluene	91	13.198	13.198	0.000	94	727749	2.00	2.05	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	98	221601	2.00	2.00	
70 2-Methylthiophene	97	13.354	13.355	-0.001	97	623974	2.00	2.08	
71 3-Methylthiophene	97	13.564	13.562	0.002	99	605842	2.00	2.07	
72 2-Hexanone	58	13.688	13.693	-0.005	93	198950	2.00	1.95	
73 n-Octane	85	13.926	13.922	0.004	93	247538	2.00	2.01	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	98	538585	2.00	2.09	
75 Ethylene Dibromide	107	14.292	14.293	-0.001	98	420842	2.00	2.07	
76 Tetrachloroethene	129	14.368	14.369	-0.001	94	302800	2.00	1.87	
77 Chlorobenzene	112	15.263	15.264	-0.001	93	611670	2.00	2.02	
78 2,3-Dimethylheptane	43	15.295	15.296	-0.001	93	648747	2.00	1.97	
79 Ethylbenzene	91	15.560	15.560	0.000	99	982934	2.00	2.13	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	779031	2.00	2.15	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	99	1529138	4.00	4.30	
82 n-Nonane	57	16.163	16.164	-0.001	89	465694	2.00	2.16	
83 Bromoform	173	16.174	16.174	0.000	96	501628	2.00	2.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.196	16.197	-0.001	99	567784	2.00	2.26	
85 o-Xylene	91	16.255	16.256	-0.001	99	802291	2.00	2.12	
86 1,1,2,2-Tetrachloroethane	83	16.589	16.591	-0.002	98	541802	2.00	2.16	
87 1,2,3-Trichloropropane	110	16.751	16.753	-0.002	96	182280	2.00	2.13	
88 Isopropylbenzene	105	16.854	16.855	-0.001	97	1080958	2.00	2.16	
89 N-Propylbenzene	120	17.409	17.410	-0.001	99	304992	2.00	2.22	
90 2-Chlorotoluene	126	17.452	17.451	0.001	97	290502	2.00	2.10	
91 4-Ethyltoluene	105	17.571	17.570	0.001	98	1066376	2.00	2.27	
92 1,3,5-Trimethylbenzene	120	17.652	17.649	0.003	93	516660	2.00	2.20	
93 Alpha Methyl Styrene	118	17.894	17.893	0.001	87	441984	2.00	2.33	
94 n-Decane	57	17.965	17.964	0.001	93	573274	2.00	2.25	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	988258	2.00	2.24	
96 1,2,4-Trimethylbenzene	105	18.110	18.109	0.001	96	910673	2.00	2.22	
97 sec-Butylbenzene	105	18.374	18.375	-0.001	97	1263164	2.00	2.26	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	97	605199	2.00	2.13	
99 Benzyl chloride	91	18.466	18.467	-0.001	98	773806	2.00	2.28	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	93	593199	2.00	2.13	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	96	1093486	2.00	2.31	
102 1,2,3-Trimethylbenzene	105	18.601	18.598	0.003	98	699839	2.00	2.21	
103 Butylcyclohexane	83	18.655	18.656	-0.001	92	674502	2.00	2.14	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	82	596060	2.00	2.14	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	93	837064	2.00	2.25	
106 Indene	116	18.984	18.985	-0.001	92	634787	2.00	2.27	
107 n-Butylbenzene	91	18.994	18.996	-0.002	98	1008610	2.00	2.34	
108 Undecane	57	19.329	19.328	0.001	94	592546	2.00	2.41	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.377	19.379	-0.002	98	796167	2.00	2.37	
110 1,2-Dibromo-3-Chloropropan	157	19.474	19.475	-0.001	96	257722	2.00	2.24	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	97	922484	2.00	2.42	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	95	571694	2.00	2.36	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.220	-0.001	97	746045	2.00	2.37	
114 Dodecane	57	20.391	20.391	0.000	95	363445	2.00	1.78	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	94	410458	2.00	2.02	
116 Naphthalene	128	20.704	20.704	0.000	99	891077	2.00	2.10	
117 Benzo(b)thiophene	134	20.806	20.807	-0.001	99	477077	2.00	1.79	
118 Hexachlorobutadiene	225	20.925	20.922	0.003	95	474107	2.00	2.21	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	94	337959	2.00	1.86	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	100	426303	6.25	4.66	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	99	387084	6.25	4.73	
A 124 Toluene Range	1	13.198	(13.168-13.228)		0	1861093	2.00	2.09	
A 125 C8 Range	1	13.926	(13.896-13.956)		0	2282900	2.00	1.97	
S 126 Xylenes, Total	100				0		6.00	6.41	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.96	

Reagents:

40L6DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

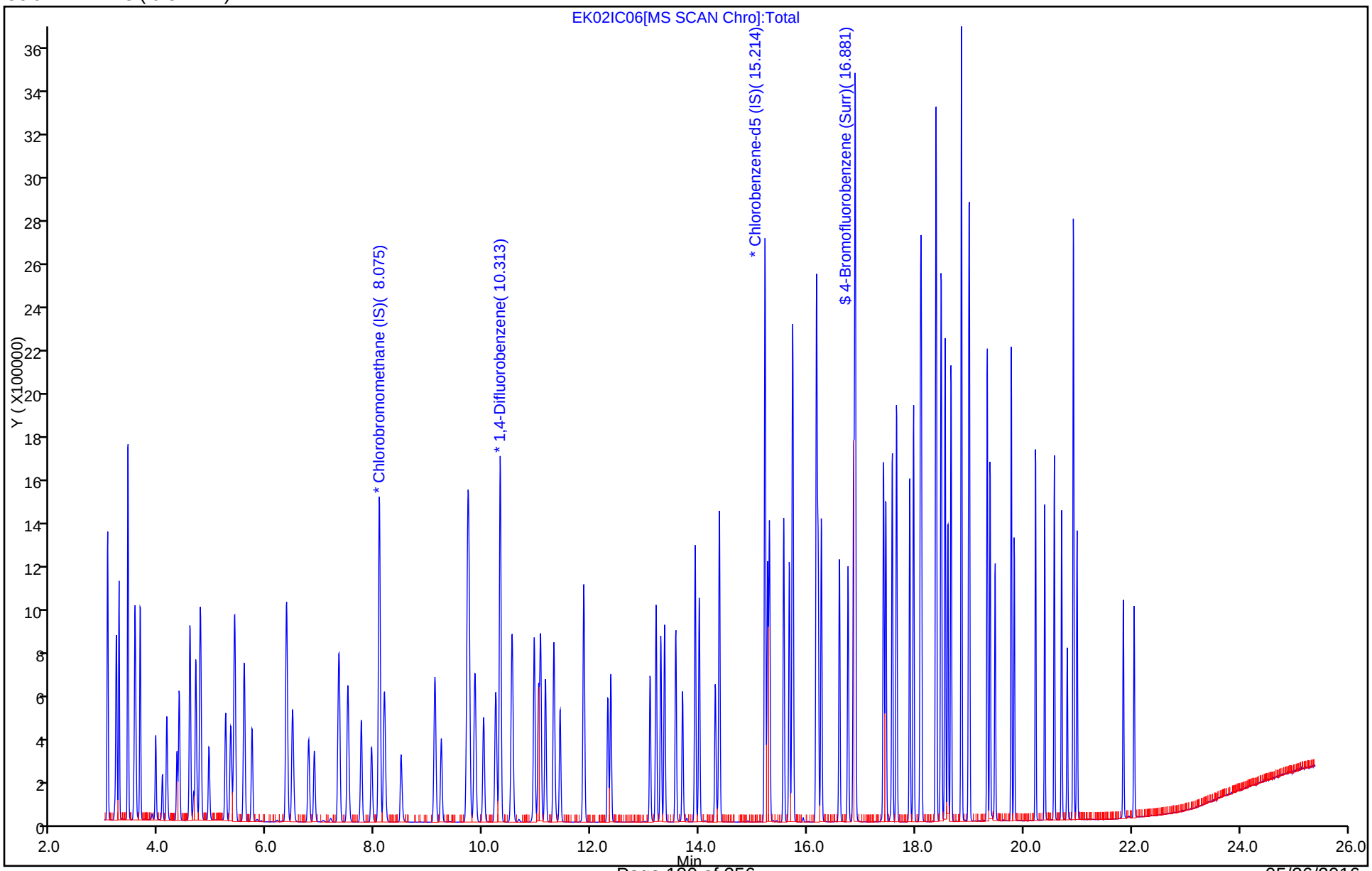
Report Date: 10-Dec-2015 15:38:06 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC06.D

Injection Date:	03-Dec-2015 00:02:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

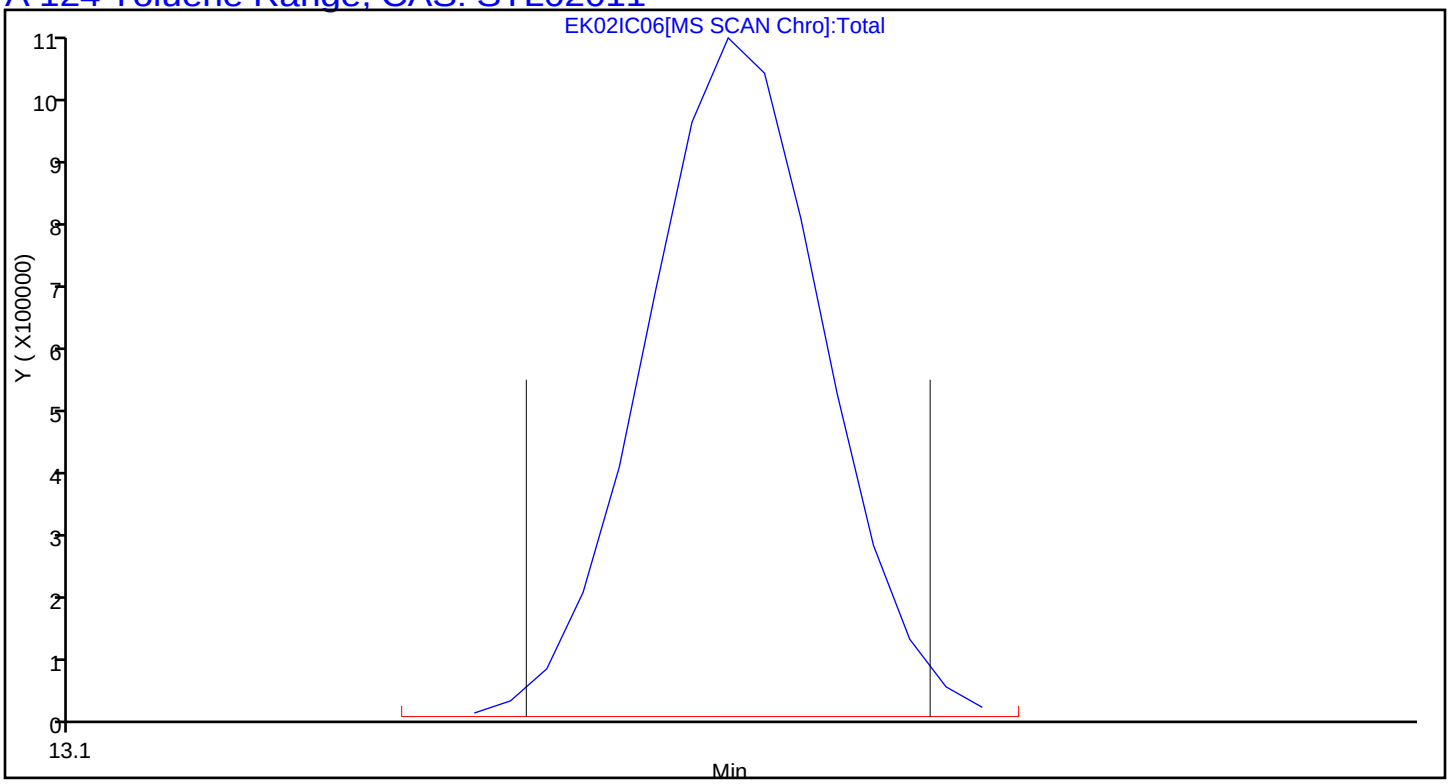


Report Date: 10-Dec-2015 15:38:07 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC06.D				
Injection Date:	03-Dec-2015 00:02:30	Instrument ID:	ME		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

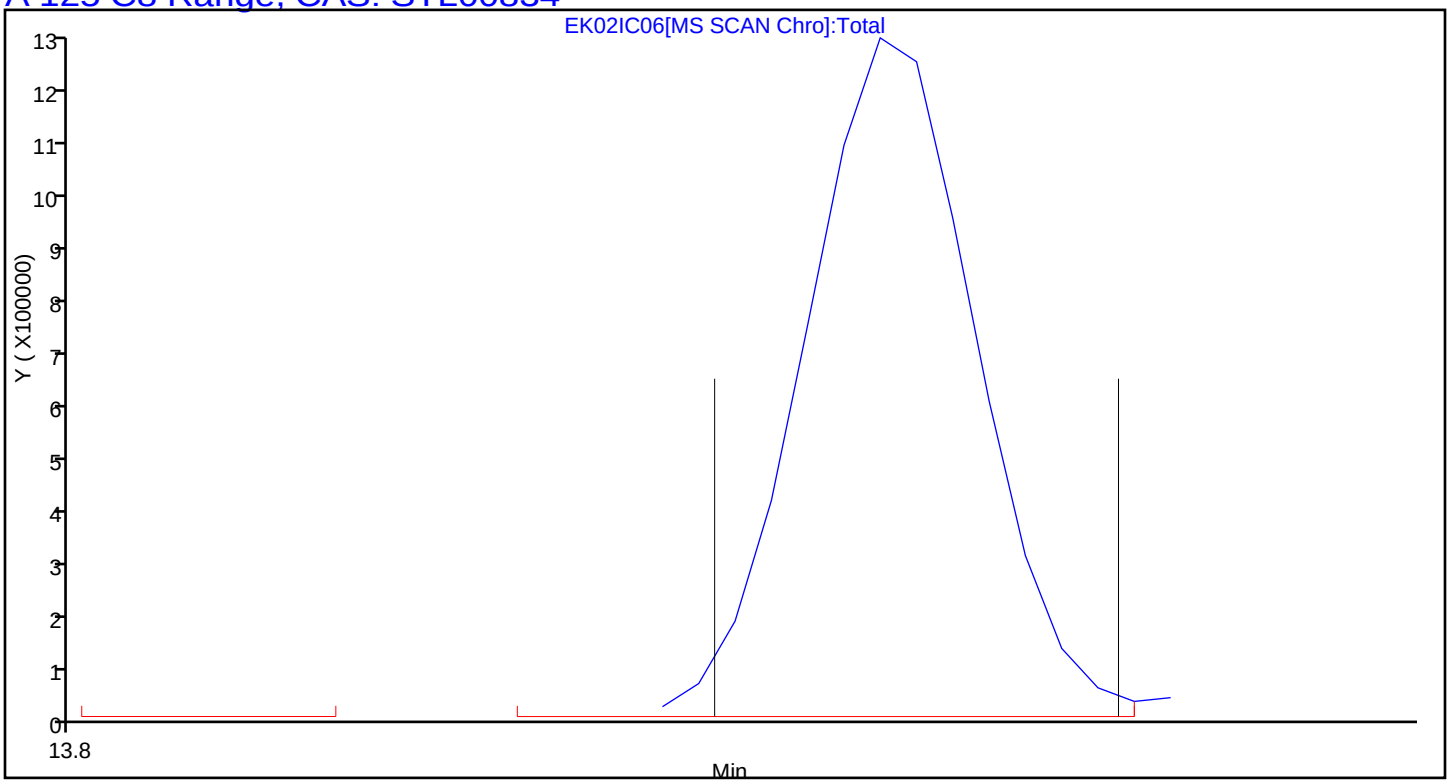


Report Date: 10-Dec-2015 15:38:07 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC06.D				
Injection Date:	03-Dec-2015 00:02:30	Instrument ID:	ME		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 03-Dec-2015 00:48:30 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-009
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:38:10 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 08-Dec-2015 17:50:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.075	8.072	0.003	90	312974	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.313	10.312	0.001	95	1421922	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.215	15.215	0.000	89	1307063	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	89	965402	4.00	3.95	
6 Chlorodifluoromethane	67	3.206	3.204	0.002	97	150885	4.00	3.78	
7 Propene	41	3.216	3.217	-0.001	96	364495	4.00	3.24	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	99	1351817	4.00	3.81	
9 Chloromethane	52	3.421	3.421	0.000	57	119747	4.00	3.74	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.427	3.425	0.002	89	836324	4.00	3.81	
11 Acetaldehyde	44	3.556	3.555	0.001	95	631163	20.0	18.0	
12 Vinyl chloride	62	3.572	3.572	0.000	99	432933	4.00	3.75	
13 Butane	43	3.648	3.649	-0.001	83	608016	4.00	3.85	
14 Butadiene	54	3.648	3.649	-0.001	72	319966	4.00	3.95	
15 Bromomethane	94	3.939	3.936	0.003	98	409183	4.00	3.84	
16 Chloroethane	64	4.063	4.060	0.003	95	205174	4.00	3.82	
17 Ethanol	31	4.144	4.141	0.003	98	639203	20.0	18.7	
18 Vinyl bromide	106	4.333	4.331	0.002	98	385732	4.00	3.89	
19 2-Methylbutane	43	4.370	4.370	0.000	89	409337	4.00	3.84	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	1215483	4.00	3.81	
21 Acrolein	56	4.581	4.578	0.003	96	107251	4.00	3.92	
22 Acetonitrile	40	4.640	4.639	0.001	98	123483	4.00	4.04	
23 Acetone	58	4.678	4.681	-0.003	99	380385	12.0	10.6	
24 Isopropyl alcohol	45	4.759	4.758	0.001	96	1285580	12.0	11.6	
25 Pentane	72	4.769	4.770	-0.001	95	66079	4.00	3.91	
26 Ethyl ether	31	4.920	4.923	-0.003	94	285434	4.00	3.96	
27 1,1-Dichloroethene	96	5.233	5.231	0.002	96	349550	4.00	3.82	
28 2-Methyl-2-propanol	59	5.320	5.327	-0.007	96	707426	4.00	4.06	
29 Acrylonitrile	53	5.336	5.334	0.002	93	237848	4.00	4.08	
30 1,1,2-Trichloro-1,2,2-trif	101	5.400	5.396	0.004	96	854659	4.00	3.87	
31 Methylene Chloride	84	5.568	5.567	0.001	97	344491	4.00	3.60	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.584	5.580	0.004	96	426877	4.00	3.92	
33 Carbon disulfide	76	5.719	5.719	0.000	99	1112567	4.00	3.97	
34 trans-1,2-Dichloroethene	96	6.355	6.352	0.003	97	404315	4.00	3.92	
35 2-Methylpentane	43	6.366	6.365	0.001	93	821088	4.00	3.89	
36 Methyl tert-butyl ether	73	6.473	6.478	-0.005	96	989489	4.00	3.97	
37 1,1-Dichloroethane	63	6.770	6.767	0.003	100	789523	4.00	3.93	
38 Vinyl acetate	43	6.873	6.872	0.000	100	948994	4.00	4.24	
39 2-Butanone (MEK)	72	7.309	7.318	-0.009	97	151632	4.00	3.61	
40 Hexane	56	7.336	7.332	0.004	91	330079	4.00	3.92	
41 Isopropyl ether	45	7.493	7.497	-0.004	94	1122132	4.00	3.92	
42 cis-1,2-Dichloroethene	96	7.746	7.741	0.005	96	423054	4.00	4.04	
43 Ethyl acetate	43	7.935	7.935	0.000	98	722107	4.00	3.90	
44 Chloroform	83	8.086	8.083	0.003	97	967614	4.00	3.91	
45 Tert-butyl ethyl ether	59	8.172	8.174	-0.002	96	1068531	4.00	4.03	
46 Tetrahydrofuran	42	8.474	8.488	-0.014	91	355719	4.00	3.88	
47 1,1,1-Trichloroethane	97	9.105	9.105	0.000	97	1074811	4.00	3.99	
48 1,2-Dichloroethane	62	9.224	9.222	0.002	99	705083	4.00	3.91	
49 n-Butanol	31	9.682	9.697	-0.015	79	138947	4.00	4.32	
50 Cyclohexane	69	9.709	9.709	0.000	85	192740	4.00	3.96	
51 Benzene	78	9.714	9.716	-0.002	98	1110926	4.00	3.85	
52 Carbon tetrachloride	117	9.741	9.739	0.002	98	1159714	4.00	4.06	
53 2,3-Dimethylpentane	71	9.849	9.845	0.004	89	277469	4.00	4.02	
54 Thiophene	84	10.011	10.006	0.005	97	684954	4.00	4.01	
55 Tert-amyl methyl ether	73	10.232	10.237	-0.005	97	968376	4.00	4.04	
56 Isooctane	57	10.534	10.533	0.001	97	1925955	4.00	3.95	
57 n-Heptane	71	10.944	10.944	0.000	91	431948	4.00	4.11	
58 1,2-Dichloropropane	63	11.025	11.023	0.002	86	438183	4.00	3.96	
59 Trichloroethene	130	11.062	11.060	0.002	96	605644	4.00	4.03	
60 Dibromomethane	93	11.149	11.149	0.000	96	537388	4.00	4.05	
61 Dichlorobromomethane	83	11.305	11.304	0.001	99	1027900	4.00	4.15	
62 1,4-Dioxane	88	11.321	11.332	-0.011	93	162072	4.00	4.06	
63 Methyl methacrylate	41	11.424	11.403	0.021	91	461189	4.00	2.05	
64 Methylcyclohexane	83	11.860	11.861	-0.001	94	914113	4.00	4.02	
65 4-Methyl-2-pentanone (MIBK	43	12.303	12.307	-0.004	98	789895	4.00	4.07	
66 cis-1,3-Dichloropropene	75	12.362	12.361	0.001	97	714413	4.00	4.28	
67 trans-1,3-Dichloropropene	75	13.090	13.087	0.003	98	664043	4.00	4.41	
68 Toluene	91	13.198	13.198	0.000	94	1310618	4.00	4.07	
69 1,1,2-Trichloroethane	83	13.284	13.285	-0.001	98	404472	4.00	4.02	
70 2-Methylthiophene	97	13.354	13.355	-0.001	97	1137800	4.00	4.18	
71 3-Methylthiophene	97	13.564	13.562	0.002	99	1113936	4.00	4.20	
72 2-Hexanone	58	13.688	13.693	-0.005	94	389176	4.00	4.20	
73 n-Octane	85	13.920	13.922	-0.002	91	474700	4.00	4.25	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	97	1033996	4.00	4.42	
75 Ethylene Dibromide	107	14.292	14.293	-0.001	99	775268	4.00	4.21	
76 Tetrachloroethene	129	14.368	14.369	-0.001	94	577072	4.00	3.93	
77 Chlorobenzene	112	15.263	15.264	-0.001	93	1105359	4.00	4.02	
78 2,3-Dimethylheptane	43	15.295	15.296	-0.001	92	1167317	4.00	3.89	
79 Ethylbenzene	91	15.560	15.560	0.000	99	1704755	4.00	4.08	
80 2-Ethylthiophene	97	15.667	15.663	0.004	98	1383182	4.00	4.21	
81 m-Xylene & p-Xylene	91	15.727	15.728	-0.001	99	2601289	8.00	8.05	
82 n-Nonane	57	16.164	16.164	0.000	88	822898	4.00	4.21	
83 Bromoform	173	16.174	16.174	0.000	96	958618	4.00	4.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.196	16.197	-0.001	99	1001867	4.00	4.39	
85 o-Xylene	91	16.255	16.256	-0.001	99	1375379	4.00	3.99	
86 1,1,2,2-Tetrachloroethane	83	16.590	16.591	-0.001	98	905157	4.00	3.98	
87 1,2,3-Trichloropropane	110	16.751	16.753	-0.002	95	312934	4.00	4.04	
88 Isopropylbenzene	105	16.854	16.855	-0.001	97	1832475	4.00	4.04	
89 N-Propylbenzene	120	17.409	17.410	-0.001	98	527539	4.00	4.23	
90 2-Chlorotoluene	126	17.452	17.451	0.001	96	515589	4.00	4.10	
91 4-Ethyltoluene	105	17.571	17.570	0.001	97	1790093	4.00	4.19	
92 1,3,5-Trimethylbenzene	120	17.652	17.649	0.003	93	885263	4.00	4.15	
93 Alpha Methyl Styrene	118	17.895	17.893	0.002	87	785337	4.00	4.55	
94 n-Decane	57	17.965	17.964	0.001	93	978198	4.00	4.23	
95 tert-Butylbenzene	119	18.094	18.095	-0.001	92	1651106	4.00	4.12	
96 1,2,4-Trimethylbenzene	105	18.110	18.109	0.001	95	1525743	4.00	4.10	
97 sec-Butylbenzene	105	18.374	18.375	-0.001	98	2094566	4.00	4.12	
98 1,3-Dichlorobenzene	146	18.385	18.386	-0.001	97	1066988	4.00	4.13	
99 Benzyl chloride	91	18.466	18.467	-0.001	97	1352772	4.00	4.40	
100 1,4-Dichlorobenzene	146	18.477	18.478	-0.001	94	1053206	4.00	4.17	
101 4-Isopropyltoluene	119	18.547	18.548	-0.001	96	1811142	4.00	4.21	
102 1,2,3-Trimethylbenzene	105	18.601	18.598	0.003	98	1173371	4.00	4.07	
103 Butylcyclohexane	83	18.655	18.656	-0.001	92	1171920	4.00	4.09	
104 1,2-Dichlorobenzene	146	18.849	18.850	-0.001	84	1023788	4.00	4.06	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	93	1409534	4.00	4.18	
106 Indene	116	18.984	18.985	-0.001	91	1081973	4.00	4.26	
107 n-Butylbenzene	91	18.995	18.996	-0.001	98	1642952	4.00	4.21	
108 Undecane	57	19.329	19.328	0.001	94	925675	4.00	4.15	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.377	19.379	-0.002	98	1338038	4.00	4.39	
110 1,2-Dibromo-3-Chloropropan	157	19.474	19.475	-0.001	98	477369	4.00	4.57	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.772	-0.001	97	1569955	4.00	4.54	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	95	978121	4.00	4.44	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.220	-0.001	98	1295852	4.00	4.54	
114 Dodecane	57	20.391	20.391	0.000	95	818238	4.00	4.40	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	94	795330	4.00	4.31	
116 Naphthalene	128	20.704	20.704	0.000	98	1724666	4.00	4.47	
117 Benzo(b)thiophene	134	20.806	20.807	-0.001	99	1039883	4.00	4.30	
118 Hexachlorobutadiene	225	20.925	20.922	0.003	95	817015	4.00	4.19	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	95	714810	4.00	4.34	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	99	1250335	12.5	15.1	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	100	1110339	12.5	14.9	
A 124 Toluene Range	1	13.198	(13.168-13.228)		0	3358427	4.00	4.10	
A 125 C8 Range	1	13.920	(13.890-13.950)		0	4289891	4.00	4.03	
S 126 Xylenes, Total	100				0		12.0	12.0	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.96	

Reagents:

40L7DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

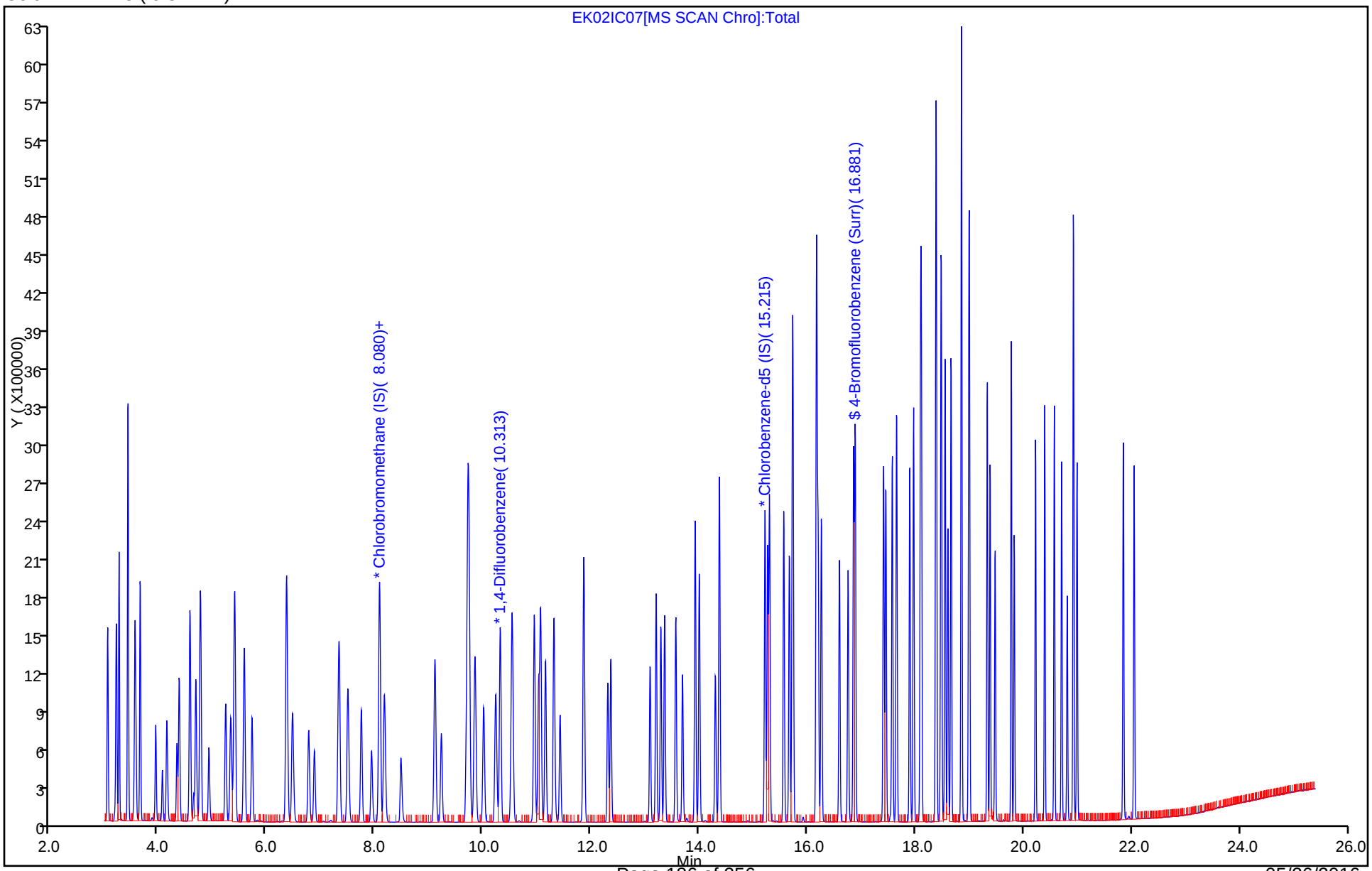
Report Date: 10-Dec-2015 15:38:11 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC07.D

Injection Date:	03-Dec-2015 00:48:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

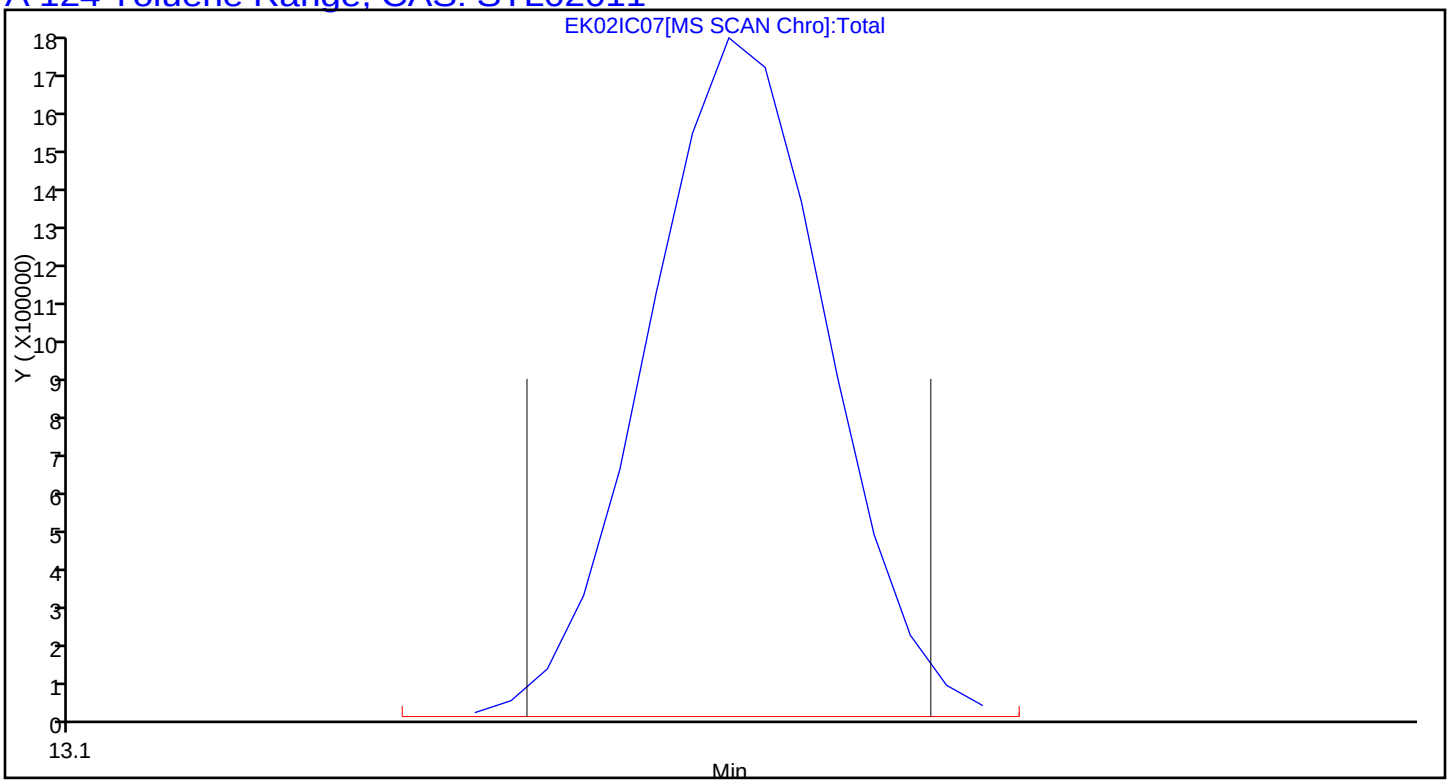


Report Date: 10-Dec-2015 15:38:11 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC07.D				
Injection Date:	03-Dec-2015 00:48:30	Instrument ID:	ME		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

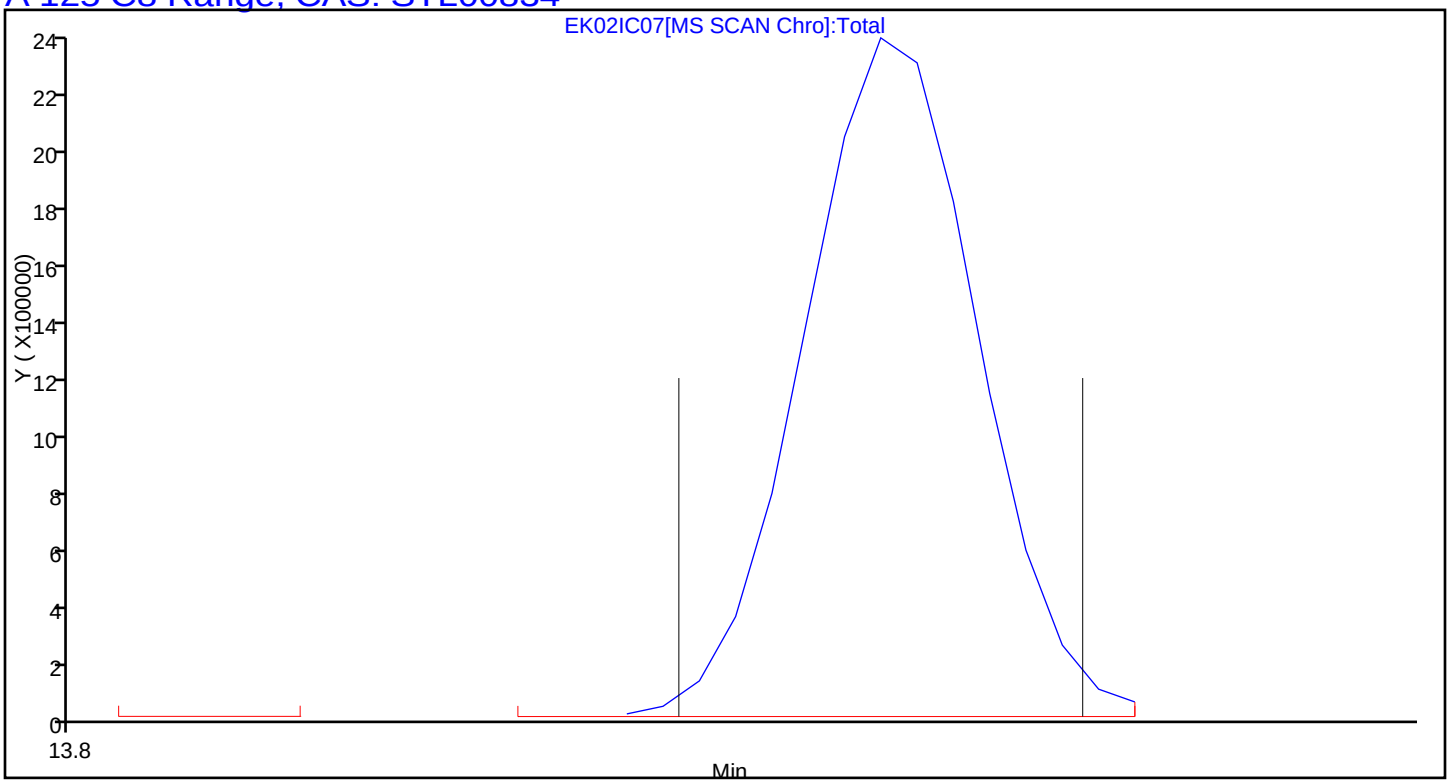


Report Date: 10-Dec-2015 15:38:12 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC07.D				
Injection Date:	03-Dec-2015 00:48:30	Instrument ID:	ME		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 03-Dec-2015 02:20:30 ALS Bottle#: 14 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-011
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:38:15 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 08-Dec-2015 17:51:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.081	8.072	0.009	97	358252	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.324	10.312	0.012	95	1609823	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.220	15.215	0.005	88	1529230	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.886	16.881	0.005	90	1133197	4.00	3.96	
6 Chlorodifluoromethane	67	3.206	3.204	0.002	96	561388	16.0	12.3	
7 Propene	41	3.217	3.217	0.000	96	1260560	16.0	9.79	
8 Dichlorodifluoromethane	85	3.260	3.260	0.000	96	4317453	16.0	10.6	
9 Chloromethane	52	3.422	3.421	0.001	59	422145	16.0	11.5	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.427	3.425	0.002	84	2976692	16.0	11.8	
11 Acetaldehyde	44	3.556	3.555	0.001	98	2027102	80.0	50.6	
12 Vinyl chloride	62	3.573	3.572	0.001	99	1565247	16.0	11.8	
13 Butane	43	3.653	3.649	0.004	82	2071298	16.0	11.5	
14 Butadiene	54	3.653	3.649	0.004	75	1165787	16.0	12.6	
15 Bromomethane	94	3.939	3.936	0.003	98	1492013	16.0	12.2	
16 Chloroethane	64	4.063	4.060	0.003	95	761537	16.0	12.4	
17 Ethanol	31	4.160	4.141	0.019	98	2110943	80.0	53.8	
18 Vinyl bromide	106	4.338	4.331	0.007	98	1407887	16.0	12.4	
19 2-Methylbutane	43	4.376	4.370	0.006	88	1469091	16.0	12.0	
20 Trichlorofluoromethane	101	4.576	4.570	0.006	98	3942972	16.0	10.8	
21 Acrolein	56	4.586	4.578	0.008	96	389565	16.0	12.4	
22 Acetonitrile	40	4.651	4.639	0.012	98	451834	16.0	12.9	
23 Acetone	58	4.689	4.681	0.008	98	1411466	48.0	34.4	
24 Isopropyl alcohol	45	4.780	4.758	0.022	95	4189046	48.0	33.0	
25 Pentane	72	4.775	4.770	0.005	96	246556	16.0	12.8	
26 Ethyl ether	31	4.926	4.923	0.003	92	990242	16.0	12.0	
27 1,1-Dichloroethene	96	5.239	5.231	0.008	98	1290738	16.0	12.3	
28 2-Methyl-2-propanol	59	5.341	5.327	0.014	96	2382825	16.0	11.9	
29 Acrylonitrile	53	5.347	5.334	0.013	92	837700	16.0	12.6	
30 1,1,2-Trichloro-1,2,2-trif	101	5.401	5.396	0.005	95	3028279	16.0	12.0	
31 Methylene Chloride	84	5.579	5.567	0.011	95	1212079	16.0	11.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.589	5.580	0.009	96	1453814	16.0	11.7	
33 Carbon disulfide	76	5.724	5.719	0.005	99	3708553	16.0	11.5	
34 trans-1,2-Dichloroethene	96	6.360	6.352	0.008	98	1421955	16.0	12.0	
35 2-Methylpentane	43	6.371	6.365	0.006	92	2733127	16.0	11.3	
36 Methyl tert-butyl ether	73	6.474	6.478	-0.004	96	3700791	16.0	13.0	
37 1,1-Dichloroethane	63	6.776	6.767	0.009	99	2705273	16.0	11.8	
38 Vinyl acetate	43	6.883	6.872	0.011	99	3349852	16.0	13.1	
39 2-Butanone (MEK)	72	7.320	7.318	0.002	98	615362	16.0	12.8	
40 Hexane	56	7.342	7.332	0.010	90	1164919	16.0	12.1	
41 Isopropyl ether	45	7.498	7.497	0.001	93	4019362	16.0	12.3	
42 cis-1,2-Dichloroethene	96	7.752	7.741	0.011	95	1556479	16.0	13.0	
43 Ethyl acetate	43	7.940	7.935	0.005	98	2862311	16.0	13.5	
44 Chloroform	83	8.097	8.083	0.014	97	3371750	16.0	11.9	
45 Tert-butyl ethyl ether	59	8.178	8.174	0.004	95	4000619	16.0	13.2	
46 Tetrahydrofuran	42	8.480	8.488	-0.008	89	1486599	16.0	14.2	
47 1,1,1-Trichloroethane	97	9.111	9.105	0.006	98	3737726	16.0	12.1	
48 1,2-Dichloroethane	62	9.235	9.222	0.013	98	2378947	16.0	11.6	
49 n-Butanol	31	9.693	9.697	-0.004	76	424645	16.0	11.7	
50 Cyclohexane	69	9.714	9.709	0.005	93	674871	16.0	12.3	
51 Benzene	78	9.725	9.716	0.009	99	3580791	16.0	11.0	
52 Carbon tetrachloride	117	9.747	9.739	0.008	98	3964715	16.0	12.2	
53 2,3-Dimethylpentane	71	9.855	9.845	0.010	90	1011137	16.0	12.9	
54 Thiophene	84	10.016	10.006	0.010	98	2327854	16.0	12.0	
55 Tert-amyl methyl ether	73	10.238	10.237	0.001	96	3853028	16.0	13.7	
56 Isooctane	57	10.539	10.533	0.006	95	6413605	16.0	11.6	
57 n-Heptane	71	10.949	10.944	0.005	88	1555506	16.0	13.1	
58 1,2-Dichloropropane	63	11.030	11.023	0.007	85	1533971	16.0	12.2	
59 Trichloroethene	130	11.068	11.060	0.008	97	2178345	16.0	12.8	
60 Dibromomethane	93	11.160	11.149	0.011	95	1889039	16.0	12.6	
61 Dichlorobromomethane	83	11.311	11.304	0.007	99	3490288	16.0	12.4	
62 1,4-Dioxane	88	11.327	11.332	-0.005	91	614985	16.0	13.6	
63 Methyl methacrylate	41	11.429	11.403	0.026	89	1898576	16.0	7.46	
64 Methylcyclohexane	83	11.866	11.861	0.005	94	3140249	16.0	12.2	
65 4-Methyl-2-pentanone (MIBK	43	12.308	12.307	0.001	95	3094762	16.0	14.1	
66 cis-1,3-Dichloropropene	75	12.368	12.361	0.007	96	2548983	16.0	13.5	
67 trans-1,3-Dichloropropene	75	13.095	13.087	0.008	99	2511525	16.0	14.2	
68 Toluene	91	13.203	13.198	0.005	95	4402810	16.0	11.7	
69 1,1,2-Trichloroethane	83	13.290	13.285	0.005	98	1471537	16.0	12.5	
70 2-Methylthiophene	97	13.360	13.355	0.005	96	3885564	16.0	12.2	
71 3-Methylthiophene	97	13.570	13.562	0.008	97	3816796	16.0	12.3	
72 2-Hexanone	58	13.694	13.693	0.001	96	1614987	16.0	14.9	
73 n-Octane	85	13.926	13.922	0.004	92	1665534	16.0	12.7	
74 Chlorodibromomethane	129	14.001	13.997	0.004	96	3684718	16.0	13.5	
75 Ethylene Dibromide	107	14.298	14.293	0.005	99	2822797	16.0	13.1	
76 Tetrachloroethene	129	14.373	14.369	0.004	97	2092930	16.0	12.2	
77 Chlorobenzene	112	15.269	15.264	0.005	91	3786043	16.0	11.8	
78 2,3-Dimethylheptane	43	15.301	15.296	0.005	87	3671742	16.0	10.5	
79 Ethylbenzene	91	15.565	15.560	0.005	96	5536748	16.0	11.3	
80 2-Ethylthiophene	97	15.668	15.663	0.005	97	4692432	16.0	12.2	
81 m-Xylene & p-Xylene	91	15.732	15.728	0.004	95	8013574	32.0	21.2	
82 n-Nonane	57	16.169	16.164	0.005	83	2584672	16.0	11.3	
83 Bromoform	173	16.180	16.174	0.006	95	3532001	16.0	14.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.201	16.197	0.004	97	3685510	16.0	13.8	
85 o-Xylene	91	16.261	16.256	0.005	97	4623403	16.0	11.5	
86 1,1,2,2-Tetrachloroethane	83	16.595	16.591	0.004	96	3378453	16.0	12.7	
87 1,2,3-Trichloropropane	110	16.757	16.753	0.004	93	1250535	16.0	13.8	
88 Isopropylbenzene	105	16.859	16.855	0.004	97	6081669	16.0	11.5	
89 N-Propylbenzene	120	17.415	17.410	0.005	94	2087357	16.0	14.3	
90 2-Chlorotoluene	126	17.453	17.451	0.002	93	1956924	16.0	13.3	
91 4-Ethyltoluene	105	17.571	17.570	0.001	94	6230772	16.0	12.5	
92 1,3,5-Trimethylbenzene	120	17.652	17.649	0.003	94	3397763	16.0	13.6	
93 Alpha Methyl Styrene	118	17.895	17.893	0.002	85	3135209	16.0	15.5	
94 n-Decane	57	17.970	17.964	0.006	95	3321325	16.0	12.3	
95 tert-Butylbenzene	119	18.100	18.095	0.005	91	5849564	16.0	12.5	
96 1,2,4-Trimethylbenzene	105	18.116	18.109	0.007	94	5290436	16.0	12.2	
97 sec-Butylbenzene	105	18.380	18.375	0.005	93	6731328	16.0	11.3	
98 1,3-Dichlorobenzene	146	18.391	18.386	0.005	97	3958231	16.0	13.1	
99 Benzyl chloride	91	18.472	18.467	0.005	97	4943647	16.0	13.7	
100 1,4-Dichlorobenzene	146	18.482	18.478	0.004	92	3976009	16.0	13.5	
101 4-Isopropyltoluene	119	18.553	18.548	0.005	92	6147104	16.0	12.2	
102 1,2,3-Trimethylbenzene	105	18.601	18.598	0.003	96	4243511	16.0	12.6	
103 Butylcyclohexane	83	18.660	18.656	0.004	90	3940521	16.0	11.7	
104 1,2-Dichlorobenzene	146	18.855	18.850	0.005	87	3759539	16.0	12.7	
105 2,3-Dihydroindene	117	18.855	18.850	0.005	94	4807440	16.0	12.2	
106 Indene	116	18.989	18.985	0.004	95	4074465	16.0	13.7	
107 n-Butylbenzene	91	19.000	18.996	0.004	94	5438096	16.0	11.9	
108 Undecane	57	19.329	19.328	0.001	90	3391969	16.0	13.0	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.383	19.379	0.004	95	4805136	16.0	13.5	
110 1,2-Dibromo-3-Chloropropan	157	19.475	19.475	0.000	99	2048143	16.0	16.7	
111 1,2,4,5-Tetramethylbenzene	119	19.777	19.772	0.005	96	5372844	16.0	13.3	
112 1,2,3,5-Tetramethylbenzene	119	19.831	19.826	0.005	96	3667016	16.0	14.2	
113 1,2,3,4-Tetramethylbenzene	119	20.224	20.220	0.004	97	4626407	16.0	13.9	
114 Dodecane	57	20.391	20.391	0.000	92	2997328	16.0	13.8	
115 1,2,4-Trichlorobenzene	180	20.569	20.569	0.000	95	3191884	16.0	14.8	
116 Naphthalene	128	20.704	20.704	0.000	95	6018522	16.0	13.3	
117 Benzo(b)thiophene	134	20.812	20.807	0.005	98	4058307	16.0	14.3	
118 Hexachlorobutadiene	225	20.925	20.922	0.003	96	3112006	16.0	13.6	
119 1,2,3-Trichlorobenzene	180	20.990	20.990	0.000	94	2792196	16.0	14.5	
120 2-Methylnaphthalene	142	21.847	21.847	0.000	99	3051243	50.0	31.4	
121 1-Methylnaphthalene	142	22.047	22.047	0.000	99	2424851	50.0	27.9	
A 124 Toluene Range	1	13.203	(13.173-13.233)		0	11753847	16.0	12.7	
A 125 C8 Range	1	13.926	(13.896-13.956)		0	14522406	16.0	12.0	
S 126 Xylenes, Total	100				0		48.0	32.7	
S 127 1,2-Dichloroethene, Total	1				0		32.0	25.0	

Reagents:

40L9DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

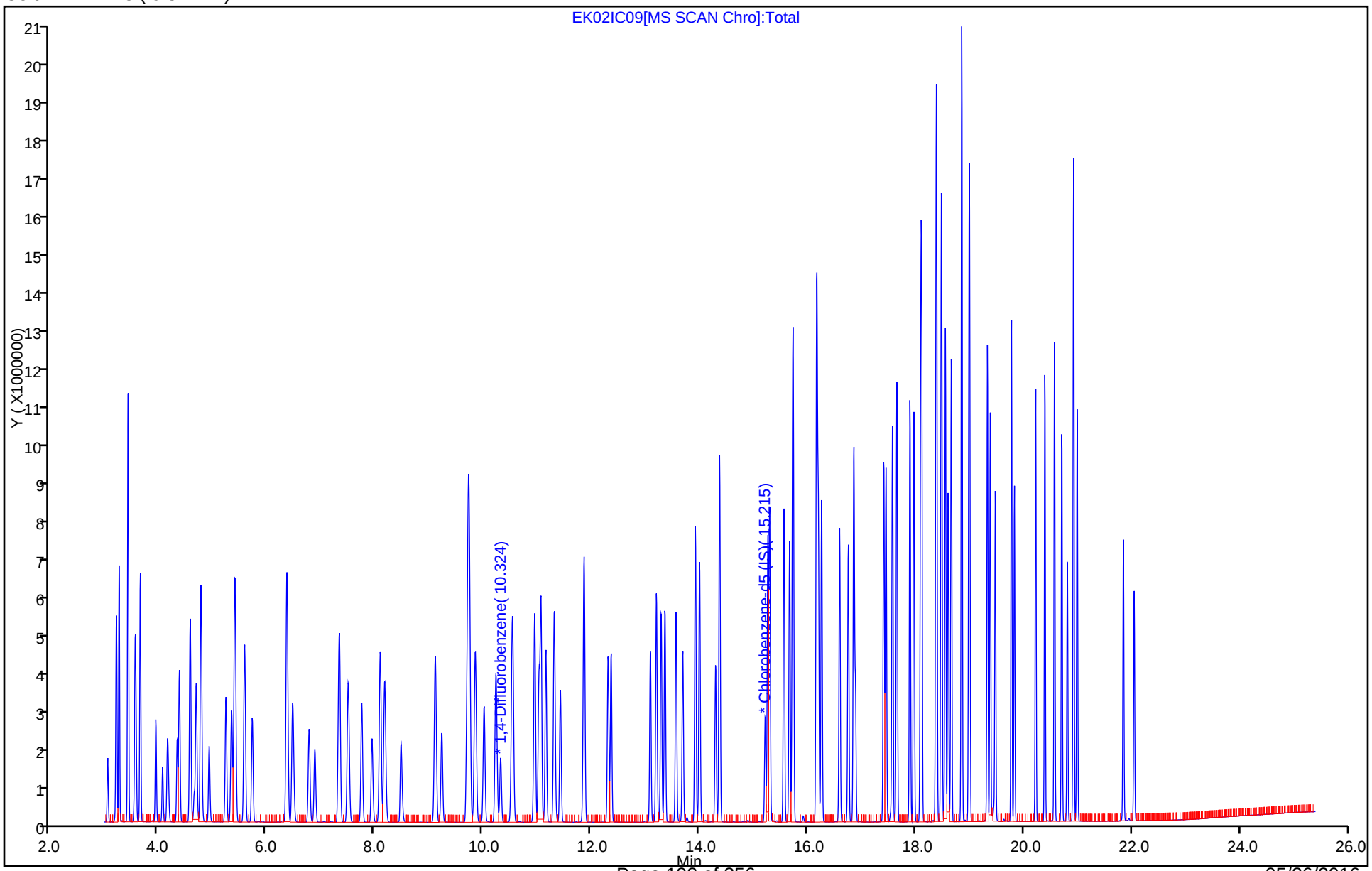
Report Date: 10-Dec-2015 15:38:16 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC09.D

Injection Date:	03-Dec-2015 02:20:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

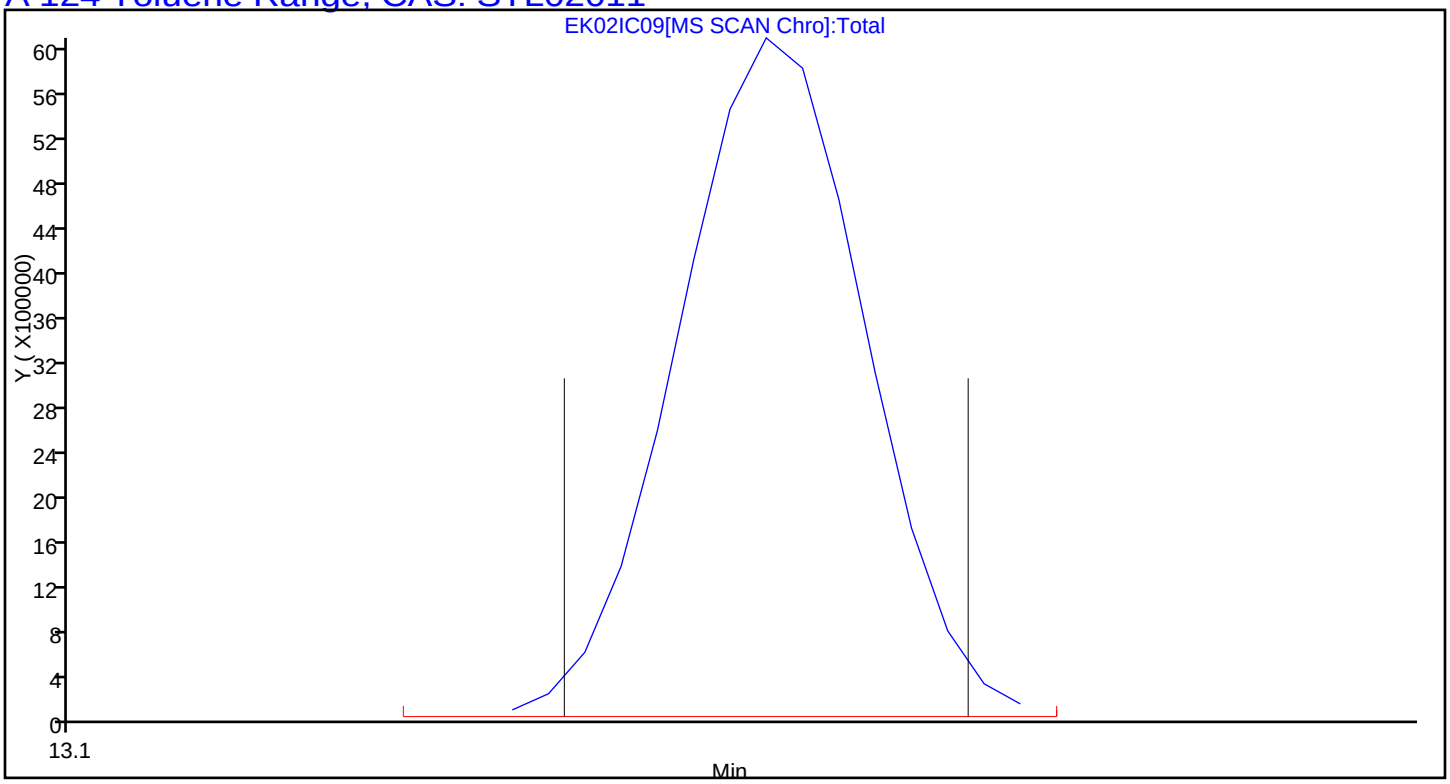


Report Date: 10-Dec-2015 15:38:16 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC09.D				
Injection Date:	03-Dec-2015 02:20:30	Instrument ID:	ME		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

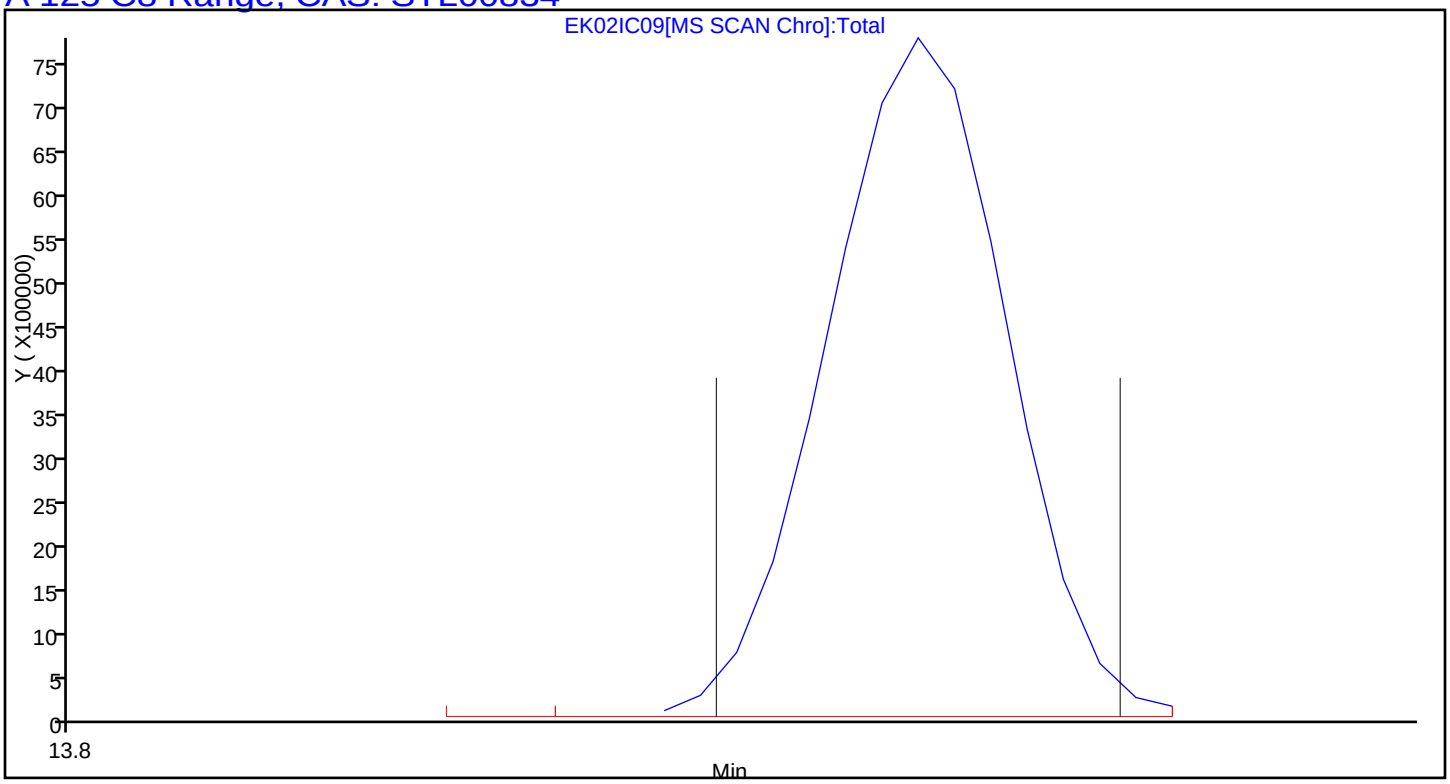


Report Date: 10-Dec-2015 15:38:16 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC09.D				
Injection Date:	03-Dec-2015 02:20:30	Instrument ID:	ME		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 03-Dec-2015 09:19:30 ALS Bottle#: 13 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-010
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Dec-2015 15:38:20 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 03-Dec-2015 10:06:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.075	8.072	0.003	92	309894	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.318	10.312	0.006	95	1359040	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.220	15.216	0.004	88	1298454	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.892	16.883	0.009	95	993477	4.00	4.09	
6 Chlorodifluoromethane	67	3.200	3.204	-0.004	96	314262	8.00	7.96	
7 Propene	41	3.211	3.217	-0.006	97	744623	8.00	6.69	
8 Dichlorodifluoromethane	85	3.254	3.259	-0.005	98	2680132	8.00	7.63	
9 Chloromethane	52	3.416	3.420	-0.004	58	243324	8.00	7.68	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.422	3.424	-0.002	87	1733517	8.00	7.97	
11 Acetaldehyde	44	3.551	3.554	-0.003	97	1158414	40.0	33.4	
12 Vinyl chloride	62	3.567	3.572	-0.005	99	871677	8.00	7.62	
13 Butane	43	3.648	3.649	-0.001	83	1184826	8.00	7.58	
14 Butadiene	54	3.648	3.649	-0.001	74	658631	8.00	8.20	
15 Bromomethane	94	3.934	3.936	-0.002	98	842377	8.00	7.98	
16 Chloroethane	64	4.058	4.060	-0.002	95	419417	8.00	7.90	
17 Ethanol	31	4.144	4.141	0.003	98	1171464	40.0	34.5	
18 Vinyl bromide	106	4.327	4.330	-0.003	98	793439	8.00	8.09	
19 2-Methylbutane	43	4.371	4.370	0.001	88	817760	8.00	7.74	
20 Trichlorofluoromethane	101	4.570	4.570	0.000	100	2379923	8.00	7.54	
21 Acrolein	56	4.575	4.578	-0.003	96	204318	8.00	7.54	
22 Acetonitrile	40	4.640	4.640	0.000	98	225708	8.00	7.47	
23 Acetone	58	4.678	4.681	-0.003	98	692456	24.0	19.5	
24 Isopropyl alcohol	45	4.759	4.758	0.001	94	2297280	24.0	20.9	
25 Pentane	72	4.770	4.770	0.000	97	132880	8.00	7.95	
26 Ethyl ether	31	4.921	4.923	-0.002	93	507265	8.00	7.11	
27 1,1-Dichloroethene	96	5.228	5.231	-0.003	97	709824	8.00	7.84	
28 2-Methyl-2-propanol	59	5.320	5.326	-0.006	96	1314194	8.00	7.61	
29 Acrylonitrile	53	5.336	5.335	0.001	93	433906	8.00	7.52	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.396	-0.001	96	1659710	8.00	7.59	
31 Methylene Chloride	84	5.568	5.567	0.001	97	665556	8.00	7.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.584	5.580	0.004	96	830411	8.00	7.70	
33 Carbon disulfide	76	5.719	5.719	0.000	99	2160309	8.00	7.78	
34 trans-1,2-Dichloroethene	96	6.355	6.352	0.003	97	786118	8.00	7.70	
35 2-Methylpentane	43	6.366	6.365	0.001	92	1542322	8.00	7.37	
36 Methyl tert-butyl ether	73	6.468	6.477	-0.009	96	1791594	8.00	7.25	
37 1,1-Dichloroethane	63	6.770	6.767	0.003	100	1488820	8.00	7.48	
38 Vinyl acetate	43	6.873	6.872	0.001	99	1714570	8.00	7.73	
39 2-Butanone (MEK)	72	7.315	7.318	-0.003	98	284094	8.00	6.82	
40 Hexane	56	7.336	7.333	0.003	91	627200	8.00	7.52	
41 Isopropyl ether	45	7.493	7.496	-0.003	94	2010997	8.00	7.09	
42 cis-1,2-Dichloroethene	96	7.746	7.742	0.004	96	803827	8.00	7.75	
43 Ethyl acetate	43	7.935	7.935	0.000	98	1318445	8.00	7.19	
44 Chloroform	83	8.091	8.084	0.007	96	1788382	8.00	7.31	
45 Tert-butyl ethyl ether	59	8.172	8.174	-0.002	96	1936566	8.00	7.37	
46 Tetrahydrofuran	42	8.474	8.486	-0.012	91	671451	8.00	7.40	
47 1,1,1-Trichloroethane	97	9.110	9.106	0.004	97	2003439	8.00	7.52	
48 1,2-Dichloroethane	62	9.229	9.222	0.007	99	1326886	8.00	7.69	
49 n-Butanol	31	9.687	9.696	-0.009	91	264998	8.00	8.61	
50 Cyclohexane	69	9.714	9.710	0.004	91	361809	8.00	7.78	
51 Benzene	78	9.720	9.716	0.004	98	2069114	8.00	7.50	
52 Carbon tetrachloride	117	9.741	9.739	0.002	97	2113582	8.00	7.73	
53 2,3-Dimethylpentane	71	9.849	9.846	0.003	90	518712	8.00	7.87	
54 Thiophene	84	10.011	10.007	0.004	98	1284360	8.00	7.87	
55 Tert-amyl methyl ether	73	10.232	10.236	-0.004	97	1779527	8.00	7.48	
56 Isooctane	57	10.539	10.533	0.006	97	3487887	8.00	7.49	
57 n-Heptane	71	10.949	10.945	0.004	90	795335	8.00	7.91	
58 1,2-Dichloropropane	63	11.030	11.024	0.006	85	795575	8.00	7.52	
59 Trichloroethene	130	11.068	11.061	0.007	97	1108215	8.00	7.71	
60 Dibromomethane	93	11.154	11.149	0.005	96	1000466	8.00	7.90	
61 Dichlorobromomethane	83	11.311	11.304	0.007	100	1887410	8.00	7.96	
62 1,4-Dioxane	88	11.327	11.331	-0.004	93	298631	8.00	7.83	
63 Methyl methacrylate	41	11.424	11.405	0.019	91	853110	8.00	3.97	
64 Methylcyclohexane	83	11.866	11.861	0.005	94	1656924	8.00	7.63	
65 4-Methyl-2-pentanone (MIBK	43	12.308	12.307	0.001	97	1469990	8.00	7.92	
66 cis-1,3-Dichloropropene	75	12.367	12.362	0.005	97	1313661	8.00	8.24	
67 trans-1,3-Dichloropropene	75	13.095	13.088	0.007	98	1243242	8.00	8.30	
68 Toluene	91	13.203	13.198	0.005	94	2308156	8.00	7.21	
69 1,1,2-Trichloroethane	83	13.295	13.286	0.009	98	740474	8.00	7.40	
70 2-Methylthiophene	97	13.365	13.356	0.009	97	2037731	8.00	7.53	
71 3-Methylthiophene	97	13.570	13.563	0.007	98	1987004	8.00	7.54	
72 2-Hexanone	58	13.694	13.693	0.001	94	746832	8.00	8.11	
73 n-Octane	85	13.931	13.923	0.008	89	876625	8.00	7.90	
74 Chlorodibromomethane	129	14.007	13.998	0.009	97	1956387	8.00	8.42	
75 Ethylene Dibromide	107	14.303	14.294	0.009	98	1429034	8.00	7.81	
76 Tetrachloroethene	129	14.373	14.369	0.004	97	1068099	8.00	7.33	
77 Chlorobenzene	112	15.269	15.264	0.005	92	1978581	8.00	7.24	
78 2,3-Dimethylheptane	43	15.301	15.297	0.004	91	2070422	8.00	6.95	
79 Ethylbenzene	91	15.565	15.561	0.004	98	2943200	8.00	7.09	
80 2-Ethylthiophene	97	15.673	15.665	0.008	98	2444450	8.00	7.49	
81 m-Xylene & p-Xylene	91	15.732	15.728	0.004	99	4413757	16.0	13.8	
82 n-Nonane	57	16.169	16.165	0.004	86	1443983	8.00	7.44	
83 Bromoform	173	16.180	16.174	0.006	95	1832330	8.00	8.80	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.201	16.197	0.004	99	1811971	8.00	8.00	
85 o-Xylene	91	16.266	16.257	0.009	100	2398188	8.00	7.01	
86 1,1,2,2-Tetrachloroethane	83	16.595	16.591	0.004	98	1642804	8.00	7.27	
87 1,2,3-Trichloropropane	110	16.757	16.753	0.004	95	562657	8.00	7.30	
88 Isopropylbenzene	105	16.859	16.855	0.004	97	3179929	8.00	7.05	
89 N-Propylbenzene	120	17.415	17.410	0.005	97	961585	8.00	7.76	
90 2-Chlorotoluene	126	17.458	17.452	0.006	95	937068	8.00	7.50	
91 4-Ethyltoluene	105	17.577	17.571	0.005	96	3124764	8.00	7.37	
92 1,3,5-Trimethylbenzene	120	17.657	17.650	0.007	94	1583185	8.00	7.46	
93 Alpha Methyl Styrene	118	17.900	17.894	0.006	87	1439352	8.00	8.39	
94 n-Decane	57	17.970	17.965	0.005	94	1709301	8.00	7.45	
95 tert-Butylbenzene	119	18.100	18.095	0.005	92	2887178	8.00	7.25	
96 1,2,4-Trimethylbenzene	105	18.116	18.110	0.006	95	2665142	8.00	7.21	
97 sec-Butylbenzene	105	18.380	18.376	0.004	95	3584597	8.00	7.10	
98 1,3-Dichlorobenzene	146	18.391	18.386	0.005	97	1936145	8.00	7.55	
99 Benzyl chloride	91	18.477	18.468	0.009	99	2445848	8.00	8.00	
100 1,4-Dichlorobenzene	146	18.482	18.478	0.004	93	1912667	8.00	7.62	
101 4-Isopropyltoluene	119	18.553	18.548	0.005	95	3141630	8.00	7.35	
102 1,2,3-Trimethylbenzene	105	18.606	18.599	0.007	98	2063325	8.00	7.21	
103 Butylcyclohexane	83	18.666	18.657	0.009	91	2046156	8.00	7.18	
104 1,2-Dichlorobenzene	146	18.854	18.850	0.004	85	1840986	8.00	7.34	
105 2,3-Dihydroindene	117	18.854	18.851	0.003	93	2479827	8.00	7.39	
106 Indene	116	18.989	18.985	0.004	92	1946193	8.00	7.72	
107 n-Butylbenzene	91	19.000	18.996	0.004	98	2841009	8.00	7.32	
108 Undecane	57	19.334	19.329	0.005	93	1684649	8.00	7.60	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.383	19.379	0.004	98	2381594	8.00	7.86	
110 1,2-Dibromo-3-Chloropropan	157	19.480	19.475	0.005	99	915680	8.00	8.82	
111 1,2,4,5-Tetramethylbenzene	119	19.777	19.772	0.005	98	2795083	8.00	8.13	
112 1,2,3,5-Tetramethylbenzene	119	19.831	19.827	0.003	97	1781518	8.00	8.14	
113 1,2,3,4-Tetramethylbenzene	119	20.224	20.220	0.004	98	2338088	8.00	8.24	
114 Dodecane	57	20.397	20.392	0.005	94	1485299	8.00	8.04	
115 1,2,4-Trichlorobenzene	180	20.575	20.570	0.005	94	1503610	8.00	8.21	
116 Naphthalene	128	20.709	20.705	0.004	97	3134334	8.00	8.17	
117 Benzo(b)thiophene	134	20.812	20.808	0.004	99	1971522	8.00	8.21	
118 Hexachlorobutadiene	225	20.925	20.923	0.002	96	1506909	8.00	7.78	
119 1,2,3-Trichlorobenzene	180	20.995	20.990	0.005	94	1354271	8.00	8.28	
120 2-Methylnaphthalene	142	21.853	21.848	0.005	99	2609701	25.0	31.6	
121 1-Methylnaphthalene	142	22.052	22.047	0.005	99	2336446	25.0	31.6	
A 124 Toluene Range	1	13.203	(13.173-13.233)		0	6016537	8.00	7.69	
A 125 C8 Range	1	13.931	(13.901-13.961)		0	7865533	8.00	7.73	
S 126 Xylenes, Total	100				0		24.0	20.8	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.5	

Reagents:

40L8DNP_00001	Amount Added: 200.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

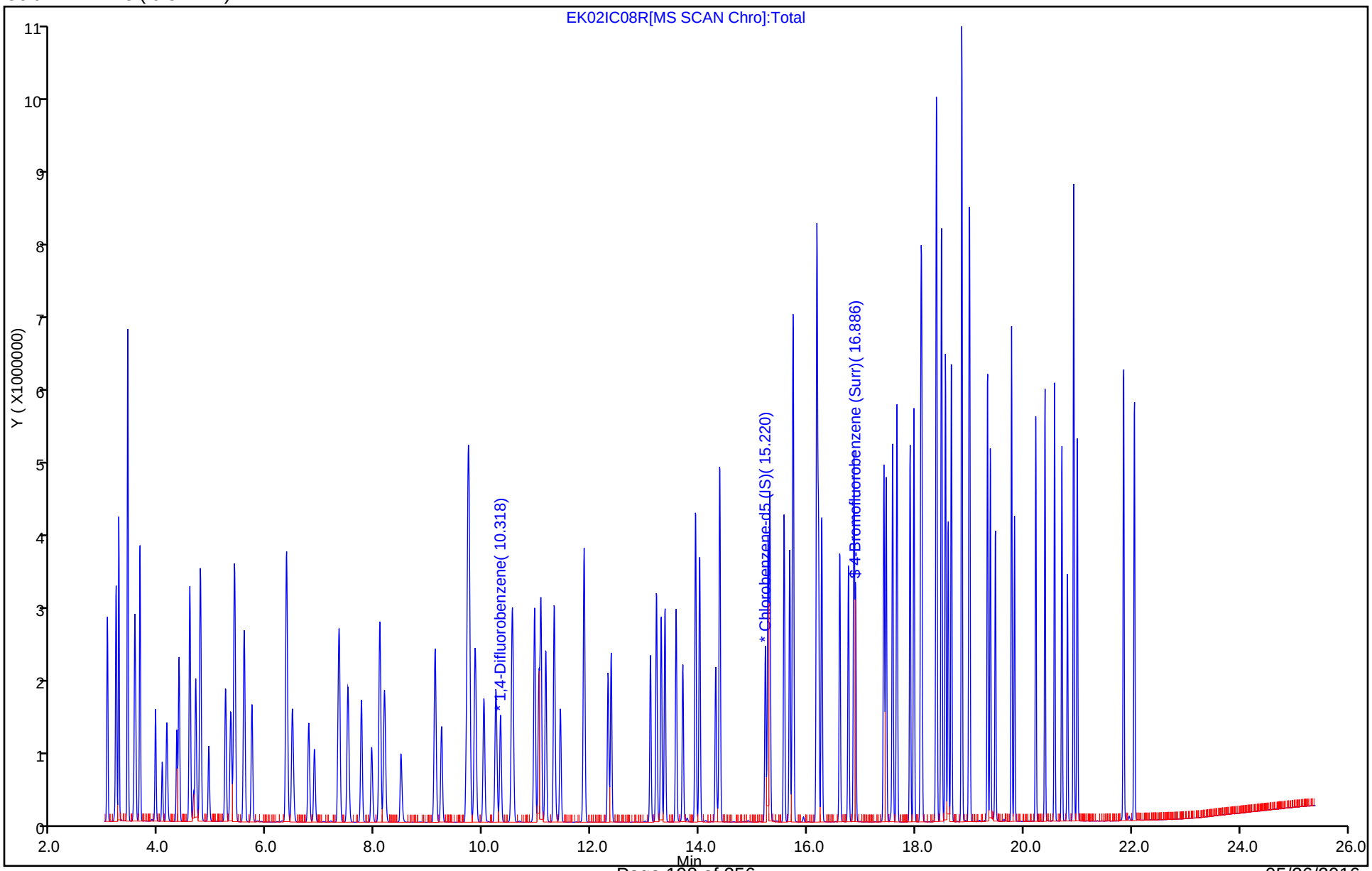
Report Date: 10-Dec-2015 15:38:21 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Injection Date:	03-Dec-2015 09:19:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L8			Worklist Smp#:	19
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

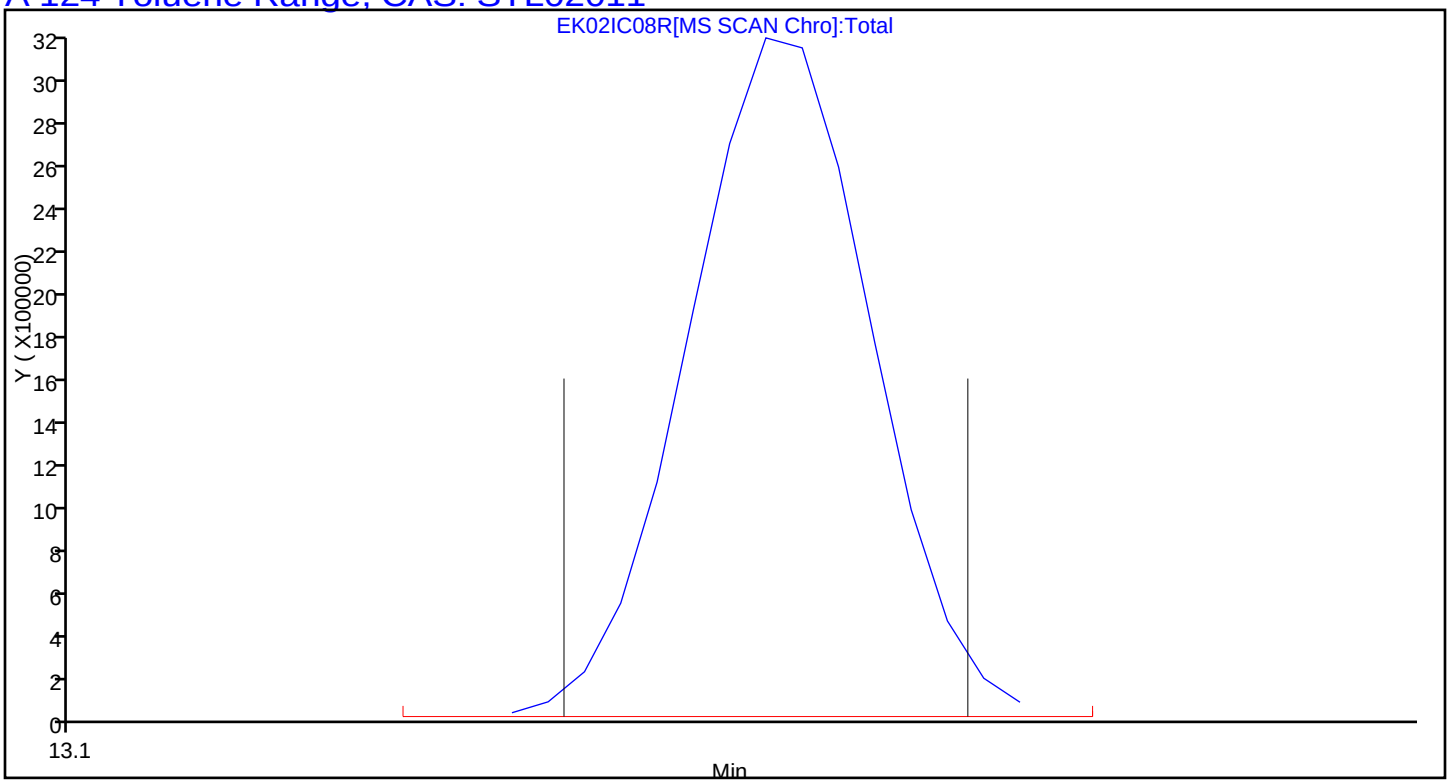


Report Date: 10-Dec-2015 15:38:21 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Injection Date:	03-Dec-2015 09:19:30	Instrument ID:	ME		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

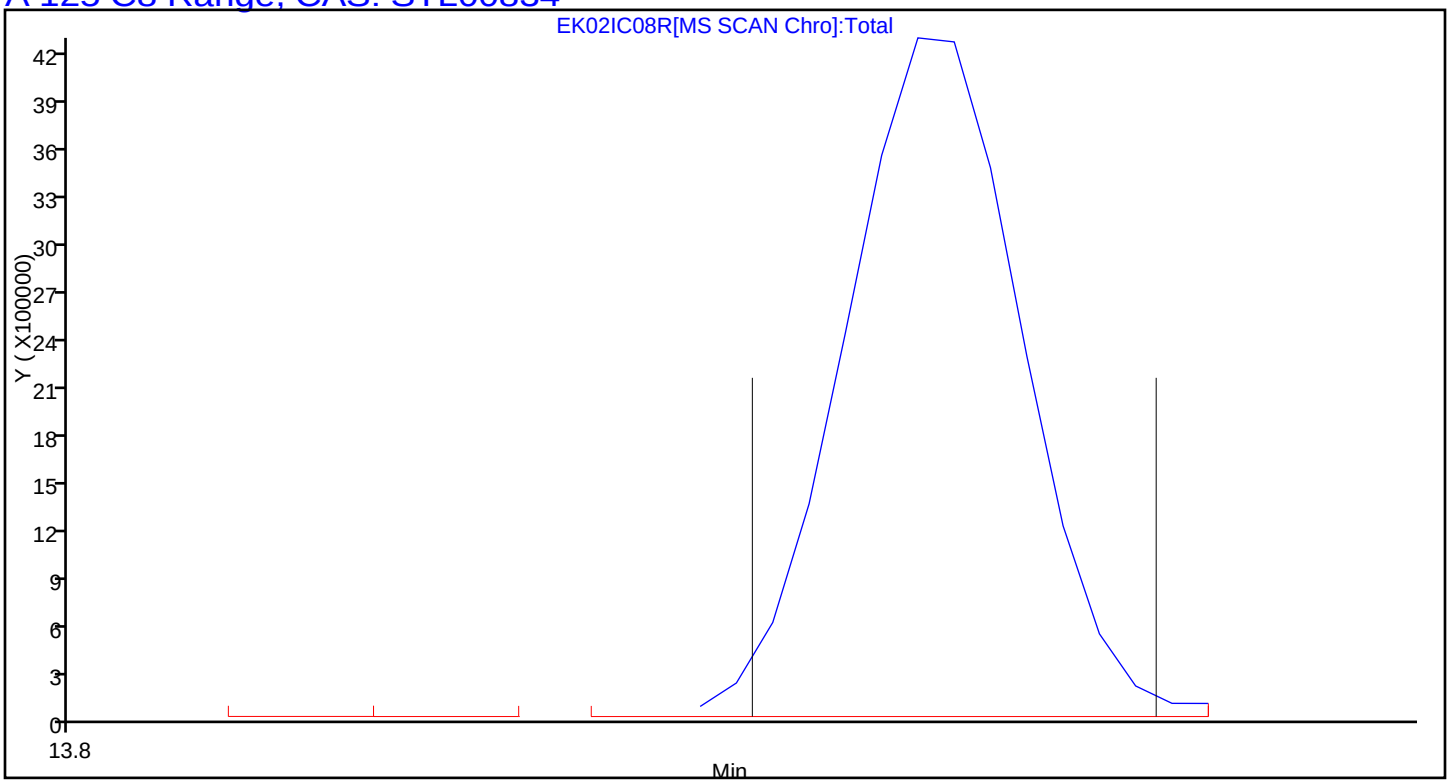


Report Date: 10-Dec-2015 15:38:21 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Injection Date:	03-Dec-2015 09:19:30	Instrument ID:	ME		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab Sample ID: ICV 140-3815/13 Calibration Date: 12/03/2015 03:51

Instrument ID: ME Calib Start Date: 12/02/2015 20:13

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/03/2015 09:19

Lab File ID: EICVK02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5095	0.5118		2.00	1.99	0.4	35.0
Propene	Ave	1.437	1.260		1.75	1.99	-12.3	35.0
Dichlorodifluoromethane	Ave	4.532	4.680		2.06	1.99	3.3	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.808	3.008		2.13	1.99	7.1	35.0
Chloromethane	Ave	0.4088	0.4070		1.98	1.99	-0.5	35.0
Acetaldehyde	Ave	0.4474	0.3903		8.69	9.96	-12.8	35.0
Vinyl chloride	Ave	1.476	1.510		2.04	1.99	2.2	35.0
1,3-Butadiene	Ave	1.037	1.081		2.08	1.99	4.2	35.0
Butane	Ave	2.018	2.109		2.08	1.99	4.5	35.0
Bromomethane	Ave	1.363	1.388		2.03	1.99	1.8	35.0
Chloroethane	Ave	0.6856	0.7067		2.05	1.99	3.1	35.0
Ethanol	Ave	0.4379	0.4139		9.41	9.96	-5.5	35.0
Vinyl bromide	Ave	1.266	1.402		2.21	1.99	10.7	35.0
2-Methylbutane	Ave	1.364	1.441		2.10	1.99	5.6	35.0
Trichlorofluoromethane	Ave	4.076	4.150		2.03	1.99	1.8	35.0
Acrolein	Ave	0.3497	0.3564		2.03	1.99	1.9	35.0
Acetonitrile	Ave	0.3902	0.4028		2.06	1.99	3.2	35.0
Acetone	Ave	0.4581	0.4347		5.67	5.97	-5.1	35.0
Isopropyl alcohol	Ave	1.416	1.399		5.90	5.97	-1.2	35.0
Pentane	Ave	0.2158	0.2360		2.18	1.99	9.3	35.0
Ethyl ether	Ave	0.9209	0.9636		2.08	1.99	4.6	35.0
1,1-Dichloroethene	Ave	1.169	1.223		2.08	1.99	4.6	35.0
tert-Butyl alcohol	Ave	2.228	2.248		2.01	1.99	0.9	35.0
Acrylonitrile	Ave	0.7453	0.8102		2.16	1.99	8.7	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.823	2.999		2.12	1.99	6.2	35.0
Methylene Chloride	Ave	1.222	1.210		1.97	1.99	-1.0	35.0
3-Chloropropene	Ave	1.393	1.434		2.05	1.99	3.0	35.0
Carbon disulfide	Ave	3.586	3.829		2.13	1.99	6.8	35.0
trans-1,2-Dichloroethene	Ave	1.318	1.413		2.13	1.99	7.2	35.0
2-Methylpentane	Ave	2.699	3.097		2.28	1.99	14.7	35.0
Methyl tert-butyl ether	Ave	3.188	3.268		2.04	1.99	2.5	35.0
1,1-Dichloroethane	Ave	2.570	2.752		2.13	1.99	7.1	35.0
Vinyl acetate	Ave	2.863	3.035		2.11	1.99	6.0	35.0
2-Butanone (MEK)	Ave	0.5373	0.4984		1.85	1.99	-7.2	35.0
Hexane	Ave	1.077	1.141		2.11	1.99	5.9	35.0
Isopropyl ether	Ave	3.661	3.696		2.01	1.99	1.0	35.0
cis-1,2-Dichloroethene	Ave	1.338	1.502		2.24	1.99	12.3	35.0
Ethyl acetate	Ave	2.365	2.248		1.89	1.99	-5.0	35.0
Chloroform	Ave	3.160	3.346		2.11	1.99	5.9	35.0
Tert-butyl ethyl ether	Ave	3.390	3.549		2.09	1.99	4.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab Sample ID: ICV 140-3815/13 Calibration Date: 12/03/2015 03:51

Instrument ID: ME Calib Start Date: 12/02/2015 20:13

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/03/2015 09:19

Lab File ID: EICVK02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.171	1.213		2.06	1.99	3.6	35.0
1,1,1-Trichloroethane	Ave	3.440	3.688		2.14	1.99	7.2	35.0
1,2-Dichloroethane	Ave	0.5077	0.5208		2.04	1.99	2.6	35.0
1-Butanol	Ave	0.0906	0.0976		2.15	1.99	7.8	35.0
Cyclohexane	Ave	0.1369	0.1495		2.17	1.99	9.2	35.0
Benzene	Ave	0.8117	0.8786		2.16	1.99	8.2	35.0
Carbon tetrachloride	Ave	0.8045	0.8523		2.11	1.99	5.9	35.0
2,3-Dimethylpentane	Ave	0.1940	0.1966		2.02	1.99	1.3	35.0
Thiophene	Ave	0.4801	0.5526		2.29	1.99	15.1	35.0
Tert-amyl methyl ether	Ave	0.7330	0.7474		2.03	1.99	2.0	35.0
2,2,4-Trimethylpentane	Ave	1.370	1.492		2.17	1.99	8.9	35.0
Heptane	Ave	0.2960	0.3265		2.20	1.99	10.3	35.0
1,2-Dichloropropane	Ave	0.3113	0.3315		2.12	1.99	6.5	35.0
Trichloroethene	Ave	0.4231	0.4768		2.24	1.99	12.7	35.0
Dibromomethane	Ave	0.3729	0.4132		2.21	1.99	10.8	35.0
Bromodichloromethane	Ave	0.6975	0.7727		2.21	1.99	10.8	35.0
1,4-Dioxane	Ave	0.1123	0.1147		2.03	1.99	2.1	35.0
Methyl methacrylate	Ave	0.6324	0.3191		1.00	1.99	-49.5*	35.0
Methylcyclohexane	Ave	0.6392	0.5681		1.77	1.99	-11.1	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5464	0.5399		1.97	1.99	-1.2	35.0
cis-1,3-Dichloropropene	Ave	0.4693	0.5346		2.27	1.99	13.9	35.0
trans-1,3-Dichloropropene	Ave	0.4613	0.5230		2.26	1.99	13.4	35.0
Toluene	Ave	0.9866	1.110		2.24	1.99	12.5	35.0
1,1,2-Trichloroethane	Ave	0.3081	0.3254		2.10	1.99	5.6	35.0
2-Methylthiophene	Ave	0.8337	0.9659		2.31	1.99	15.9	35.0
3-Methylthiophene	Ave	0.8119	0.9736		2.39	1.99	19.9	35.0
2-Hexanone	Ave	0.2836	0.2851		2.00	1.99	0.5	35.0
Octane	Ave	0.3418	0.3922		2.29	1.99	14.7	35.0
Dibromochloromethane	Ave	0.7159	0.8167		2.27	1.99	14.1	35.0
1,2-Dibromoethane (EDB)	Ave	0.5637	0.6209		2.19	1.99	10.2	35.0
Tetrachloroethene	Ave	0.4490	0.4836		2.14	1.99	7.7	35.0
Chlorobenzene	Ave	0.8421	0.9262		2.19	1.99	10.0	35.0
2,3-Dimethylheptane	Ave	0.9174	0.9717		2.11	1.99	5.9	35.0
Ethylbenzene	Ave	1.280	1.408		2.19	1.99	10.0	35.0
2-Ethylthiophene	Ave	1.005	1.104		2.19	1.99	9.8	35.0
m-Xylene & p-Xylene	Ave	0.9886	1.086		4.38	3.98	9.9	35.0
Nonane	Ave	0.5981	0.6751		2.25	1.99	12.9	35.0
Bromoform	Ave	0.6412	0.7189		2.23	1.99	12.1	35.0
Styrene	Ave	0.6977	0.8116		2.32	1.99	16.3	35.0
o-Xylene	Ave	1.054	1.125		2.13	1.99	6.7	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6964	0.7093		2.03	1.99	1.9	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab Sample ID: ICV 140-3815/13 Calibration Date: 12/03/2015 03:51

Instrument ID: ME Calib Start Date: 12/02/2015 20:13

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/03/2015 09:19

Lab File ID: EICVK02.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2373	0.2422		2.03	1.99	2.0	35.0
Isopropylbenzene	Ave	1.389	1.534		2.20	1.99	10.4	35.0
Propylbenzene	Ave	0.3817	0.4291		2.24	1.99	12.4	35.0
2-Chlorotoluene	Ave	0.3851	0.4314		2.23	1.99	12.0	35.0
4-Ethyltoluene	Ave	1.306	1.383		2.11	1.99	5.8	35.0
1,3,5-Trimethylbenzene	Ave	0.6535	0.7136		2.17	1.99	9.2	35.0
Alpha Methyl Styrene	Ave	0.5283	0.6076		2.29	1.99	15.0	35.0
Decane	Ave	0.7070	0.7819		2.20	1.99	10.6	35.0
tert-Butylbenzene	Ave	1.227	1.344		2.18	1.99	9.5	35.0
1,2,4-Trimethylbenzene	Ave	1.139	1.219		2.13	1.99	7.0	35.0
sec-Butylbenzene	Ave	1.555	1.707		2.19	1.99	9.8	35.0
1,3-Dichlorobenzene	Ave	0.7898	0.8578		2.16	1.99	8.6	35.0
Benzyl chloride	Ave	0.9413	1.017		2.15	1.99	8.0	35.0
1,4-Dichlorobenzene	Ave	0.7730	0.8309		2.14	1.99	7.5	35.0
4-Isopropyltoluene	Ave	1.317	1.435		2.17	1.99	8.9	35.0
1,2,3-Trimethylbenzene	Ave	0.8812	0.997		2.25	1.99	13.1	35.0
Butylcyclohexane	Ave	0.8777	0.9420		2.14	1.99	7.3	35.0
1,2-Dichlorobenzene	Ave	0.7725	0.8159		2.10	1.99	5.6	35.0
Indane	Ave	1.033	1.078		2.08	1.99	4.4	35.0
Indene	Ave	0.7765	1.056		2.71	1.99	36.0*	35.0
Butylbenzene	Ave	1.196	1.292		2.15	1.99	8.1	35.0
Undecane	Ave	0.6829	0.6351		1.85	1.99	-7.0	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9331	1.266		2.70	1.99	35.7*	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.3198	0.2302		1.43	1.99	-28.0	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.059	1.279		2.41	1.99	20.9	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6739	0.8177		2.42	1.99	21.3	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.8737	1.013		2.31	1.99	15.9	35.0
Dodecane	Ave	0.5688	0.5667		1.98	1.99	-0.4	35.0
1,2,4-Trichlorobenzene	Ave	0.5644	0.5441		1.92	1.99	-3.6	35.0
Naphthalene	Ave	1.181	1.198		2.02	1.99	1.4	35.0
Benzo(b)thiophene	Ave	0.7399	0.8172		2.20	1.99	10.4	35.0
Hexachlorobutadiene	Ave	0.5967	0.6085		2.03	1.99	2.0	35.0
1,2,3-Trichlorobenzene	Ave	0.5039	0.5061		2.00	1.99	0.4	35.0
2-Methylnaphthalene	Ave	0.2541	0.2081		5.10	6.22	-18.1	50.0
1-Methylnaphthalene	Ave	0.2275	0.1891		5.17	6.22	-16.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7488	0.7549		4.03	4.00	0.8	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EICVK02.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 03-Dec-2015 03:51:30 ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002334-013
Misc. Info.: E120215,T155,,
Operator ID: 403648 Instrument ID: ME
Sublist:

Method: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 11-Dec-2015 10:19:50 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK015

First Level Reviewer: barlozhetskayaa Date: 11-Dec-2015 10:19:50

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.070	8.072	-0.002	94	346404	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.313	10.312	0.001	95	1574130	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.215	15.215	0.000	88	1467549	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.881	16.881	0.000	90	1107863	4.00	4.03	
6 Chlorodifluoromethane	67	3.200	3.204	-0.004	97	88260	1.99	2.00	
7 Propene	41	3.211	3.216	-0.006	97	217317	1.99	1.75	
8 Dichlorodifluoromethane	85	3.260	3.259	0.000	100	807149	1.99	2.06	
9 Chloromethane	52	3.421	3.420	0.000	56	70191	1.99	1.98	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.421	3.424	-0.004	89	518797	1.99	2.13	
11 Acetaldehyde	44	3.551	3.554	-0.004	96	336563	9.96	8.69	
12 Vinyl chloride	62	3.572	3.572	0.000	99	260351	1.99	2.04	
13 Butane	43	3.648	3.648	-0.001	84	363682	1.99	2.08	
14 Butadiene	54	3.648	3.648	-0.001	71	186353	1.99	2.08	
15 Bromomethane	94	3.934	3.935	-0.002	98	239386	1.99	2.03	
16 Chloroethane	64	4.063	4.059	0.003	97	121885	1.99	2.05	
17 Ethanol	31	4.139	4.140	-0.002	98	356909	9.96	9.41	
18 Vinyl bromide	106	4.327	4.330	-0.004	98	241715	1.99	2.21	
19 2-Methylbutane	43	4.371	4.369	0.000	89	248487	1.99	2.10	
20 Trichlorofluoromethane	101	4.570	4.569	0.000	100	715740	1.99	2.03	
21 Acrolein	56	4.575	4.577	-0.003	96	61466	1.99	2.03	
22 Acetonitrile	40	4.635	4.638	-0.004	99	69473	1.99	2.06	
23 Acetone	58	4.678	4.680	-0.003	99	224903	5.97	5.67	
24 Isopropyl alcohol	45	4.753	4.757	-0.005	96	723707	5.97	5.90	
25 Pentane	72	4.770	4.768	0.000	96	40695	1.99	2.18	
26 Ethyl ether	31	4.921	4.922	-0.002	94	166185	1.99	2.08	
27 1,1-Dichloroethene	96	5.233	5.230	0.002	96	210900	1.99	2.08	
28 2-Methyl-2-propanol	59	5.320	5.326	-0.007	95	387707	1.99	2.01	
29 Acrylonitrile	53	5.330	5.333	-0.004	93	139728	1.99	2.16	
30 1,1,2-Trichloro-1,2,2-trif	101	5.395	5.395	-0.001	97	517255	1.99	2.12	
31 Methylene Chloride	84	5.568	5.566	0.001	97	208645	1.99	1.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.578	5.578	-0.002	96	247263	1.99	2.05	
33 Carbon disulfide	76	5.719	5.718	0.000	100	660430	1.99	2.13	
34 trans-1,2-Dichloroethene	96	6.350	6.350	-0.002	97	243690	1.99	2.13	
35 2-Methylpentane	43	6.366	6.363	0.001	96	534075	1.99	2.28	
36 Methyl tert-butyl ether	73	6.468	6.477	-0.010	96	563642	1.99	2.04	
37 1,1-Dichloroethane	63	6.765	6.765	-0.002	100	474662	1.99	2.13	
38 Vinyl acetate	43	6.873	6.870	0.001	100	523439	1.99	2.11	
39 2-Butanone (MEK)	72	7.315	7.316	-0.003	97	85951	1.99	1.85	
40 Hexane	56	7.331	7.330	-0.001	90	196729	1.99	2.11	
41 Isopropyl ether	45	7.493	7.495	-0.004	95	637436	1.99	2.01	
42 cis-1,2-Dichloroethene	96	7.741	7.739	0.000	96	259095	1.99	2.24	
43 Ethyl acetate	43	7.929	7.933	-0.006	98	387644	1.99	1.89	
44 Chloroform	83	8.080	8.081	-0.003	95	577139	1.99	2.11	
45 Tert-butyl ethyl ether	59	8.167	8.172	-0.007	96	612189	1.99	2.09	
46 Tetrahydrofuran	42	8.479	8.485	-0.009	91	209123	1.99	2.06	
47 1,1,1-Trichloroethane	97	9.105	9.103	0.000	96	636073	1.99	2.14	
48 1,2-Dichloroethane	62	9.218	9.223	-0.004	99	408144	1.99	2.04	
49 n-Butanol	31	9.682	9.699	-0.015	78	76473	1.99	2.15	
50 Cyclohexane	69	9.709	9.710	0.000	91	117125	1.99	2.17	
51 Benzene	78	9.714	9.717	-0.002	98	688578	1.99	2.16	
52 Carbon tetrachloride	117	9.736	9.740	-0.003	97	667941	1.99	2.11	
53 2,3-Dimethylpentane	71	9.844	9.846	-0.001	90	154058	1.99	2.02	
54 Thiophene	84	10.006	10.008	0.000	97	433107	1.99	2.29	
55 Tert-amyl methyl ether	73	10.227	10.236	-0.010	97	546122	1.99	2.03	
56 Isooctane	57	10.529	10.534	-0.004	98	1169621	1.99	2.17	
57 n-Heptane	71	10.944	10.946	0.000	91	255846	1.99	2.20	
58 1,2-Dichloropropane	63	11.025	11.024	0.002	86	259822	1.99	2.12	
59 Trichloroethene	130	11.057	11.062	-0.003	97	373662	1.99	2.24	
60 Dibromomethane	93	11.149	11.150	0.000	96	323830	1.99	2.21	
61 Dichlorobromomethane	83	11.305	11.305	0.001	99	605533	1.99	2.21	
62 1,4-Dioxane	88	11.321	11.334	-0.011	93	89907	1.99	2.03	
63 Methyl methacrylate	41	11.418	11.404	0.015	91	250112	1.99	1.00	
64 Methylcyclohexane	83	11.861	11.862	-0.001	94	445236	1.99	1.77	
65 4-Methyl-2-pentanone (MIBK	43	12.303	12.309	-0.004	97	423095	1.99	1.97	
66 cis-1,3-Dichloropropene	75	12.357	12.363	-0.004	97	418941	1.99	2.27	
67 trans-1,3-Dichloropropene	75	13.085	13.086	-0.002	98	382132	1.99	2.26	
68 Toluene	91	13.198	13.197	0.000	94	810927	1.99	2.24	
69 1,1,2-Trichloroethane	83	13.284	13.281	-0.001	99	237773	1.99	2.10	
70 2-Methylthiophene	97	13.354	13.354	-0.001	97	705716	1.99	2.31	
71 3-Methylthiophene	97	13.559	13.561	-0.003	99	711361	1.99	2.39	
72 2-Hexanone	58	13.689	13.692	-0.004	94	208290	1.99	2.00	
73 n-Octane	85	13.920	13.921	-0.002	91	286546	1.99	2.29	
74 Chlorodibromomethane	129	13.996	13.997	-0.001	98	596721	1.99	2.27	
75 Ethylene Dibromide	107	14.292	14.293	-0.001	98	453681	1.99	2.19	
76 Tetrachloroethene	129	14.368	14.368	-0.001	96	353342	1.99	2.14	
77 Chlorobenzene	112	15.263	15.263	-0.001	93	676746	1.99	2.19	
78 2,3-Dimethylheptane	43	15.295	15.295	-0.001	93	709973	1.99	2.11	
79 Ethylbenzene	91	15.560	15.560	0.000	98	1028851	1.99	2.19	
80 2-Ethylthiophene	97	15.662	15.663	-0.001	98	806541	1.99	2.19	
81 m-Xylene & p-Xylene	91	15.727	15.727	-0.001	99	1587564	3.98	4.38	
82 n-Nonane	57	16.164	16.164	0.000	91	493246	1.99	2.25	
83 Bromoform	173	16.174	16.173	0.000	96	525268	1.99	2.23	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.196	16.196	-0.001	99	592978	1.99	2.32	
85 o-Xylene	91	16.255	16.255	-0.001	99	822065	1.99	2.13	
86 1,1,2,2-Tetrachloroethane	83	16.590	16.590	-0.001	99	518243	1.99	2.03	
87 1,2,3-Trichloropropane	110	16.751	16.752	-0.002	96	176924	1.99	2.03	
88 Isopropylbenzene	105	16.854	16.854	-0.001	97	1120630	1.99	2.20	
89 N-Propylbenzene	120	17.409	17.409	-0.001	99	313514	1.99	2.24	
90 2-Chlorotoluene	126	17.447	17.450	-0.004	97	315210	1.99	2.23	
91 4-Ethyltoluene	105	17.571	17.570	0.001	98	1010350	1.99	2.11	
92 1,3,5-Trimethylbenzene	120	17.647	17.648	-0.002	93	521416	1.99	2.17	
93 Alpha Methyl Styrene	118	17.895	17.892	0.002	88	443923	1.99	2.29	
94 n-Decane	57	17.965	17.963	0.001	93	571307	1.99	2.20	
95 tert-Butylbenzene	119	18.094	18.094	-0.001	93	981670	1.99	2.18	
96 1,2,4-Trimethylbenzene	105	18.110	18.108	0.001	96	890587	1.99	2.13	
97 sec-Butylbenzene	105	18.375	18.374	-0.001	97	1247216	1.99	2.19	
98 1,3-Dichlorobenzene	146	18.385	18.385	-0.001	98	626742	1.99	2.16	
99 Benzyl chloride	91	18.466	18.466	-0.001	98	743091	1.99	2.15	
100 1,4-Dichlorobenzene	146	18.477	18.477	-0.001	94	607060	1.99	2.14	
101 4-Isopropyltoluene	119	18.547	18.547	-0.001	96	1048257	1.99	2.17	
102 1,2,3-Trimethylbenzene	105	18.596	18.597	-0.002	98	728461	1.99	2.25	
103 Butylcyclohexane	83	18.655	18.655	-0.001	92	688227	1.99	2.14	
104 1,2-Dichlorobenzene	146	18.849	18.849	-0.001	84	596129	1.99	2.10	
105 2,3-Dihydroindene	117	18.849	18.850	-0.001	93	787791	1.99	2.08	
106 Indene	116	18.984	18.984	-0.001	92	771839	1.99	2.71	
107 n-Butylbenzene	91	18.995	18.995	-0.001	98	943862	1.99	2.15	
108 Undecane	57	19.329	19.327	0.001	94	464038	1.99	1.85	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.377	19.378	-0.002	98	925303	1.99	2.70	
110 1,2-Dibromo-3-Chloropropan	157	19.475	19.474	0.000	98	168213	1.99	1.43	
111 1,2,4,5-Tetramethylbenzene	119	19.771	19.771	-0.001	97	934822	1.99	2.41	
112 1,2,3,5-Tetramethylbenzene	119	19.825	19.826	-0.001	96	597417	1.99	2.42	
113 1,2,3,4-Tetramethylbenzene	119	20.219	20.219	-0.001	97	740017	1.99	2.31	
114 Dodecane	57	20.391	20.390	0.000	96	414067	1.99	1.98	
115 1,2,4-Trichlorobenzene	180	20.569	20.568	0.000	94	397515	1.99	1.92	
116 Naphthalene	128	20.704	20.703	0.000	99	875125	1.99	2.02	
117 Benzo(b)thiophene	134	20.806	20.806	-0.001	99	597079	1.99	2.20	
118 Hexachlorobutadiene	225	20.920	20.921	-0.002	95	444589	1.99	2.03	
119 1,2,3-Trichlorobenzene	180	20.990	20.989	0.000	96	369789	1.99	2.00	
120 2-Methylnaphthalene	142	21.847	21.846	0.000	100	475109	6.22	5.10	
121 1-Methylnaphthalene	142	22.047	22.046	0.000	100	431776	6.22	5.17	
A 124 Toluene Range	1	13.203	(13.173-13.233)		0	2068345	1.99	2.28	
A 125 C8 Range	1	13.925	(13.901-13.948)		0	2545532	1.99	2.16	
S 126 Xylenes, Total	100				0		5.97	6.50	
S 127 1,2-Dichloroethene, Total	1				0		3.98	4.37	

Reagents:

40CV101S_00002	Amount Added: 100.00	Units: mL	
MAissur1_00002	Amount Added: 40.00	Units: mL	Run Reagent

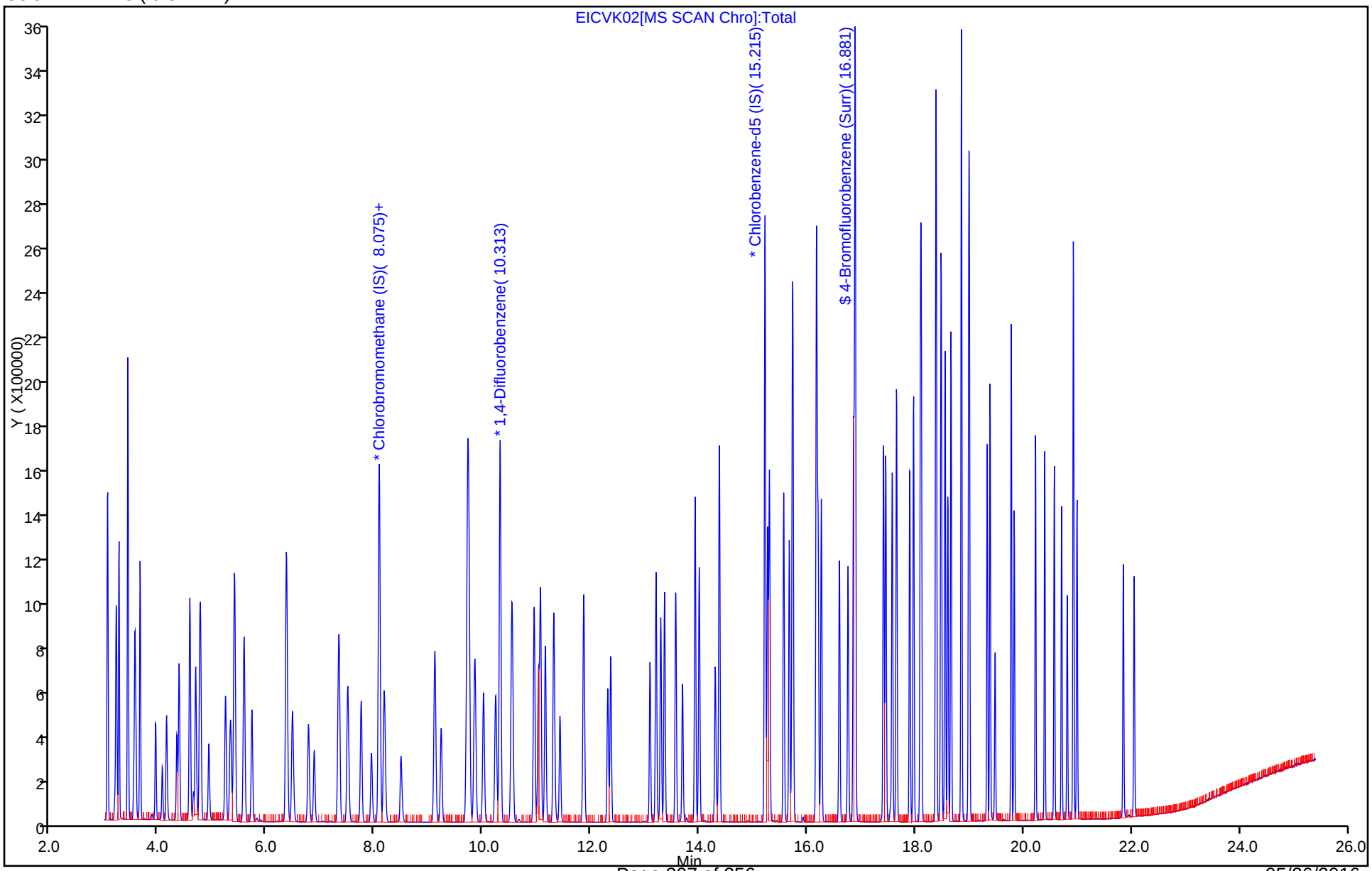
Report Date: 11-Dec-2015 10:19:52 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EICVK02.D

Injection Date:	03-Dec-2015 03:51:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab Sample ID: CCVIS 140-4987/6 Calibration Date: 05/19/2016 12:47

Instrument ID: ME Calib Start Date: 12/02/2015 20:13

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/03/2015 09:19

Lab File ID: ECCVE19A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5095	0.6753		2.64	1.99	32.5*	30.0
Dichlorodifluoromethane	Ave	4.532	6.212		2.73	1.99	37.1*	30.0
Chloromethane	Ave	0.4088	0.3763		1.83	1.99	-8.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.808	3.516		2.49	1.99	25.2	30.0
Acetaldehyde	Ave	0.4474	0.3304		7.35	9.96	-26.2	30.0
Vinyl chloride	Ave	1.476	1.309		1.77	1.99	-11.3	30.0
1,3-Butadiene	Ave	1.037	0.9132		1.75	1.99	-11.9	30.0
Butane	Ave	2.018	1.541		1.52	1.99	-23.7	30.0
Bromomethane	Ave	1.363	1.345		1.96	1.99	-1.3	30.0
Chloroethane	Ave	0.6856	0.5618		1.63	1.99	-18.1	30.0
Ethanol	Ave	0.4379	0.2750		6.25	9.96	-37.2*	30.0
Vinyl bromide	Ave	1.266	1.361		2.14	1.99	7.6	30.0
2-Methylbutane	Ave	1.364	0.9902		1.45	1.99	-27.4	30.0
Trichlorofluoromethane	Ave	4.076	4.908		2.40	1.99	20.4	30.0
Acrolein	Ave	0.3497	0.2589		1.47	1.99	-26.0	30.0
Acetonitrile	Ave	0.3902	0.2530		1.29	1.99	-35.2*	30.0
Acetone	Ave	0.4581	0.3828		4.99	5.97	-16.4	30.0
Isopropyl alcohol	Ave	1.416	1.084		4.57	5.97	-23.5	30.0
Pentane	Ave	0.2158	0.2057		1.90	1.99	-4.7	30.0
Ethyl ether	Ave	0.9209	0.5904		1.28	1.99	-35.9*	30.0
1,1-Dichloroethene	Ave	1.169	1.257		2.14	1.99	7.5	30.0
tert-Butyl alcohol	Ave	2.228	1.810		1.62	1.99	-18.8	30.0
Acrylonitrile	Ave	0.7453	0.5188		1.39	1.99	-30.4*	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.823	2.834		2.00	1.99	0.4	30.0
Methylene Chloride	Ave	1.222	1.072		1.75	1.99	-12.3	30.0
3-Chloropropene	Ave	1.393	1.233		1.76	1.99	-11.4	30.0
Carbon disulfide	Ave	3.586	3.462		1.92	1.99	-3.5	30.0
trans-1,2-Dichloroethene	Ave	1.318	1.252		1.89	1.99	-5.0	30.0
2-Methylpentane	Ave	2.699	1.906		1.41	1.99	-29.4	30.0
Methyl tert-butyl ether	Ave	3.188	3.361		2.10	1.99	5.4	30.0
1,1-Dichloroethane	Ave	2.570	2.263		1.75	1.99	-11.9	30.0
Vinyl acetate	Ave	2.863	2.339		1.63	1.99	-18.3	30.0
2-Butanone (MEK)	Ave	0.5373	0.4532		1.68	1.99	-15.7	30.0
Hexane	Ave	1.077	0.8109		1.50	1.99	-24.7	30.0
Isopropyl ether	Ave	3.661	2.748		1.49	1.99	-24.9	30.0
cis-1,2-Dichloroethene	Ave	1.338	1.243		1.85	1.99	-7.1	30.0
Ethyl acetate	Ave	2.365	1.785		1.50	1.99	-24.5	30.0
Chloroform	Ave	3.160	3.255		2.05	1.99	3.0	30.0
Tert-butyl ethyl ether	Ave	3.390	3.003		1.76	1.99	-11.4	30.0
Tetrahydrofuran	Ave	1.171	0.8303		1.41	1.99	-29.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab Sample ID: CCVIS 140-4987/6 Calibration Date: 05/19/2016 12:47

Instrument ID: ME Calib Start Date: 12/02/2015 20:13

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/03/2015 09:19

Lab File ID: ECCVE19A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,1,1-Trichloroethane	Ave	3.440	3.982		2.31	1.99	15.8	30.0
1,2-Dichloroethane	Ave	0.5077	0.5058		1.98	1.99	-0.4	30.0
1-Butanol	Ave	0.0906	0.0544		1.20	1.99	-39.9*	30.0
Cyclohexane	Ave	0.1369	0.1174		1.71	1.99	-14.2	30.0
Benzene	Ave	0.8117	0.7104		1.74	1.99	-12.5	30.0
Carbon tetrachloride	Ave	0.8045	0.9152		2.27	1.99	13.8	30.0
2,3-Dimethylpentane	Ave	0.1940	0.1610		1.65	1.99	-17.0	30.0
Thiophene	Ave	0.4801	0.4074		1.69	1.99	-15.1	30.0
Tert-amyl methyl ether	Ave	0.7330	0.6808		1.85	1.99	-7.1	30.0
2,2,4-Trimethylpentane	Ave	1.370	0.9834		1.43	1.99	-28.2	30.0
Heptane	Ave	0.2960	0.2488		1.67	1.99	-15.9	30.0
1,2-Dichloropropane	Ave	0.3113	0.2427		1.55	1.99	-22.1	30.0
Trichloroethene	Ave	0.4231	0.3843		1.81	1.99	-9.2	30.0
Dibromomethane	Ave	0.3729	0.3553		1.90	1.99	-4.7	30.0
Bromodichloromethane	Ave	0.6975	0.7287		2.08	1.99	4.5	30.0
1,4-Dioxane	Ave	0.1123	0.0958		1.70	1.99	-14.7	30.0
Methyl methacrylate	Ave	0.6324	0.2397		0.755	1.99	-62.1*	30.0
Methylcyclohexane	Ave	0.6392	0.5530		1.72	1.99	-13.5	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5464	0.3441		1.25	1.99	-37.0*	30.0
cis-1,3-Dichloropropene	Ave	0.4693	0.4365		1.85	1.99	-7.0	30.0
trans-1,3-Dichloropropene	Ave	0.4613	0.4392		1.90	1.99	-4.8	30.0
Toluene	Ave	0.9866	0.8686		1.75	1.99	-12.0	30.0
1,1,2-Trichloroethane	Ave	0.3081	0.2651		1.71	1.99	-14.0	30.0
2-Methylthiophene	Ave	0.8337	0.7236		1.73	1.99	-13.2	30.0
3-Methylthiophene	Ave	0.8119	0.7061		1.73	1.99	-13.0	30.0
2-Hexanone	Ave	0.2836	0.1786		1.25	1.99	-37.0*	30.0
Octane	Ave	0.3418	0.2930		1.71	1.99	-14.3	30.0
Dibromochloromethane	Ave	0.7159	0.7276		2.02	1.99	1.6	30.0
1,2-Dibromoethane (EDB)	Ave	0.5637	0.5096		1.80	1.99	-9.6	30.0
Tetrachloroethene	Ave	0.4490	0.4078		1.81	1.99	-9.2	30.0
Chlorobenzene	Ave	0.8421	0.7150		1.69	1.99	-15.1	30.0
2,3-Dimethylheptane	Ave	0.9174	0.5894		1.28	1.99	-35.8*	30.0
Ethylbenzene	Ave	1.280	1.221		1.90	1.99	-4.6	30.0
2-Ethylthiophene	Ave	1.005	0.9600		1.90	1.99	-4.5	30.0
m-Xylene & p-Xylene	Ave	0.9886	0.9670		3.90	3.98	-2.2	30.0
Bromoform	Ave	0.6412	0.6708		2.08	1.99	4.6	30.0
Nonane	Ave	0.5981	0.4580		1.52	1.99	-23.4	30.0
Styrene	Ave	0.6977	0.6784		1.94	1.99	-2.8	30.0
o-Xylene	Ave	1.054	1.012		1.91	1.99	-4.0	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6964	0.5840		1.67	1.99	-16.1	30.0
1,2,3-Trichloropropane	Ave	0.2373	0.2368		1.99	1.99	-0.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Lab Sample ID: CCVIS 140-4987/6 Calibration Date: 05/19/2016 12:47

Instrument ID: ME Calib Start Date: 12/02/2015 20:13

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 12/03/2015 09:19

Lab File ID: ECCVE19A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isopropylbenzene	Ave	1.389	1.368		1.96	1.99	-1.6	30.0
Propylbenzene	Ave	0.3817	0.3648		1.90	1.99	-4.4	30.0
2-Chlorotoluene	Ave	0.3851	0.3504		1.81	1.99	-9.0	30.0
4-Ethyltoluene	Ave	1.306	1.303		1.99	1.99	-0.3	30.0
1,3,5-Trimethylbenzene	Ave	0.6535	0.6077		1.85	1.99	-7.0	30.0
Alpha Methyl Styrene	Ave	0.5283	0.4998		1.88	1.99	-5.4	30.0
Decane	Ave	0.7070	0.5364		1.51	1.99	-24.1	30.0
tert-Butylbenzene	Ave	1.227	1.209		1.96	1.99	-1.5	30.0
1,2,4-Trimethylbenzene	Ave	1.139	1.121		1.96	1.99	-1.5	30.0
sec-Butylbenzene	Ave	1.555	1.546		1.98	1.99	-0.6	30.0
1,3-Dichlorobenzene	Ave	0.7898	0.7238		1.83	1.99	-8.4	30.0
Benzyl chloride	Ave	0.9413	0.8824		1.87	1.99	-6.3	30.0
1,4-Dichlorobenzene	Ave	0.7730	0.6927		1.78	1.99	-10.4	30.0
4-Isopropyltoluene	Ave	1.317	1.302		1.97	1.99	-1.2	30.0
1,2,3-Trimethylbenzene	Ave	0.8812	0.8402		1.90	1.99	-4.6	30.0
Butylcyclohexane	Ave	0.8777	0.7619		1.73	1.99	-13.2	30.0
1,2-Dichlorobenzene	Ave	0.7725	0.7071		1.82	1.99	-8.5	30.0
Indane	Ave	1.033	0.9819		1.89	1.99	-5.0	30.0
Indene	Ave	0.7765	0.6953		1.78	1.99	-10.5	30.0
Butylbenzene	Ave	1.196	1.163		1.94	1.99	-2.7	30.0
Undecane	Ave	0.6829	0.4721		1.38	1.99	-30.9*	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9331	0.8815		1.88	1.99	-5.5	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.3198	0.2673		1.66	1.99	-16.4	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.059	1.030		1.94	1.99	-2.7	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6739	0.6273		1.85	1.99	-6.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.8737	0.8016		1.83	1.99	-8.2	30.0
Dodecane	Ave	0.5688	0.3030		1.06	1.99	-46.7*	30.0
1,2,4-Trichlorobenzene	Ave	0.5644	0.3996		1.41	1.99	-29.2	30.0
Naphthalene	Ave	1.181	0.8494		1.43	1.99	-28.1	30.0
Benzo(b)thiophene	Ave	0.7399	0.4572		1.23	1.99	-38.2*	30.0
Hexachlorobutadiene	Ave	0.5967	0.6345		2.12	1.99	6.3	30.0
1,2,3-Trichlorobenzene	Ave	0.5039	0.3389		1.34	1.99	-32.7*	30.0
2-Methylnaphthalene	Ave	0.2541	0.0944		2.31	6.22	-62.9*	50.0
1-Methylnaphthalene	Ave	0.2275	0.0947		2.59	6.22	-58.4*	50.0
Propene	Ave	1.437				1.99		
4-Bromofluorobenzene (Surr)	Ave	0.7488	0.7922		4.23	4.00	5.8	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ECCVE19A.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-May-2016 12:47:30 ALS Bottle#: 13 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002879-002
Misc. Info.: E051916,TO155,,p16
Operator ID: 7126 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-May-2016 10:52:03 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK033

First Level Reviewer: tajh Date: 19-May-2016 13:38:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.755	7.755	0.000	82	359774	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.982	9.982	0.000	95	1660794	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	89	1603857	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	90	1270527	4.00	4.23	
6 Chlorodifluoromethane	67	3.037	3.037	0.000	96	120960	1.99	2.64	
8 Dichlorodifluoromethane	85	3.091	3.091	0.000	99	1112773	1.99	2.73	
9 Chloromethane	52	3.247	3.247	0.000	98	67402	1.99	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.253	3.253	0.000	90	629786	1.99	2.49	
11 Acetaldehyde	44	3.377	3.377	0.000	99	295873	9.96	7.35	
12 Vinyl chloride	62	3.393	3.393	0.000	99	234539	1.99	1.77	
13 Butane	43	3.463	3.463	0.000	81	275944	1.99	1.52	
14 Butadiene	54	3.463	3.463	0.000	76	163578	1.99	1.75	
15 Bromomethane	94	3.738	3.738	0.000	97	240886	1.99	1.96	
16 Chloroethane	64	3.857	3.857	0.000	100	100629	1.99	1.63	
17 Ethanol	31	3.948	3.948	0.000	96	246253	9.96	6.25	
18 Vinyl bromide	106	4.110	4.110	0.000	98	243869	1.99	2.14	
19 2-Methylbutane	43	4.148	4.148	0.000	86	177359	1.99	1.45	
20 Trichlorofluoromethane	101	4.342	4.342	0.000	99	879195	1.99	2.40	
21 Acrolein	56	4.347	4.347	0.000	95	46366	1.99	1.47	
22 Acetonitrile	40	4.412	4.412	0.000	99	45323	1.99	1.29	
23 Acetone	58	4.450	4.450	0.000	99	205699	5.97	4.99	
25 Pentane	72	4.531	4.531	0.000	74	36847	1.99	1.90	
24 Isopropyl alcohol	45	4.531	4.531	0.000	81	582360	5.97	4.57	
26 Ethyl ether	31	4.676	4.676	0.000	78	105744	1.99	1.28	
27 1,1-Dichloroethene	96	4.967	4.967	0.000	99	225120	1.99	2.14	
28 2-Methyl-2-propanol	59	5.070	5.070	0.000	93	324145	1.99	1.62	
29 Acrylonitrile	53	5.075	5.075	0.000	94	92919	1.99	1.39	
30 1,1,2-Trichloro-1,2,2-trif	101	5.129	5.129	0.000	96	507551	1.99	2.00	
31 Methylene Chloride	84	5.296	5.296	0.000	92	191980	1.99	1.75	
32 3-Chloro-1-propene	39	5.307	5.307	0.000	90	220925	1.99	1.76	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.437	5.437	0.000	99	620091	1.99	1.92	
34 trans-1,2-Dichloroethene	96	6.062	6.062	0.000	98	224300	1.99	1.89	
35 2-Methylpentane	43	6.073	6.073	0.000	89	341393	1.99	1.41	
36 Methyl tert-butyl ether	73	6.186	6.186	0.000	94	602003	1.99	2.10	
37 1,1-Dichloroethane	63	6.467	6.467	0.000	99	405305	1.99	1.75	
38 Vinyl acetate	43	6.580	6.580	0.000	99	419010	1.99	1.63	
39 2-Butanone (MEK)	72	7.017	7.017	0.000	97	81173	1.99	1.68	
40 Hexane	56	7.027	7.027	0.000	81	145243	1.99	1.50	
41 Isopropyl ether	45	7.194	7.194	0.000	92	492232	1.99	1.49	
42 cis-1,2-Dichloroethene	96	7.426	7.426	0.000	96	222656	1.99	1.85	
43 Ethyl acetate	43	7.626	7.626	0.000	99	319790	1.99	1.50	
44 Chloroform	83	7.766	7.766	0.000	96	583043	1.99	2.05	
45 Tert-butyl ethyl ether	59	7.858	7.858	0.000	93	537975	1.99	1.76	
46 Tetrahydrofuran	42	8.160	8.160	0.000	83	148716	1.99	1.41	
47 1,1,1-Trichloroethane	97	8.774	8.774	0.000	94	713267	1.99	2.31	
48 1,2-Dichloroethane	62	8.893	8.893	0.000	98	418228	1.99	1.98	
49 n-Butanol	31	9.368	9.368	0.000	66	44969	1.99	1.20	
50 Cyclohexane	69	9.373	9.373	0.000	90	97102	1.99	1.71	
51 Benzene	78	9.378	9.378	0.000	96	587383	1.99	1.74	
52 Carbon tetrachloride	117	9.400	9.400	0.000	98	756699	1.99	2.27	
53 2,3-Dimethylpentane	71	9.508	9.508	0.000	86	133139	1.99	1.65	
54 Thiophene	84	9.664	9.664	0.000	94	336853	1.99	1.69	
55 Tert-amyl methyl ether	73	9.901	9.901	0.000	98	543585	1.99	1.85	
56 Isooctane	57	10.203	10.203	0.000	97	813119	1.99	1.43	
57 n-Heptane	71	10.629	10.629	0.000	85	205748	1.99	1.67	
58 1,2-Dichloropropane	63	10.705	10.705	0.000	83	200639	1.99	1.55	
59 Trichloroethene	130	10.743	10.743	0.000	96	317763	1.99	1.81	
60 Dibromomethane	93	10.829	10.829	0.000	95	293763	1.99	1.90	
61 Dichlorobromomethane	83	10.991	10.991	0.000	98	602502	1.99	2.08	
62 1,4-Dioxane	88	11.018	11.018	0.000	89	79200	1.99	1.70	
63 Methyl methacrylate	41	11.120	11.120	0.000	85	198231	1.99	0.7549	
64 Methylcyclohexane	83	11.552	11.552	0.000	94	457234	1.99	1.72	
65 4-Methyl-2-pentanone (MIBK	43	12.015	12.015	0.000	94	284554	1.99	1.25	
66 cis-1,3-Dichloropropene	75	12.064	12.064	0.000	96	360888	1.99	1.85	
67 trans-1,3-Dichloropropene	75	12.797	12.797	0.000	97	350708	1.99	1.90	
68 Toluene	91	12.905	12.905	0.000	94	693584	1.99	1.75	
69 1,1,2-Trichloroethane	83	12.997	12.997	0.000	96	211653	1.99	1.71	
70 2-Methylthiophene	97	13.067	13.067	0.000	96	577765	1.99	1.73	
71 3-Methylthiophene	97	13.272	13.272	0.000	98	563831	1.99	1.73	
72 2-Hexanone	58	13.412	13.412	0.000	95	142624	1.99	1.25	
73 n-Octane	85	13.644	13.644	0.000	84	233953	1.99	1.71	
74 Chlorodibromomethane	129	13.708	13.708	0.000	97	580950	1.99	2.02	
75 Ethylene Dibromide	107	14.005	14.005	0.000	97	406884	1.99	1.80	
76 Tetrachloroethene	129	14.081	14.081	0.000	93	325667	1.99	1.81	
77 Chlorobenzene	112	14.976	14.976	0.000	91	570932	1.99	1.69	
78 2,3-Dimethylheptane	43	15.019	15.019	0.000	85	470659	1.99	1.28	
79 Ethylbenzene	91	15.278	15.278	0.000	99	974629	1.99	1.90	
80 2-Ethylthiophene	97	15.380	15.380	0.000	98	766539	1.99	1.90	
81 m-Xylene & p-Xylene	91	15.445	15.445	0.000	99	1544304	3.98	3.90	
83 Bromoform	173	15.887	15.887	0.000	96	535613	1.99	2.08	
82 n-Nonane	57	15.892	15.892	0.000	85	365726	1.99	1.52	
84 Styrene	104	15.914	15.914	0.000	97	541673	1.99	1.94	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	15.973	15.973	0.000	98	807891	1.99	1.91	
86 1,1,2,2-Tetrachloroethane	83	16.308	16.308	0.000	97	466288	1.99	1.67	
87 1,2,3-Trichloropropane	110	16.469	16.469	0.000	95	189054	1.99	1.99	
88 Isopropylbenzene	105	16.572	16.572	0.000	97	1092010	1.99	1.96	
89 N-Propylbenzene	120	17.122	17.122	0.000	99	291300	1.99	1.90	
90 2-Chlorotoluene	126	17.160	17.160	0.000	96	279802	1.99	1.81	
91 4-Ethyltoluene	105	17.284	17.284	0.000	98	1040258	1.99	1.99	
92 1,3,5-Trimethylbenzene	120	17.365	17.365	0.000	92	485231	1.99	1.85	
93 Alpha Methyl Styrene	118	17.613	17.613	0.000	87	399124	1.99	1.88	
94 n-Decane	57	17.699	17.699	0.000	96	428298	1.99	1.51	
95 tert-Butylbenzene	119	17.817	17.817	0.000	92	965344	1.99	1.96	
96 1,2,4-Trimethylbenzene	105	17.834	17.834	0.000	96	895345	1.99	1.96	
97 sec-Butylbenzene	105	18.109	18.109	0.000	97	1234305	1.99	1.98	
98 1,3-Dichlorobenzene	146	18.114	18.114	0.000	98	577975	1.99	1.83	
99 Benzyl chloride	91	18.200	18.200	0.000	98	704612	1.99	1.87	
100 1,4-Dichlorobenzene	146	18.211	18.211	0.000	93	553148	1.99	1.78	
101 4-Isopropyltoluene	119	18.287	18.287	0.000	96	1039279	1.99	1.97	
102 1,2,3-Trimethylbenzene	105	18.335	18.335	0.000	98	670940	1.99	1.90	
103 Butylcyclohexane	83	18.400	18.400	0.000	94	608350	1.99	1.73	
104 1,2-Dichlorobenzene	146	18.589	18.589	0.000	91	564625	1.99	1.82	
105 2,3-Dihydroindene	117	18.589	18.589	0.000	93	784031	1.99	1.89	
106 Indene	116	18.723	18.723	0.000	93	555208	1.99	1.78	
107 n-Butylbenzene	91	18.745	18.745	0.000	98	928553	1.99	1.94	
108 Undecane	57	19.085	19.085	0.000	90	376932	1.99	1.38	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.133	19.133	0.000	97	703911	1.99	1.88	
110 1,2-Dibromo-3-Chloropropan	157	19.219	19.219	0.000	93	213473	1.99	1.66	
111 1,2,4,5-Tetramethylbenzene	119	19.527	19.527	0.000	96	822100	1.99	1.94	
112 1,2,3,5-Tetramethylbenzene	119	19.581	19.581	0.000	94	500884	1.99	1.85	
113 1,2,3,4-Tetramethylbenzene	119	19.980	19.980	0.000	96	640099	1.99	1.83	
114 Dodecane	57	20.152	20.152	0.000	92	241974	1.99	1.06	
115 1,2,4-Trichlorobenzene	180	20.314	20.314	0.000	93	319082	1.99	1.41	
116 Naphthalene	128	20.444	20.444	0.000	98	678263	1.99	1.43	
117 Benzo(b)thiophene	134	20.546	20.546	0.000	99	365037	1.99	1.23	
118 Hexachlorobutadiene	225	20.659	20.659	0.000	95	506626	1.99	2.12	
119 1,2,3-Trichlorobenzene	180	20.719	20.719	0.000	94	270616	1.99	1.34	
120 2-Methylnaphthalene	142	21.560	21.560	0.000	98	235523	6.22	2.31	
121 1-Methylnaphthalene	142	21.759	21.759	0.000	98	236158	6.22	2.59	
A 124 Toluene Range	1	12.905	(12.875-12.935)		0	1746221	1.99	1.83	
A 125 C8 Range	1	13.644	(13.614-13.674)		0	1930328	1.99	1.55	
S 126 Xylenes, Total	100				0		5.97	5.81	
S 127 1,2-Dichloroethene, Total	1				0		3.98	3.74	

Reagents:

40CV101P_00017	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

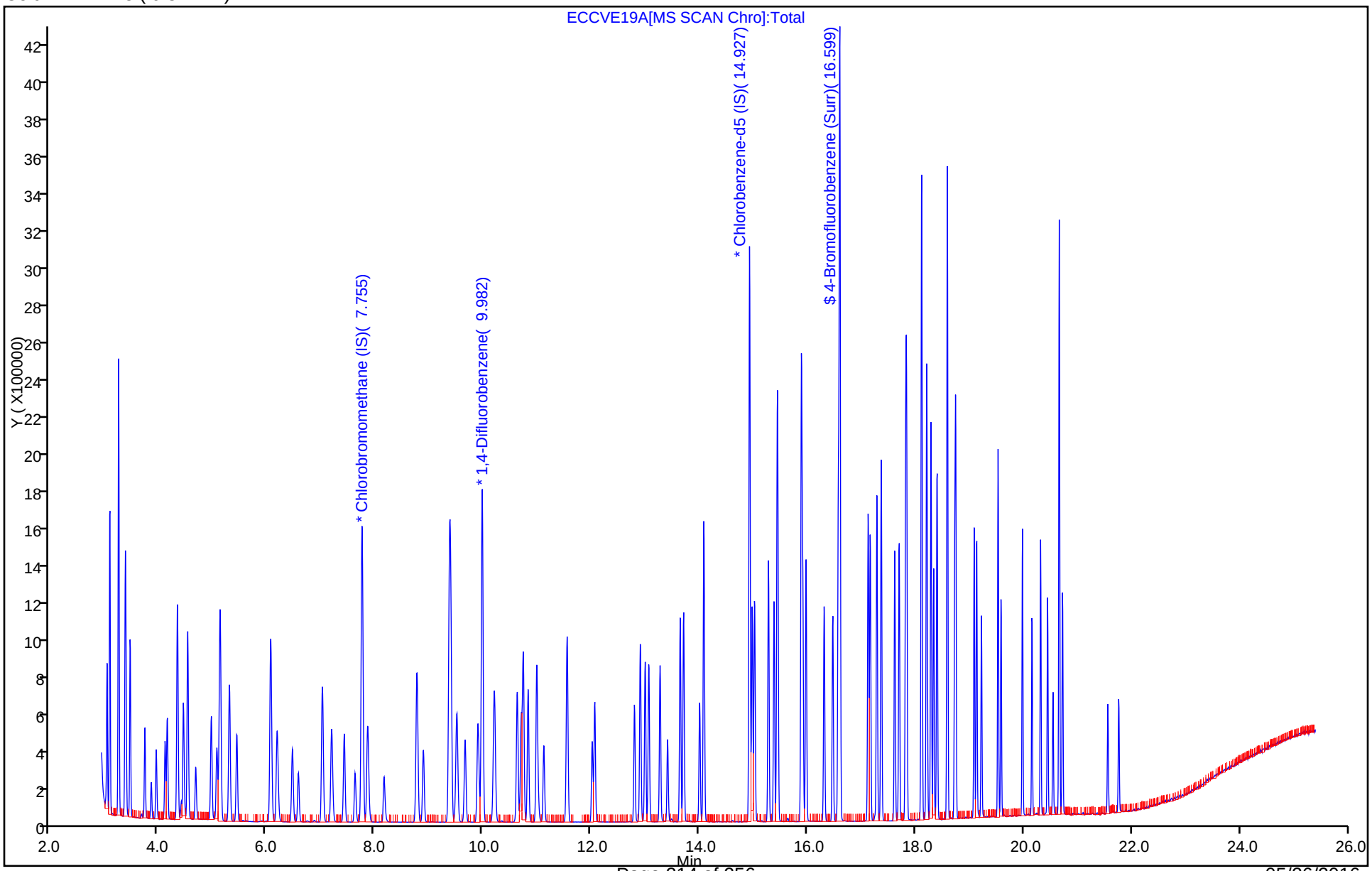
Report Date: 20-May-2016 10:52:06 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ECCVE19A.D

Injection Date:	19-May-2016 12:47:30	Instrument ID:	ME	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EBFBK02.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	02-Dec-2015 18:09:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0002334-001				
Misc. Info.:	E120215,BB,,				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Dec-2015 15:37:30	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	08-Dec-2015 17:35:58		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	5.325	5.325	0.000	0	2330228	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

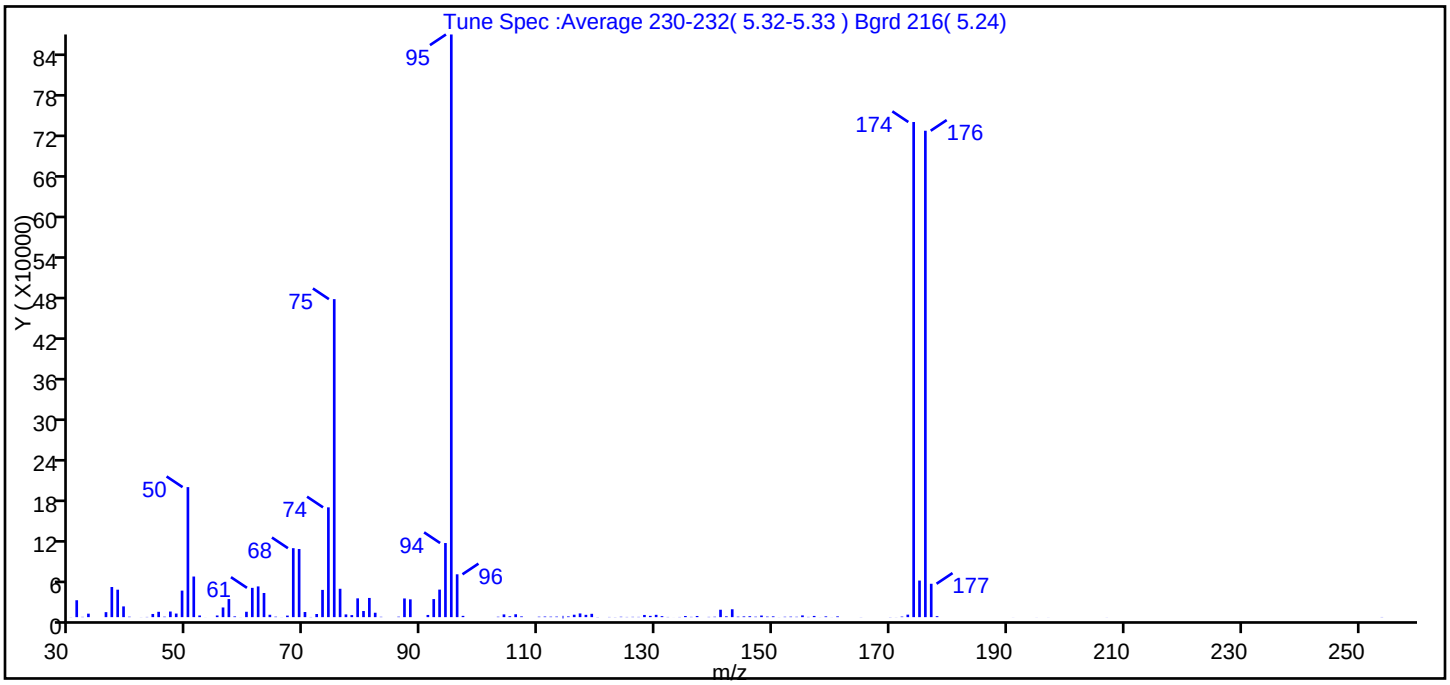
MAbfb1_00003 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EBFBK02.D
Injection Date: 02-Dec-2015 18:09:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.3
75	30 to 60% of m/z 95	54.6
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	85.0
175	5 to 9% of m/z 174	6.3 (7.4)
176	Greater than 95% but less than 101% of m/z 174	83.5 (98.2)
177	5 to 9% of m/z 176	5.7 (6.9)

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EBFBK02.D\ME_TO15.rslt\spectra.d
Injection Date: 02-Dec-2015 18:09:30
Spectrum: Tune Spec :Average 230-232(5.32-5.33) Bgrd 216(5.24)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 130

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	148	67.00	2296	111.00	890	146.00	1360
31.00	25088	68.00	102336	112.00	719	147.00	673
32.00	398	69.00	101088	113.00	804	148.00	2398
33.00	5175	70.00	7635	114.00	3	149.00	780
36.00	7431	71.00	246	115.00	1057	150.00	1150
37.00	44712	72.00	4659	116.00	3590	151.00	87
38.00	40752	73.00	40448	117.00	5509	152.00	569
39.00	15952	74.00	162944	118.00	3430	153.00	754
40.00	611	75.00	471936	119.00	4949	154.00	538
42.00	109	76.00	42104	120.00	208	155.00	2573
43.00	317	77.00	4048	122.00	287	156.00	366
44.00	4715	78.00	2988	123.00	172	157.00	1795
45.00	7915	79.00	27904	124.00	568	158.00	82
46.00	661	80.00	9095	125.00	301	159.00	1153
47.00	8336	81.00	28496	126.00	439	160.00	75
48.00	5328	82.00	6524	127.00	361	161.00	1146
49.00	39368	83.00	491	128.00	3245	165.00	141
50.00	192960	86.00	664	129.00	1899	170.00	196
51.00	60272	87.00	27744	130.00	3427	171.00	103
52.00	2480	88.00	26416	131.00	1479	172.00	820
53.00	57	91.00	3253	132.00	291	173.00	3701
55.00	2451	92.00	26824	133.00	43	174.00	734784
56.00	14350	93.00	40872	134.00	274	175.00	54304
57.00	26848	94.00	109992	135.00	1701	176.00	721856
58.00	1113	95.00	864704	136.00	401	177.00	49552
59.00	90	96.00	63576	137.00	1712	178.00	1427
60.00	7989	97.00	1908	139.00	377	191.00	74
61.00	43488	103.00	594	140.00	611	195.00	78
62.00	45608	104.00	4064	141.00	11003	197.00	74
63.00	35848	105.00	1299	142.00	1184	207.00	87
64.00	3525	106.00	4285	143.00	11699	254.00	237
65.00	684	107.00	1074	144.00	708		
66.00	90	110.00	666	145.00	1105		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	148	67.00	2296	111.00	890	146.00	1360
31.00	25088	68.00	102336	112.00	719	147.00	673
32.00	398	69.00	101088	113.00	804	148.00	2398
33.00	5175	70.00	7635	114.00	3	149.00	780
36.00	7431	71.00	246	115.00	1057	150.00	1150
37.00	44712	72.00	4659	116.00	3590	151.00	87
38.00	40752	73.00	40448	117.00	5509	152.00	569
39.00	15952	74.00	162944	118.00	3430	153.00	754
40.00	611	75.00	471936	119.00	4949	154.00	538
42.00	109	76.00	42104	120.00	208	155.00	2573
43.00	317	77.00	4048	122.00	287	156.00	366
44.00	4715	78.00	2988	123.00	172	157.00	1795
45.00	7915	79.00	27904	124.00	568	158.00	82
46.00	661	80.00	9095	125.00	301	159.00	1153
47.00	8336	81.00	28496	126.00	439	160.00	75
48.00	5328	82.00	6524	127.00	361	161.00	1146
49.00	39368	83.00	491	128.00	3245	165.00	141
50.00	192960	86.00	664	129.00	1899	170.00	196
51.00	60272	87.00	27744	130.00	3427	171.00	103
52.00	2480	88.00	26416	131.00	1479	172.00	820
53.00	57	91.00	3253	132.00	291	173.00	3701
55.00	2451	92.00	26824	133.00	43	174.00	734784
56.00	14350	93.00	40872	134.00	274	175.00	54304
57.00	26848	94.00	109992	135.00	1701	176.00	721856
58.00	1113	95.00	864704	136.00	401	177.00	49552
59.00	90	96.00	63576	137.00	1712	178.00	1427
60.00	7989	97.00	1908	139.00	377	191.00	74
61.00	43488	103.00	594	140.00	611	195.00	78
62.00	45608	104.00	4064	141.00	11003	197.00	74
63.00	35848	105.00	1299	142.00	1184	207.00	87
64.00	3525	106.00	4285	143.00	11699	254.00	237
65.00	684	107.00	1074	144.00	708		
66.00	90	110.00	666	145.00	1105		

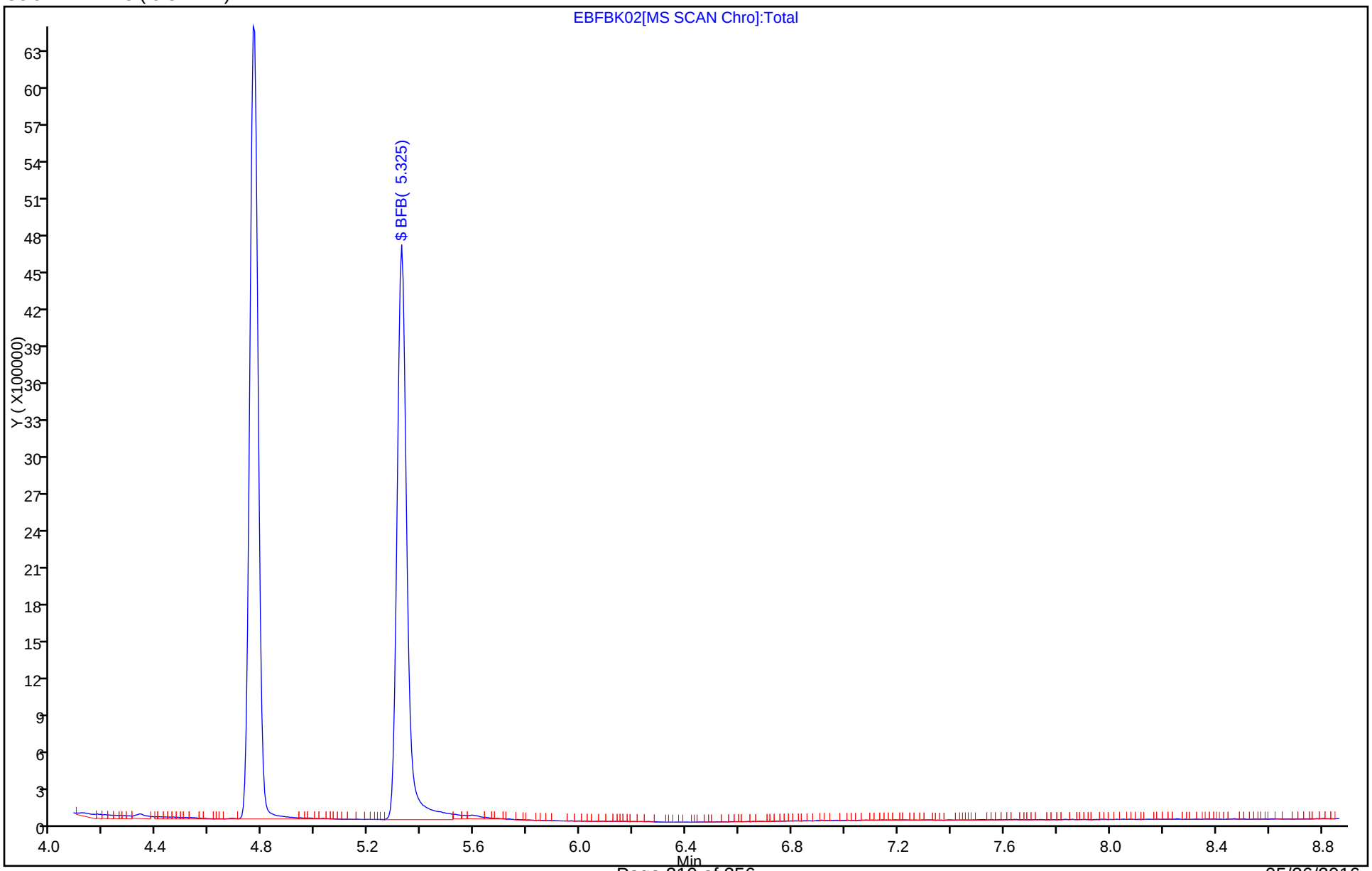
Report Date: 10-Dec-2015 15:37:33 Chrom Revision: 2.2 02-Dec-2015 11:51:48

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EBFBK02.D

Injection Date:	02-Dec-2015 18:09:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EBFBE19A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-May-2016 12:15:30	ALS Bottle#:	16	Worklist Smp#:	5
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0002879-001				
Misc. Info.:	E051916,BFB,,				
Operator ID:	7126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-May-2016 09:50:14	Calib Date:	03-Dec-2015 09:19:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK033				
First Level Reviewer: tajh		Date:	20-May-2016 09:50:14		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	5.050	5.050	0.000	0	1901145	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

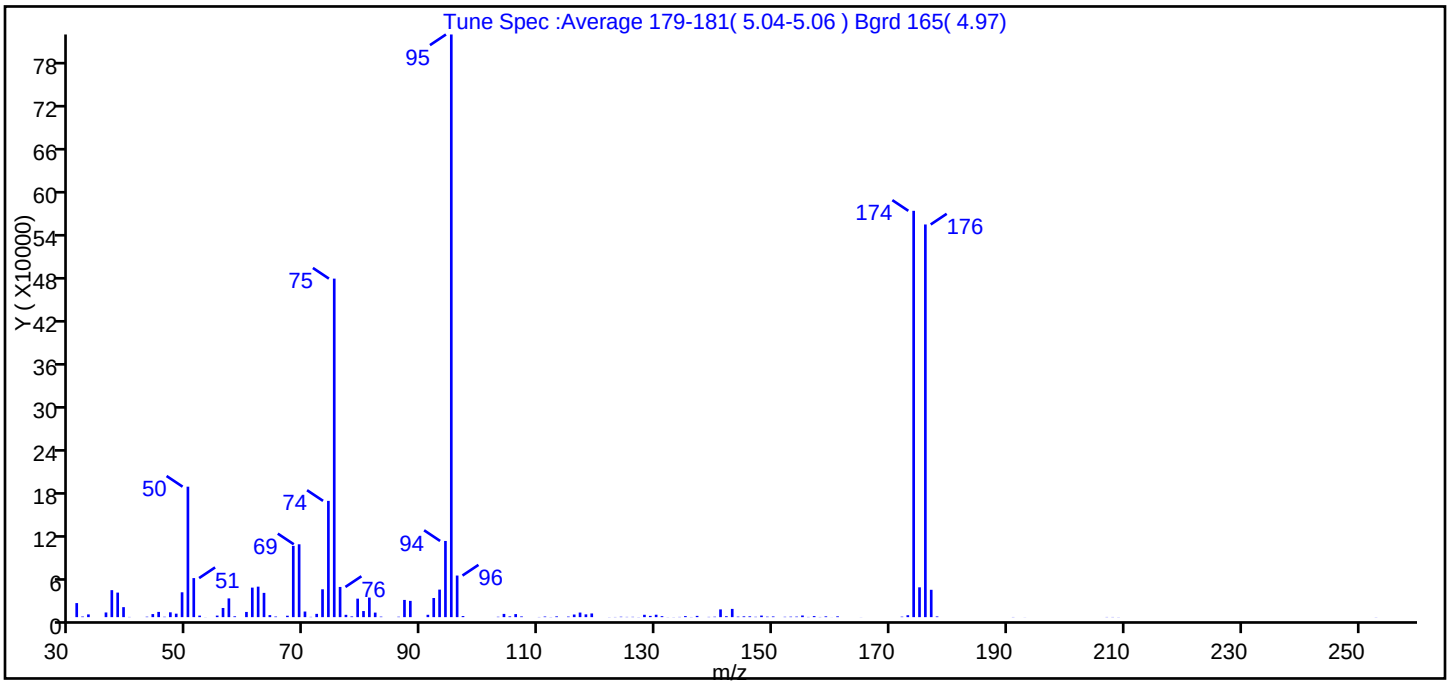
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EBFBE19A.D
Injection Date: 19-May-2016 12:15:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 5
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	22.4
75	30 to 60% of m/z 95	58.1
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	69.7
175	5 to 9% of m/z 174	5.1 (7.3)
176	Greater than 95% but less than 101% of m/z 174	67.4 (96.6)
177	5 to 9% of m/z 176	4.7 (7.0)

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EBFBE19A.D\ME_TO15.rslt\spectra.d
Injection Date: 19-May-2016 12:15:30
Spectrum: Tune Spec :Average 179-181(5.04-5.06) Bgrd 165(4.97)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 124

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	30	67.00	2001	107.00	985	144.00	730
31.00	19760	68.00	100184	110.00	240	145.00	1137
32.00	852	69.00	102456	111.00	867	146.00	1154
33.00	3867	70.00	7891	112.00	207	147.00	498
36.00	6590	71.00	373	113.00	1096	148.00	2226
37.00	37976	72.00	4630	115.00	796	149.00	665
38.00	34528	73.00	39176	116.00	3692	150.00	952
39.00	14063	74.00	163520	117.00	6445	152.00	505
40.00	288	75.00	476096	118.00	3906	153.00	689
43.00	619	76.00	42480	119.00	5198	154.00	756
44.00	4330	77.00	3278	122.00	171	155.00	2303
45.00	7362	78.00	994	123.00	244	156.00	309
46.00	533	79.00	26008	124.00	584	157.00	1476
47.00	6795	80.00	8576	125.00	342	158.00	258
48.00	4890	81.00	27560	126.00	427	159.00	1117
49.00	34960	82.00	6382	127.00	187	160.00	71
50.00	183488	83.00	705	128.00	3321	161.00	1139
51.00	54936	86.00	574	129.00	1768	165.00	105
52.00	2189	87.00	24232	130.00	3402	172.00	676
53.00	128	88.00	22872	131.00	1378	173.00	2696
55.00	2173	91.00	3322	132.00	149	174.00	571456
56.00	12886	92.00	26936	133.00	172	175.00	41936
57.00	26360	93.00	38728	134.00	324	176.00	552256
58.00	1179	94.00	107152	135.00	1485	177.00	38472
60.00	7323	95.00	819456	136.00	216	178.00	981
61.00	41536	96.00	58504	137.00	1772	191.00	226
62.00	42888	97.00	1511	139.00	358	193.00	103
63.00	34136	103.00	525	140.00	623	207.00	259
64.00	2861	104.00	4567	141.00	10899	208.00	249
65.00	861	105.00	1066	142.00	1291	209.00	165
66.00	9	106.00	4289	143.00	11577	253.00	154

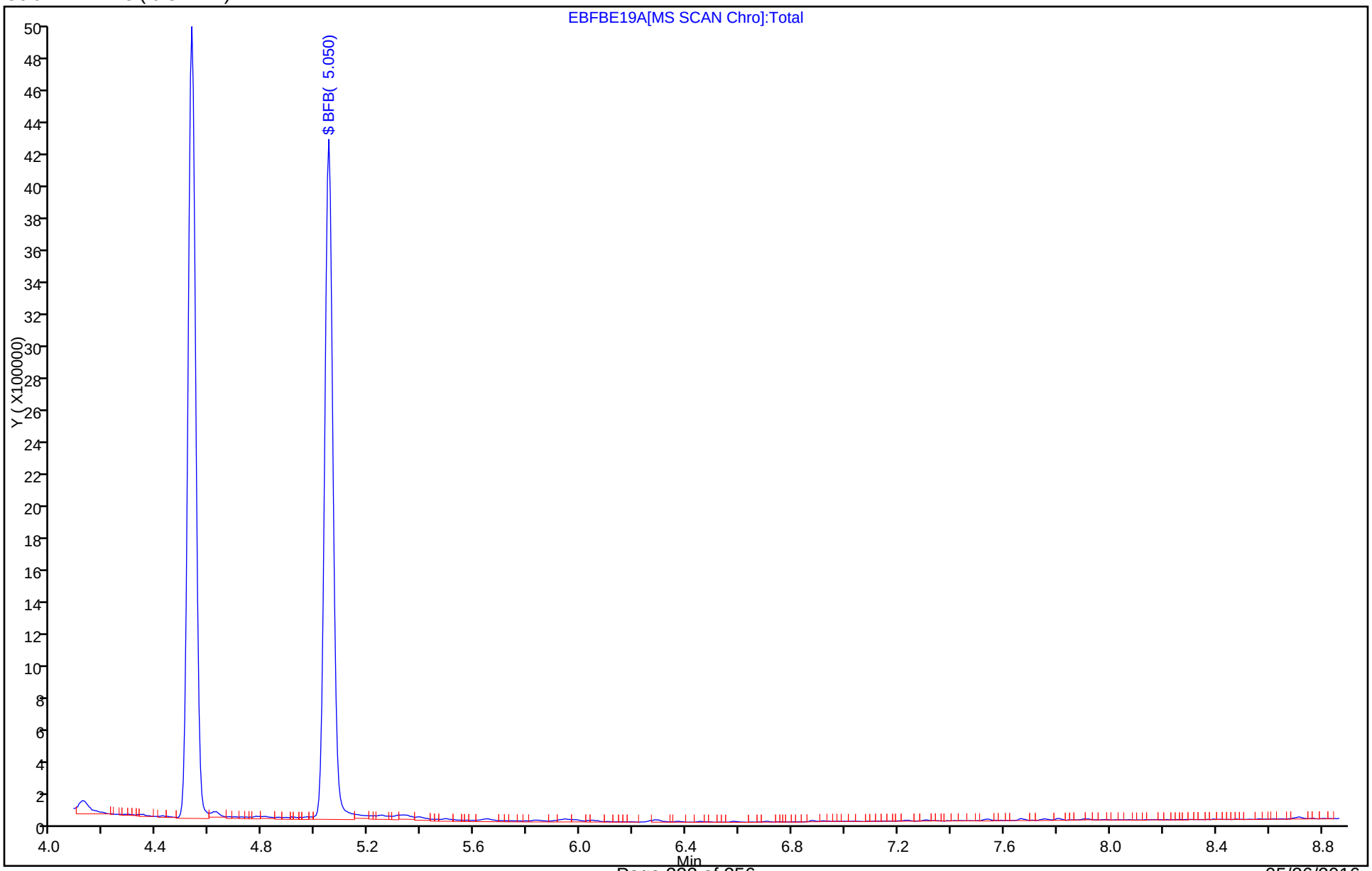
Report Date: 20-May-2016 09:50:15 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EBFBE19A.D

Injection Date:	19-May-2016 12:15:30	Instrument ID:	ME	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-4987/8

Matrix: Air Lab File ID: EMB500E19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 05/19/2016 15:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0139	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-4987/8

Matrix: Air Lab File ID: EMB500E19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 05/19/2016 15:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.0756	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EMB500E19.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 19-May-2016 15:37:30 ALS Bottle#: 16 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: MB500mL
Misc. Info.: E051916,T155,,140-0002879-008
Operator ID: 007126 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-May-2016 08:25:46 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK033

First Level Reviewer: barlozhetskayaa Date: 19-May-2016 16:32:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.745	7.755	-0.010	76	290484	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.977	9.982	-0.005	95	1207578	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	89	1166663	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	90	922268	4.00	4.22	
24 Isopropyl alcohol	45	4.525	4.531	-0.006	99	62437		0.6071	
47 1,1,1-Trichloroethane	97	8.774	8.774	0.000	89	3460		0.0139	
T 128 Propane TIC	29	3.371	3.402	-0.029	55	41299		0.5687	
T 129 Methanol TIC	31	3.366	3.803	-0.434	83	34291		0.4722	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

Report Date: 20-May-2016 10:33:05 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EMB500E19.D

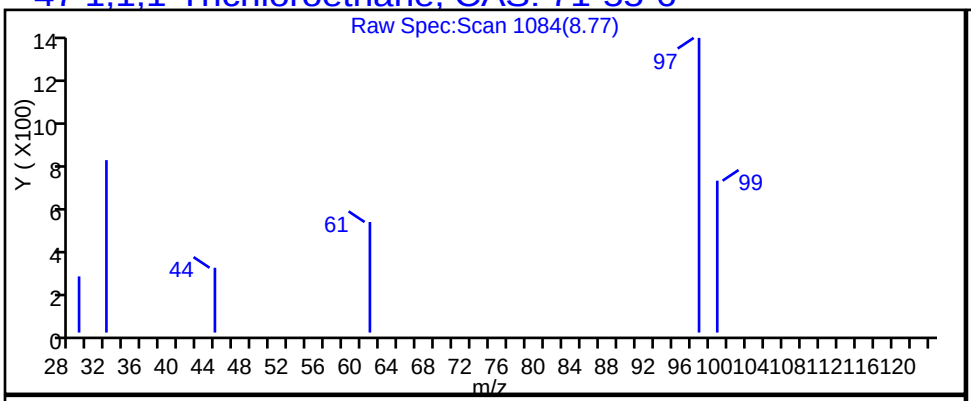
Injection Date:	19-May-2016 15:37:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	mb			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

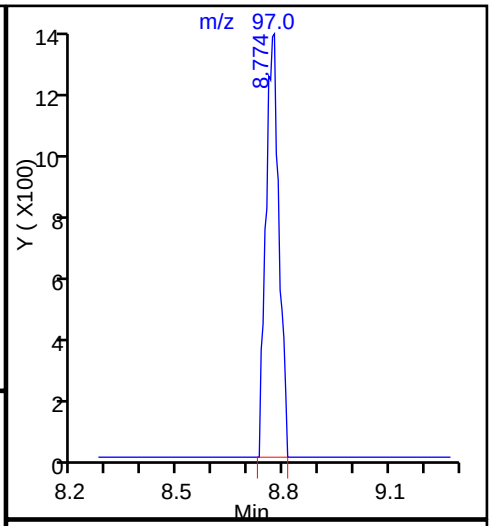
Column: RTX-5 (0.32 mm)

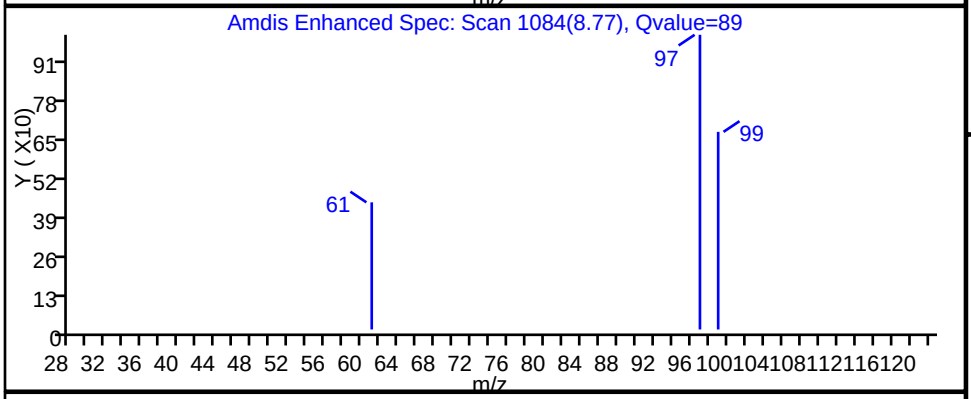


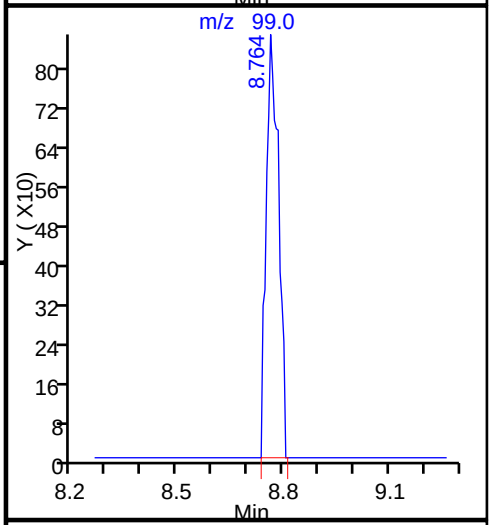
Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\EMB500E19.D
Injection Date: 19-May-2016 15:37:30 Instrument ID: ME
Lims ID: mb
Client ID:
Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

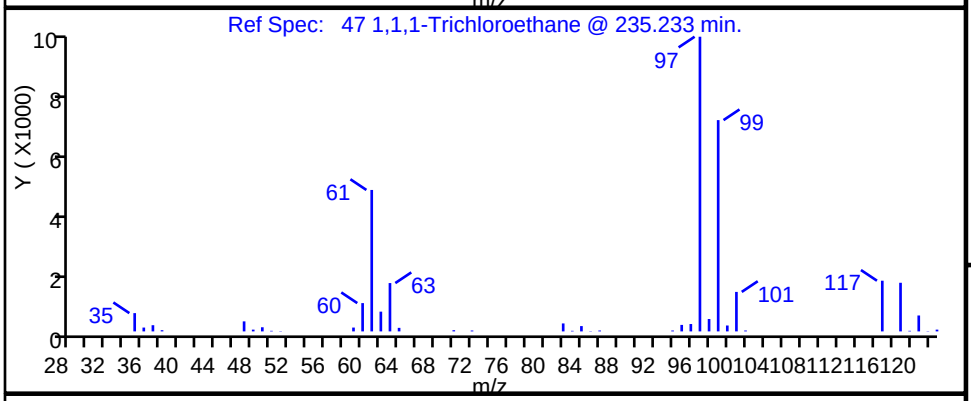
47 1,1,1-Trichloroethane, CAS: 71-55-6

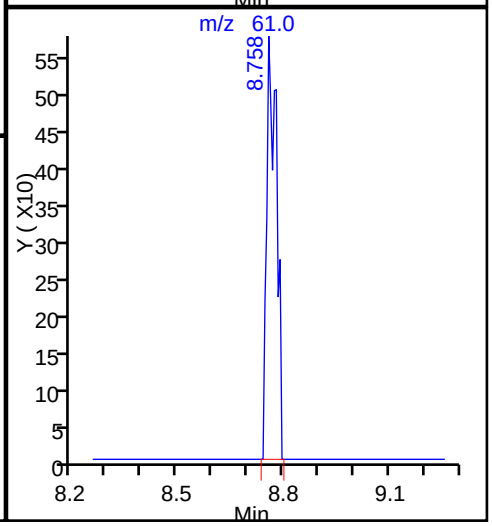


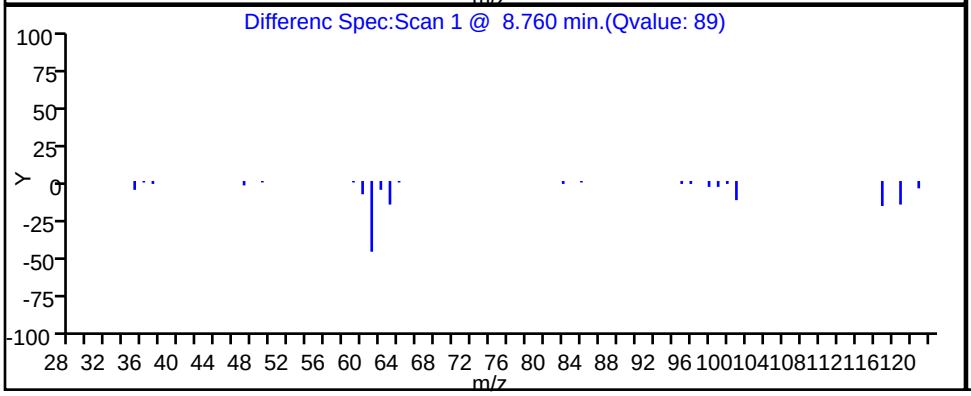












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-4987/1006

Matrix: Air Lab File ID: ECCVE19A-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 05/19/2016 12:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4987 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.74		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.27		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.64		0.080	0.015
67-66-3	Chloroform	119.38	2.05		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.85		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.73		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.75		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.98		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.14		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.90		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.75		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.10		0.40	0.068
91-20-3	Naphthalene	128.17	1.43		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.81		0.080	0.016
108-88-3	Toluene	92.14	1.75		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.89		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.41		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.31		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.71		0.080	0.021
79-01-6	Trichloroethene	131.39	1.81		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.90		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.96		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.85		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.77		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.81		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ECCVE19A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-May-2016 12:47:30 ALS Bottle#: 13 Worklist Smp#: 1006
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0002879-002
Misc. Info.: E051916,TO155,,p16
Operator ID: 7126 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-May-2016 10:52:03 Calib Date: 03-Dec-2015 09:19:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20151202-2334.b\EK02IC08R.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK033

First Level Reviewer: tajh Date: 19-May-2016 13:38:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.755	7.755	0.000	82	359774	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.982	9.982	0.000	95	1660794	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.927	14.927	0.000	89	1603857	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.599	16.599	0.000	90	1270527	4.00	4.23	
6 Chlorodifluoromethane	67	3.037	3.037	0.000	96	120960	1.99	2.64	
8 Dichlorodifluoromethane	85	3.091	3.091	0.000	99	1112773	1.99	2.73	
9 Chloromethane	52	3.247	3.247	0.000	98	67402	1.99	1.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.253	3.253	0.000	90	629786	1.99	2.49	
11 Acetaldehyde	44	3.377	3.377	0.000	99	295873	9.96	7.35	
12 Vinyl chloride	62	3.393	3.393	0.000	99	234539	1.99	1.77	
13 Butane	43	3.463	3.463	0.000	81	275944	1.99	1.52	
14 Butadiene	54	3.463	3.463	0.000	76	163578	1.99	1.75	
15 Bromomethane	94	3.738	3.738	0.000	97	240886	1.99	1.96	
16 Chloroethane	64	3.857	3.857	0.000	100	100629	1.99	1.63	
17 Ethanol	31	3.948	3.948	0.000	96	246253	9.96	6.25	
18 Vinyl bromide	106	4.110	4.110	0.000	98	243869	1.99	2.14	
19 2-Methylbutane	43	4.148	4.148	0.000	86	177359	1.99	1.45	
20 Trichlorofluoromethane	101	4.342	4.342	0.000	99	879195	1.99	2.40	
21 Acrolein	56	4.347	4.347	0.000	95	46366	1.99	1.47	
22 Acetonitrile	40	4.412	4.412	0.000	99	45323	1.99	1.29	
23 Acetone	58	4.450	4.450	0.000	99	205699	5.97	4.99	
25 Pentane	72	4.531	4.531	0.000	74	36847	1.99	1.90	
24 Isopropyl alcohol	45	4.531	4.531	0.000	81	582360	5.97	4.57	
26 Ethyl ether	31	4.676	4.676	0.000	78	105744	1.99	1.28	
27 1,1-Dichloroethene	96	4.967	4.967	0.000	99	225120	1.99	2.14	
28 2-Methyl-2-propanol	59	5.070	5.070	0.000	93	324145	1.99	1.62	
29 Acrylonitrile	53	5.075	5.075	0.000	94	92919	1.99	1.39	
30 1,1,2-Trichloro-1,2,2-trif	101	5.129	5.129	0.000	96	507551	1.99	2.00	
31 Methylene Chloride	84	5.296	5.296	0.000	92	191980	1.99	1.75	
32 3-Chloro-1-propene	39	5.307	5.307	0.000	90	220925	1.99	1.76	
33 Carbon disulfide	76	5.437	5.437	0.000	99	620091	1.99	1.92	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	6.062	6.062	0.000	98	224300	1.99	1.89	
35 2-Methylpentane	43	6.073	6.073	0.000	89	341393	1.99	1.41	
36 Methyl tert-butyl ether	73	6.186	6.186	0.000	94	602003	1.99	2.10	
37 1,1-Dichloroethane	63	6.467	6.467	0.000	99	405305	1.99	1.75	
38 Vinyl acetate	43	6.580	6.580	0.000	99	419010	1.99	1.63	
39 2-Butanone (MEK)	72	7.017	7.017	0.000	97	81173	1.99	1.68	
40 Hexane	56	7.027	7.027	0.000	81	145243	1.99	1.50	
41 Isopropyl ether	45	7.194	7.194	0.000	92	492232	1.99	1.49	
42 cis-1,2-Dichloroethene	96	7.426	7.426	0.000	96	222656	1.99	1.85	
43 Ethyl acetate	43	7.626	7.626	0.000	99	319790	1.99	1.50	
44 Chloroform	83	7.766	7.766	0.000	96	583043	1.99	2.05	
45 Tert-butyl ethyl ether	59	7.858	7.858	0.000	93	537975	1.99	1.76	
46 Tetrahydrofuran	42	8.160	8.160	0.000	83	148716	1.99	1.41	
47 1,1,1-Trichloroethane	97	8.774	8.774	0.000	94	713267	1.99	2.31	
48 1,2-Dichloroethane	62	8.893	8.893	0.000	98	418228	1.99	1.98	
49 n-Butanol	31	9.368	9.368	0.000	66	44969	1.99	1.20	
50 Cyclohexane	69	9.373	9.373	0.000	90	97102	1.99	1.71	
51 Benzene	78	9.378	9.378	0.000	96	587383	1.99	1.74	
52 Carbon tetrachloride	117	9.400	9.400	0.000	98	756699	1.99	2.27	
53 2,3-Dimethylpentane	71	9.508	9.508	0.000	86	133139	1.99	1.65	
54 Thiophene	84	9.664	9.664	0.000	94	336853	1.99	1.69	
55 Tert-amyl methyl ether	73	9.901	9.901	0.000	98	543585	1.99	1.85	
56 Isooctane	57	10.203	10.203	0.000	97	813119	1.99	1.43	
57 n-Heptane	71	10.629	10.629	0.000	85	205748	1.99	1.67	
58 1,2-Dichloropropane	63	10.705	10.705	0.000	83	200639	1.99	1.55	
59 Trichloroethene	130	10.743	10.743	0.000	96	317763	1.99	1.81	
60 Dibromomethane	93	10.829	10.829	0.000	95	293763	1.99	1.90	
61 Dichlorobromomethane	83	10.991	10.991	0.000	98	602502	1.99	2.08	
62 1,4-Dioxane	88	11.018	11.018	0.000	89	79200	1.99	1.70	
63 Methyl methacrylate	41	11.120	11.120	0.000	85	198231	1.99	0.7549	
64 Methylcyclohexane	83	11.552	11.552	0.000	94	457234	1.99	1.72	
65 4-Methyl-2-pentanone (MIBK	43	12.015	12.015	0.000	94	284554	1.99	1.25	
66 cis-1,3-Dichloropropene	75	12.064	12.064	0.000	96	360888	1.99	1.85	
67 trans-1,3-Dichloropropene	75	12.797	12.797	0.000	97	350708	1.99	1.90	
68 Toluene	91	12.905	12.905	0.000	94	693584	1.99	1.75	
69 1,1,2-Trichloroethane	83	12.997	12.997	0.000	96	211653	1.99	1.71	
70 2-Methylthiophene	97	13.067	13.067	0.000	96	577765	1.99	1.73	
71 3-Methylthiophene	97	13.272	13.272	0.000	98	563831	1.99	1.73	
72 2-Hexanone	58	13.412	13.412	0.000	95	142624	1.99	1.25	
73 n-Octane	85	13.644	13.644	0.000	84	233953	1.99	1.71	
74 Chlorodibromomethane	129	13.708	13.708	0.000	97	580950	1.99	2.02	
75 Ethylene Dibromide	107	14.005	14.005	0.000	97	406884	1.99	1.80	
76 Tetrachloroethene	129	14.081	14.081	0.000	93	325667	1.99	1.81	
77 Chlorobenzene	112	14.976	14.976	0.000	91	570932	1.99	1.69	
78 2,3-Dimethylheptane	43	15.019	15.019	0.000	85	470659	1.99	1.28	
79 Ethylbenzene	91	15.278	15.278	0.000	99	974629	1.99	1.90	
80 2-Ethylthiophene	97	15.380	15.380	0.000	98	766539	1.99	1.90	
81 m-Xylene & p-Xylene	91	15.445	15.445	0.000	99	1544304	3.98	3.90	
83 Bromoform	173	15.887	15.887	0.000	96	535613	1.99	2.08	
82 n-Nonane	57	15.892	15.892	0.000	85	365726	1.99	1.52	
84 Styrene	104	15.914	15.914	0.000	97	541673	1.99	1.94	
85 o-Xylene	91	15.973	15.973	0.000	98	807891	1.99	1.91	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	16.308	16.308	0.000	97	466288	1.99	1.67	
87 1,2,3-Trichloropropane	110	16.469	16.469	0.000	95	189054	1.99	1.99	
88 Isopropylbenzene	105	16.572	16.572	0.000	97	1092010	1.99	1.96	
89 N-Propylbenzene	120	17.122	17.122	0.000	99	291300	1.99	1.90	
90 2-Chlorotoluene	126	17.160	17.160	0.000	96	279802	1.99	1.81	
91 4-Ethyltoluene	105	17.284	17.284	0.000	98	1040258	1.99	1.99	
92 1,3,5-Trimethylbenzene	120	17.365	17.365	0.000	92	485231	1.99	1.85	
93 Alpha Methyl Styrene	118	17.613	17.613	0.000	87	399124	1.99	1.88	
94 n-Decane	57	17.699	17.699	0.000	96	428298	1.99	1.51	
95 tert-Butylbenzene	119	17.817	17.817	0.000	92	965344	1.99	1.96	
96 1,2,4-Trimethylbenzene	105	17.834	17.834	0.000	96	895345	1.99	1.96	
97 sec-Butylbenzene	105	18.109	18.109	0.000	97	1234305	1.99	1.98	
98 1,3-Dichlorobenzene	146	18.114	18.114	0.000	98	577975	1.99	1.83	
99 Benzyl chloride	91	18.200	18.200	0.000	98	704612	1.99	1.87	
100 1,4-Dichlorobenzene	146	18.211	18.211	0.000	93	553148	1.99	1.78	
101 4-Isopropyltoluene	119	18.287	18.287	0.000	96	1039279	1.99	1.97	
102 1,2,3-Trimethylbenzene	105	18.335	18.335	0.000	98	670940	1.99	1.90	
103 Butylcyclohexane	83	18.400	18.400	0.000	94	608350	1.99	1.73	
104 1,2-Dichlorobenzene	146	18.589	18.589	0.000	91	564625	1.99	1.82	
105 2,3-Dihydroindene	117	18.589	18.589	0.000	93	784031	1.99	1.89	
106 Indene	116	18.723	18.723	0.000	93	555208	1.99	1.78	
107 n-Butylbenzene	91	18.745	18.745	0.000	98	928553	1.99	1.94	
108 Undecane	57	19.085	19.085	0.000	90	376932	1.99	1.38	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.133	19.133	0.000	97	703911	1.99	1.88	
110 1,2-Dibromo-3-Chloropropan	157	19.219	19.219	0.000	93	213473	1.99	1.66	
111 1,2,4,5-Tetramethylbenzene	119	19.527	19.527	0.000	96	822100	1.99	1.94	
112 1,2,3,5-Tetramethylbenzene	119	19.581	19.581	0.000	94	500884	1.99	1.85	
113 1,2,3,4-Tetramethylbenzene	119	19.980	19.980	0.000	96	640099	1.99	1.83	
114 Dodecane	57	20.152	20.152	0.000	92	241974	1.99	1.06	
115 1,2,4-Trichlorobenzene	180	20.314	20.314	0.000	93	319082	1.99	1.41	
116 Naphthalene	128	20.444	20.444	0.000	98	678263	1.99	1.43	
117 Benzo(b)thiophene	134	20.546	20.546	0.000	99	365037	1.99	1.23	
118 Hexachlorobutadiene	225	20.659	20.659	0.000	95	506626	1.99	2.12	
119 1,2,3-Trichlorobenzene	180	20.719	20.719	0.000	94	270616	1.99	1.34	
120 2-Methylnaphthalene	142	21.560	21.560	0.000	98	235523	6.22	2.31	
121 1-Methylnaphthalene	142	21.759	21.759	0.000	98	236158	6.22	2.59	
A 124 Toluene Range	1	12.905	(12.875-12.935)		0	1746221	1.99	1.83	
A 125 C8 Range	1	13.644	(13.614-13.674)		0	1930328	1.99	1.55	
S 126 Xylenes, Total	100				0		5.97	5.81	
S 127 1,2-Dichloroethene, Total	1				0		3.98	3.74	

Reagents:

40CV101P_00017	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

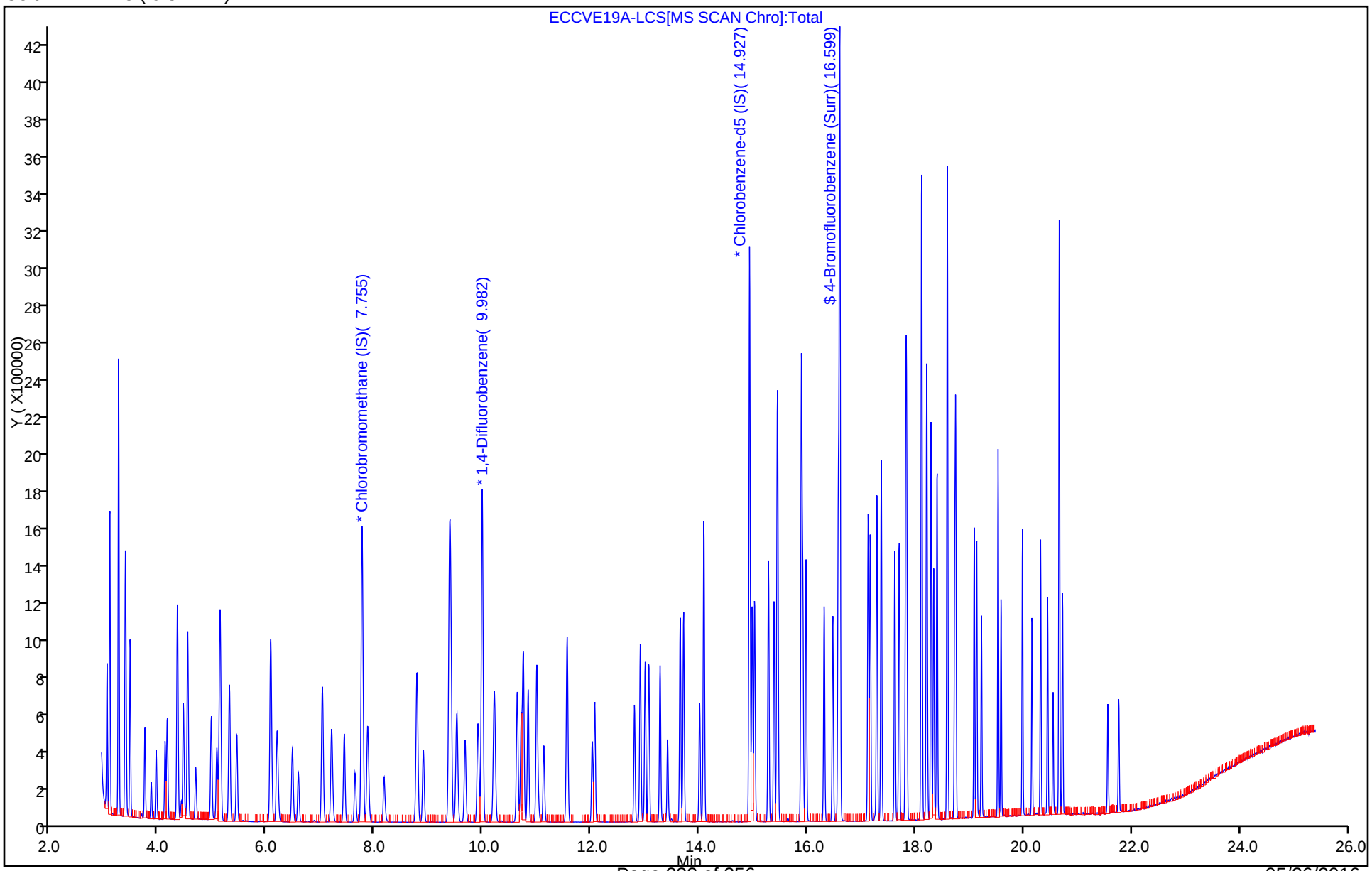
Report Date: 20-May-2016 10:52:10 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\ME\20160517-2879.b\ECCVE19A-LCS.d

Injection Date:	19-May-2016 12:47:30	Instrument ID:	ME	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1006
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Instrument ID: ME Start Date: 12/02/2015 18:09

Analysis Batch Number: 3815 End Date: 12/03/2015 09:19

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-3815/1		12/02/2015 18:09	1	EBFBK02.D	RTX-5 0.32(mm)
IC 140-3815/3		12/02/2015 20:13	1	EK02IC01.D	RTX-5 0.32(mm)
IC 140-3815/4		12/02/2015 20:59	1	EK02IC02.D	RTX-5 0.32(mm)
IC 140-3815/5		12/02/2015 21:45	1	EK02IC03.D	RTX-5 0.32(mm)
IC 140-3815/6		12/02/2015 22:31	1	EK02IC04.D	RTX-5 0.32(mm)
IC 140-3815/7		12/02/2015 23:17	1	EK02IC05.D	RTX-5 0.32(mm)
ICIS 140-3815/8		12/03/2015 00:02	1	EK02IC06.D	RTX-5 0.32(mm)
IC 140-3815/9		12/03/2015 00:48	1	EK02IC07.D	RTX-5 0.32(mm)
IC 140-3815/11		12/03/2015 02:20	1	EK02IC09.D	RTX-5 0.32(mm)
ICV 140-3815/13		12/03/2015 03:51	1	EICVK02.D	RTX-5 0.32(mm)
IC 140-3815/19		12/03/2015 09:19	1	EK02IC08R.D	RTX-5 0.32(mm)

151202

ME
ICAL
2334

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	31.2	12/2/2015	6:09:52 PM
BLK	16 - 500 mL	30.4	12/2/2015	6:42:05 PM
MDL	7 - 50 mL	41.2	12/2/2015	7:27:28 PM
ICAL01	7 - 100 mL	40.5	12/2/2015	8:13:42 PM
ICAL02	7 - 200 mL	39.7	12/2/2015	8:59:47 PM
ICAL03	8 - 201 mL	39.7	12/2/2015	9:45:05 PM
ICAL04	9 - 200 mL	40	12/2/2015	10:31:12 PM
ICAL05	10 - 201 mL	39.9	12/2/2015	11:17:00 PM
ICAL06	11 - 200 mL	39.1	12/3/2015	12:02:58 AM
ICAL07	12 - 200 mL	36.8	12/3/2015	12:48:46 AM
ICAL08DNU	13 - 200 mL	33.8	12/3/2015	1:34:50 AM
ICAL09	14 - 200 mL	39.8	12/3/2015	2:20:07 AM
PRIME	15 - 21 mL	40.1	12/3/2015	3:05:59 AM
ICV	15 - 100 mL	38.5	12/3/2015	3:51:51 AM
FLUSH	16 - 50 mL	30.2	12/3/2015	4:37:34 AM
BLK	16 - 500 mL	29.5	12/3/2015	5:10:27 AM
LCS	1 - 100 mL	38.2	12/3/2015	5:55:51 AM
expCCV closed	2 - 11 mL	3.1	12/3/2015	6:44:23 AM
ICAL08R	13 - 200 mL	31.3	12/3/2015	9:19:17 AM

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

Analysis Date:	12/2/15	Instrument:	ME	Chrom WL #:	2334	TALS Batch & Event #	TO14/15: 3815 / 418	AFCEE: 3814 / 417
							DOD: 3812 / 415	OHIO: 3813 / 416

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	(PNU) TPH as Hexane	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	NA	✓	propene @ 34%	✓	✓	NA	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓		✓		✓	✓	NA	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓		✓		✓	✓		✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	NA		NA	all avg	NA	NA		NA
18. If curves were used, is correlation coefficient ≥0.990? [F6]	✓	✓		✓	✓	✓	✓		✓
19. Is the intercept less than the RL for each curve? [F6]	✓	✓		✓	✓	✓	✓		✓
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	✓	✓			✓	✓	✓		
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓	✓	✓	✓	✓	✓
22. **Analyst/Date:** AFB 12/8/15	**2nd Level Reviewer/Date:**							12/9/15	
Comments: icv → indene 36%.	↑ rec. OK to use for both checks.								

TALS Review → 1,2-dimethyl-4-ethyl bz 36%	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓	✓	NA	✓					
24. Graphics uploaded? [Sample List Tab]	✓	✓		✓		✓	✓	NA	✓
25. All points are in the most recent active calibration event? [Calibration Events – 'Fix ICAL linkage' if needed]	✓	✓		✓		✓	✓		✓
26. Runs linked to BFB? [QC Links]	✓	✓		✓		✓	✓		✓
27. If criteria not met, was a NCM generated?	NA					NA	NA		NA
28. After review in TALS, approve the method in TALS.						✓	✓		✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>								✓	
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	NA	✓
Analyst:	**Date:** 12/10/15				**2nd Level Reviewer :** AFB		**Date:** 12/11/15		
Comments: (PNU) methyl methacrylate! Reran Lv. 8 per SOP CA-Q-P-003 Rev. 0 (5.2.3.5)					**Comments:**				

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-4944-1

SDG No.:

Instrument ID: ME Start Date: 05/19/2016 12:15

Analysis Batch Number: 4987 End Date: 05/20/2016 10:43

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-4987/5		05/19/2016 12:15	1	EBFBE19A.D	RTX-5 0.32(mm)
CCVIS 140-4987/6		05/19/2016 12:47	1	ECCVE19A.D	RTX-5 0.32(mm)
LCS 140-4987/1006		05/19/2016 12:47	1	ECCVE19A-LCS.d	RTX-5 0.32(mm)
MB 140-4987/8		05/19/2016 15:37	1	EMB500E19.D	RTX-5 0.32(mm)
ZZZZZ		05/19/2016 16:32	1.87		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 17:17	1		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 18:51	1		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 19:39	1		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 20:30	1.42		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 21:19	1		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 22:09	1		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 22:55	1		RTX-5 0.32(mm)
ZZZZZ		05/19/2016 23:42	1		RTX-5 0.32(mm)
ZZZZZ		05/20/2016 00:27	1		RTX-5 0.32(mm)
140-4944-1		05/20/2016 01:14	1	EE19P111.D	RTX-5 0.32(mm)
140-4944-2		05/20/2016 02:00	1	EE19P112.D	RTX-5 0.32(mm)
140-4944-3		05/20/2016 02:46	1	EE19P113.D	RTX-5 0.32(mm)
140-4944-4		05/20/2016 03:33	1	EE19P114.D	RTX-5 0.32(mm)
140-4944-5		05/20/2016 04:18	1	EE19P115.D	RTX-5 0.32(mm)
ZZZZZ		05/20/2016 05:04	1		RTX-5 0.32(mm)
140-4944-6		05/20/2016 05:50	1	EE19P116.D	RTX-5 0.32(mm)
ZZZZZ		05/20/2016 06:36	1.87		RTX-5 0.32(mm)
ZZZZZ		05/20/2016 08:13	1		RTX-5 0.32(mm)
ZZZZZ		05/20/2016 09:00	1		RTX-5 0.32(mm)
ZZZZZ		05/20/2016 10:43	3.47		RTX-5 0.32(mm)

160519

TA-Knoxville
TO-14 Autosampler Log ME WL 2879

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	15.1	5/19/2016	12:15:25 PM
CCV	9 - 100 mL	24	5/19/2016	12:47:24 PM
dnuleak	16 - 51 mL	35.6	5/19/2016	2:51:57 PM
MB500	16 - 501 mL	36	5/19/2016	3:37:44 PM
4957-01	1 - 935 mL	4	5/19/2016	4:32:08 PM
4957-02	2 - 250 mL	11.6	5/19/2016	5:17:29 PM
4957-03	3 - 100 mL	4	5/19/2016	6:03:33 PM
4957-04	4 - 500 mL	6.9	5/19/2016	6:51:19 PM
4957-04DU	4 - 500 mL	3.9	5/19/2016	7:39:42 PM
4957-05	5 - 711 mL	4	5/19/2016	8:30:10 PM
4957-06	6 - 501 mL	3.7	5/19/2016	9:19:18 PM
4957-07	7 - 500 mL	3.6	5/19/2016	10:09:30 PM
4965-01	8 - 51 mL	4	5/19/2016	10:55:40 PM
4965-02	9 - 50 mL	8.4	5/19/2016	11:42:05 PM
4965-03	10 - 50 mL	3.7	5/20/2016	12:27:58 AM
4944-01	11 - 41 mL	4	5/20/2016	1:14:15 AM
4944-02	12 - 21 mL	3.8	5/20/2016	2:00:39 AM
4944-03	13 - 50 mL	8.6	5/20/2016	2:46:54 AM
4944-04	14 - 101 mL	3.7	5/20/2016	3:33:00 AM
4944-05	15 - 101 mL	3.6	5/20/2016	4:18:51 AM
4944-05	15 - 101 mL	3.7	5/20/2016	5:04:48 AM
4944-06	16 - 100 mL	3.8	5/20/2016	5:50:38 AM
4957-01DL	1 - 11 mL	7.4	5/20/2016	6:36:50 AM
4957-02DL	2 - 12 mL	9.2	5/20/2016	7:22:54 AM
4957-03R	3 - 500 mL	3.6	5/20/2016	8:13:24 AM
4957-04DL	4 - 20 mL	3.8	5/20/2016	9:00:27 AM
4957-05R	5 - 710 mL	4	5/20/2016	9:50:42 AM
4957-02DL	2 - 10 mL	15.5	5/20/2016	10:43:10 AM

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

Instrument/Date	ME 5/19/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	2879	CCAL Batch #	4987			
ICAL Chrom WL #	2334	ICAL Batch # / Event #	3815, 418	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] CDFM butanol DCDFM MIBK Ethanol 2-hexa E/E 2methyl-n-ph	✓	☑ CCV - %D - LCS criteria met (NCM# 4898) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____) 4944 4957 4965	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NJ		NJ
7. Has the RT been updated to the method?			✓
Analyst: [signature] Date: 5/20/16		2nd Level Reviewer : [signature] Date: 05/23/16	
Comments:		Comments:	
8. Has the vol injected been verified vs lintech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) ☑ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NJ		NJ
18. Obvious non-TPH peaks excluded?			

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]			
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?			
22. Sample special instructions verified?			
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.		☑ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) ☐ LCS/LCSD - %R High (NCM#_____)	
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]			
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]			
26. Analytes over calibration range set to secondary [Conditions Review Tab]			
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]			
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*		4957-4 IPA Evalue - Other OK	
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]		**500 mL blank ID:** _____ **200 mL blank ID:**	
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]			
31. Correct ICV linked to each MB? [QC Links]			
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]			
33. Runs set to 1st level review?		Runs set to 2nd level review?	
34. QC checker run and items addressed?			
35. Checklist & Entech report scanned, attached & assigned properly?			

Analyst: Date: 5/20/16	**2nd Level Reviewer :** Date: 05/23/16
Comments:	**Comments:**
Example Calculation: 4957-2 IPA	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
30.075 x 10mL x 3.47 = 5565.07	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 | Lab Sample ID: 140-4628-3

Matrix: Air | Lab File ID: LOT4628.D

Analysis Method: TO-15 | Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) | Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4520 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 | Lab Sample ID: 140-4628-3

Matrix: Air | Lab File ID: LOT4628.D

Analysis Method: TO-15 | Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) | Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4520 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 Lab Sample ID: 140-4628-3

Matrix: Air Lab File ID: LOT4628.D

Analysis Method: TO-15 Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4520 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4628-1

SDG No.:

Client Sample ID: 09735 Lab Sample ID: 140-4628-3

Matrix: Air Lab File ID: LOT4628.D

Analysis Method: TO-15 Date Collected: 03/21/2016 13:45

Sample wt/vol: 200(mL) Date Analyzed: 03/23/2016 02:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4520 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160321-2673.b\LOT4628.D
Lims ID: 140-4628-A-3 Lab Sample ID: 140-4628-3
Client ID: 09735
Sample Type: Client
Inject. Date: 23-Mar-2016 02:05:30 ALS Bottle#: 11 Worklist Smp#: 21
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 09735
Misc. Info.: J032216,TO5,,140-0002673-021
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160321-2673.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 23-Mar-2016 10:41:40 Calib Date: 28-Jan-2016 00:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160127-2524.b\JA27ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK025

First Level Reviewer: tajh Date: 23-Mar-2016 10:41:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.436	9.442	-0.006	97	249247	4.00	
* 2 1,4-Difluorobenzene	114	11.599	11.605	-0.006	96	1174463	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.273	16.274	-0.001	89	905476	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.898	17.899	-0.001	95	505744	3.30	
13 Butane	43	4.492	4.498	-0.006	91	4858	0.0471	
19 2-Methylbutane	43	5.401	5.402	-0.001	84	2117	0.0216	
31 Methylene Chloride	84	6.768	6.779	-0.011	98	6053	0.0755	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

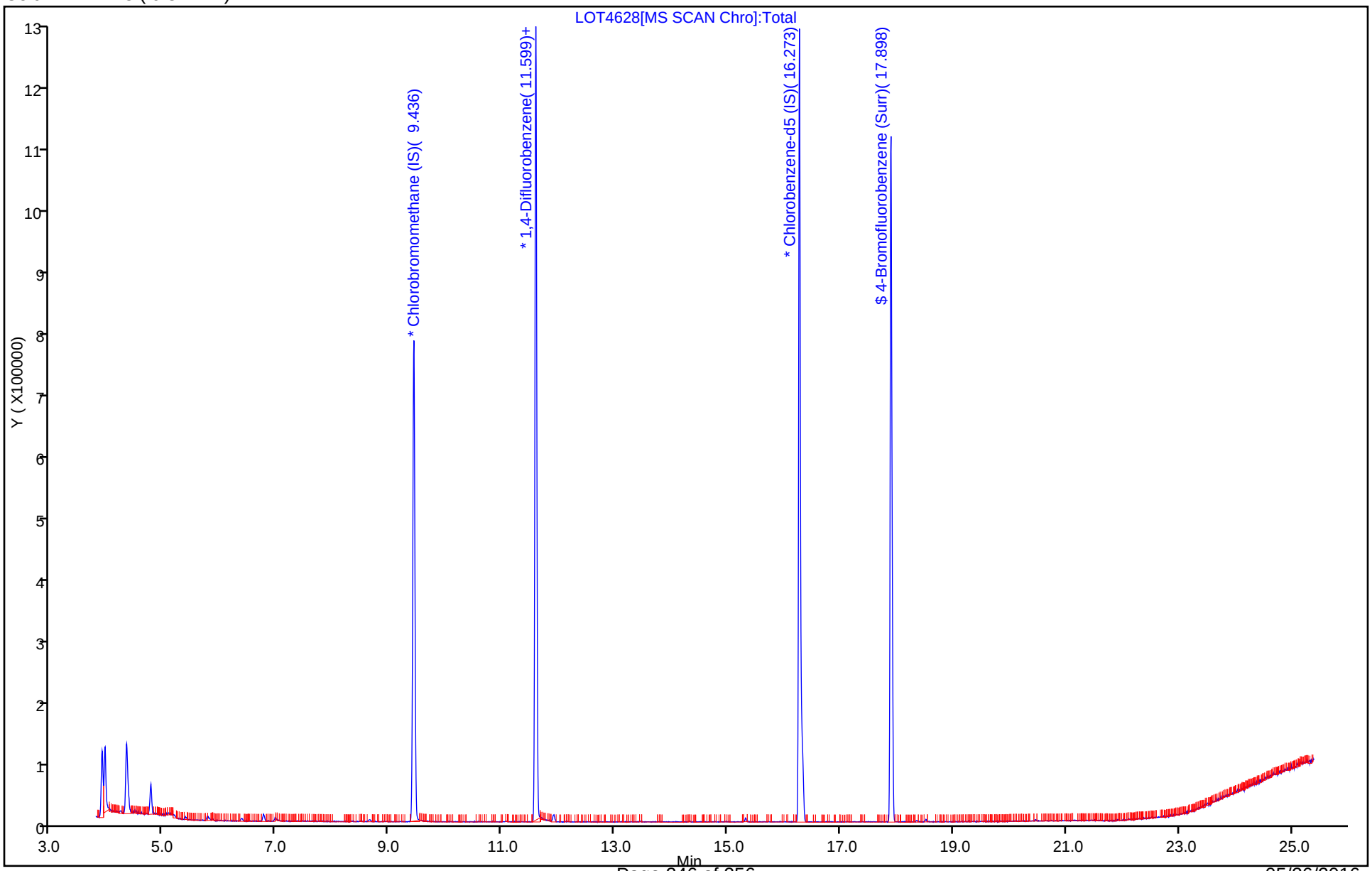
Report Date: 23-Mar-2016 10:42:00 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160321-2673.b\LOT4628.D

Injection Date:	23-Mar-2016 02:05:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-4628-A-3	Lab Sample ID:	140-4628-3	Worklist Smp#:	21
Client ID:	09735				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4629-1

SDG No.:

Client Sample ID: 10519 | Lab Sample ID: 140-4629-16

Matrix: Air | Lab File ID: LOT4629.D

Analysis Method: TO-15 | Date Collected: 03/21/2016 14:55

Sample wt/vol: 200(mL) | Date Analyzed: 03/24/2016 11:58

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4522 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4629-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-4629-16

Matrix: Air Lab File ID: LOT4629.D

Analysis Method: TO-15 Date Collected: 03/21/2016 14:55

Sample wt/vol: 200(mL) Date Analyzed: 03/24/2016 11:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4522 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4629-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-4629-16

Matrix: Air Lab File ID: LOT4629.D

Analysis Method: TO-15 Date Collected: 03/21/2016 14:55

Sample wt/vol: 200(mL) Date Analyzed: 03/24/2016 11:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4522 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4629-1

SDG No.:

Client Sample ID: 10519 Lab Sample ID: 140-4629-16

Matrix: Air Lab File ID: LOT4629.D

Analysis Method: TO-15 Date Collected: 03/21/2016 14:55

Sample wt/vol: 200(mL) Date Analyzed: 03/24/2016 11:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4522 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160321-2675.b\LOT4629.D
Lims ID: 140-4629-A-16 Lab Sample ID: 140-4629-16
Client ID: 10519
Sample Type: Client
Inject. Date: 24-Mar-2016 11:58:30 ALS Bottle#: 1 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 10519
Misc. Info.: J032416,TO15,,140-0002675-004
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160321-2675.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Mar-2016 09:22:36 Calib Date: 28-Jan-2016 00:38:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160127-2524.b\JA27ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK005

First Level Reviewer: tajh Date: 24-Mar-2016 13:04:11

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.436	9.441	-0.005	97	331363	4.00	
* 2 1,4-Difluorobenzene	114	11.604	11.604	0.000	96	1449475	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.273	16.279	-0.006	88	1198807	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.898	17.898	0.000	88	748295	3.69	
31 Methylene Chloride	84	6.773	6.779	-0.006	96	7647	0.0718	

Reagents:

MAissur1_00002 Amount Added: 40.00 Units: mL Run Reagent

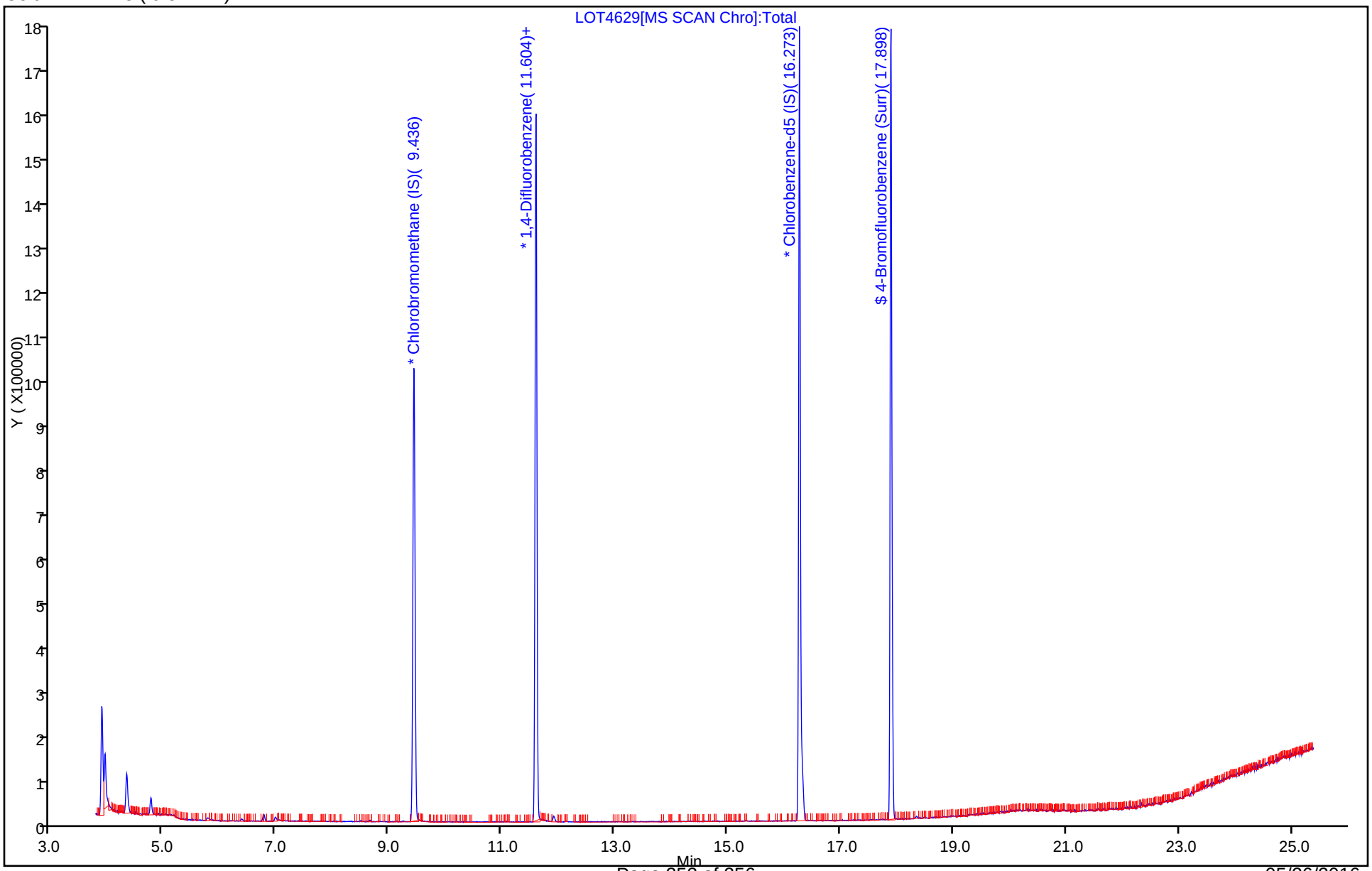
Report Date: 25-Mar-2016 09:22:43 Chrom Revision: 2.2 04-Mar-2016 14:36:24

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160321-2675.b\LOT4629.D

Injection Date:	24-Mar-2016 11:58:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-4629-A-16	Lab Sample ID:	140-4629-16	Worklist Smp#:	4
Client ID:	10519				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

180325

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: DLM/SMW
Company: TetraTech	Phone: 410-990-4607	1 of 1 COCs
Address: 51 Franklin St. Suite 400	Site Contact: Dawn Monico	
City/State/Zip Annapolis, MD 21401	TAL Contact: Terry Wasmund	
Phone: 410-990-4607		
FAX:		
Project Name: SSD OEM	Analysis Turnaround Time	140-4944 Chain of Custody
Site/location: MRC	Standard (Specify) X	
PO # 117-0512124	Rush (Specify)	

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
A-INFLUENT	5/12/16	1420	N/A	-29	0	28	09668	X											
A-MID-GAC		1415		-28	0	99	10782	X											
A-EFFLUENT		1410		-29	0	195	09835	X											
C-INFLUENT		1355		-29	-1.5	139	11109	X											
C-MID-GAC		1350		-29	0	71	09637	X											
C-EFFLUENT		1345		-26	0	74	09830	X											

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

1-Cooler with Custody Seal
R.A 5/13/16
RECEIVED @ Ambient Temp

1-Cooler FedEx 776331194898 SO

ambient = 20.0°C

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time: 5/12/16 @ 1622	Canisters Received by: 5-12-2016 1622
Samples Relinquished by:	Date/Time: 5/12/16 1700	Received by: 5/13/16 09:30
Relinquished by:	Date/Time:	Received by:

6 cans
6 KR

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 5/16/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-4944-a-1	09668	4629	B	1	0	1330	
AFB	140-4944-a-2	10782	4629	B	1	0	1331	
AFB	140-4944-a-3	09835	4629	B	1	0	1332	
AFB	140-4944-a-4	11109	4628	B	1	+0.8	1333	
AFB	140-4944-a-5	09637	4629	B	1	0	1334	
AFB	140-4944-a-6	09830	4629	B	1	0	1335	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 140-4944-1

Login Number: 4944
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

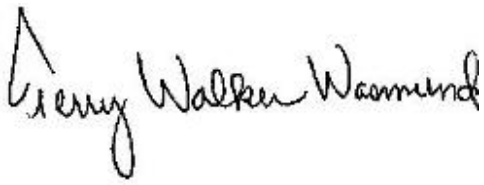
ANALYTICAL REPORT

Job Number: 140-5091-1

Job Description: SSD OEM LMC-MRC

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
6/20/2016 12:32 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
06/20/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-5091-1

Receipt
The samples were received on 6/7/2016 at 9:30 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-5091-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.8		3.6	1.0	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	18		3.6	0.68	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	39		3.6	1.1	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.5		3.6	0.45	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	35		3.6	0.64	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.92	J	3.6	0.91	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	120		3.6	0.55	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	210		1.8	0.64	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	31		12	3.3	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	63		13	2.4	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	150		14	4.3	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	26		15	1.8	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	140		14	2.5	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.6	J	14	3.6	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	670		20	3.0	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1100		9.8	3.4	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID-GAC — Lab Sample ID: 140-5091-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.80		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	24		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.22	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	16		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.48		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.4		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	7.3		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.65	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.82		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.26	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	6.2		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.29		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.15	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.41	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.6		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	85		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.1	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	64		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.6		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	29		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.2	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.0	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	34		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.6		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.39	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.8	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-5091-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.15	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.12	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	12		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.0		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	2.1		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.15	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.0		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.16	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	20		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	3.3		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.43	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.47	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	13		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	0.61	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	46		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.0		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	8.1		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.66	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.63	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	18		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.9	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-5091-1

Date Collected: 06/02/16 15:52

Matrix: Air

Date Received: 06/07/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9.8**		3.6	1.0	ppb v/v			06/08/16 20:25	1
Carbon tetrachloride	ND		3.6	0.68	ppb v/v			06/08/16 20:25	1
Chlorodifluoromethane	**18**		3.6	0.68	ppb v/v			06/08/16 20:25	1
Chloroform	ND		3.6	0.68	ppb v/v			06/08/16 20:25	1
cis-1,2-Dichloroethene	**39**		3.6	1.1	ppb v/v			06/08/16 20:25	1
Dichlorodifluoromethane	ND		3.6	1.2	ppb v/v			06/08/16 20:25	1
1,1-Dichloroethane	**6.5**		3.6	0.45	ppb v/v			06/08/16 20:25	1
1,2-Dichloroethane	ND		3.6	0.86	ppb v/v			06/08/16 20:25	1
1,1-Dichloroethene	**35**		3.6	0.64	ppb v/v			06/08/16 20:25	1
Ethylbenzene	ND		3.6	1.2	ppb v/v			06/08/16 20:25	1
Methylene Chloride	ND		9.1	5.9	ppb v/v			06/08/16 20:25	1
Methyl tert-butyl ether	ND		18	3.1	ppb v/v			06/08/16 20:25	1
Naphthalene	ND		1.8	1.8	ppb v/v			06/08/16 20:25	1
Tetrachloroethene	ND		3.6	0.73	ppb v/v			06/08/16 20:25	1
Toluene	ND		5.5	5.5	ppb v/v			06/08/16 20:25	1
trans-1,2-Dichloroethene	**0.92**	**J**	3.6	0.91	ppb v/v			06/08/16 20:25	1
1,2,4-Trichlorobenzene	ND		3.6	1.8	ppb v/v			06/08/16 20:25	1
1,1,1-Trichloroethane	**120**		3.6	0.55	ppb v/v			06/08/16 20:25	1
1,1,2-Trichloroethane	ND		3.6	0.95	ppb v/v			06/08/16 20:25	1
Trichloroethene	**210**		1.8	0.64	ppb v/v			06/08/16 20:25	1
1,2,3-Trimethylbenzene	ND		3.6	1.5	ppb v/v			06/08/16 20:25	1
1,2,4-Trimethylbenzene	ND		3.6	1.1	ppb v/v			06/08/16 20:25	1
1,3,5-Trimethylbenzene	ND		3.6	1.2	ppb v/v			06/08/16 20:25	1
Vinyl chloride	ND		1.8	1.3	ppb v/v			06/08/16 20:25	1
Xylenes, Total	ND		7.3	1.1	ppb v/v			06/08/16 20:25	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**31**		12	3.3	ug/m3			06/08/16 20:25	1
Carbon tetrachloride	ND		23	4.3	ug/m3			06/08/16 20:25	1
Chlorodifluoromethane	**63**		13	2.4	ug/m3			06/08/16 20:25	1
Chloroform	ND		18	3.3	ug/m3			06/08/16 20:25	1
cis-1,2-Dichloroethene	**150**		14	4.3	ug/m3			06/08/16 20:25	1
Dichlorodifluoromethane	ND		18	6.1	ug/m3			06/08/16 20:25	1
1,1-Dichloroethane	**26**		15	1.8	ug/m3			06/08/16 20:25	1
1,2-Dichloroethane	ND		15	3.5	ug/m3			06/08/16 20:25	1
1,1-Dichloroethene	**140**		14	2.5	ug/m3			06/08/16 20:25	1
Ethylbenzene	ND		16	5.3	ug/m3			06/08/16 20:25	1
Methylene Chloride	ND		32	21	ug/m3			06/08/16 20:25	1
Methyl tert-butyl ether	ND		66	11	ug/m3			06/08/16 20:25	1
Naphthalene	ND		9.5	9.5	ug/m3			06/08/16 20:25	1
Tetrachloroethene	ND		25	4.9	ug/m3			06/08/16 20:25	1
Toluene	ND		21	21	ug/m3			06/08/16 20:25	1
trans-1,2-Dichloroethene	**3.6**	**J**	14	3.6	ug/m3			06/08/16 20:25	1
1,2,4-Trichlorobenzene	ND		27	13	ug/m3			06/08/16 20:25	1
1,1,1-Trichloroethane	**670**		20	3.0	ug/m3			06/08/16 20:25	1
1,1,2-Trichloroethane	ND		20	5.2	ug/m3			06/08/16 20:25	1
Trichloroethene	**1100**		9.8	3.4	ug/m3			06/08/16 20:25	1
1,2,3-Trimethylbenzene	ND		18	7.6	ug/m3			06/08/16 20:25	1
1,2,4-Trimethylbenzene	ND		18	5.6	ug/m3			06/08/16 20:25	1

Client Sample ID: A-INFLUENT
Date Collected: 06/02/16 15:52
Date Received: 06/07/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5091-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		18	5.8	ug/m3			06/08/16 20:25	1
Vinyl chloride	ND		4.6	3.4	ug/m3			06/08/16 20:25	1
Xylenes, Total	ND		32	4.7	ug/m3			06/08/16 20:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*06/08/16 20:25*	*1*

Client Sample ID: A-MID-GAC

Lab Sample ID: 140-5091-2

Date Collected: 06/02/16 15:48

Matrix: Air

Date Received: 06/07/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.80**		0.40	0.12	ppb v/v			06/08/16 21:06	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			06/08/16 21:06	1
Chlorodifluoromethane	**24**		0.40	0.075	ppb v/v			06/08/16 21:06	1
Chloroform	**0.22**	**J**	0.40	0.075	ppb v/v			06/08/16 21:06	1
cis-1,2-Dichloroethene	**16**		0.40	0.12	ppb v/v			06/08/16 21:06	1
Dichlorodifluoromethane	**0.48**		0.40	0.14	ppb v/v			06/08/16 21:06	1
1,1-Dichloroethane	**1.4**		0.40	0.050	ppb v/v			06/08/16 21:06	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			06/08/16 21:06	1
1,1-Dichloroethene	**7.3**		0.40	0.070	ppb v/v			06/08/16 21:06	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			06/08/16 21:06	1
Methylene Chloride	**0.65**	**J**	1.0	0.65	ppb v/v			06/08/16 21:06	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			06/08/16 21:06	1
Naphthalene	ND		0.20	0.20	ppb v/v			06/08/16 21:06	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			06/08/16 21:06	1
Toluene	**0.82**		0.60	0.60	ppb v/v			06/08/16 21:06	1
trans-1,2-Dichloroethene	**0.26**	**J**	0.40	0.10	ppb v/v			06/08/16 21:06	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			06/08/16 21:06	1
1,1,1-Trichloroethane	**6.2**		0.40	0.060	ppb v/v			06/08/16 21:06	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			06/08/16 21:06	1
Trichloroethene	**0.29**		0.20	0.070	ppb v/v			06/08/16 21:06	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			06/08/16 21:06	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			06/08/16 21:06	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			06/08/16 21:06	1
Vinyl chloride	**0.15**	**J**	0.20	0.15	ppb v/v			06/08/16 21:06	1
Xylenes, Total	**0.41**	**J**	0.80	0.12	ppb v/v			06/08/16 21:06	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.6**		1.3	0.37	ug/m3			06/08/16 21:06	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			06/08/16 21:06	1
Chlorodifluoromethane	**85**		1.4	0.27	ug/m3			06/08/16 21:06	1
Chloroform	**1.1**	**J**	2.0	0.37	ug/m3			06/08/16 21:06	1
cis-1,2-Dichloroethene	**64**		1.6	0.48	ug/m3			06/08/16 21:06	1
Dichlorodifluoromethane	**2.4**		2.0	0.67	ug/m3			06/08/16 21:06	1
1,1-Dichloroethane	**5.6**		1.6	0.20	ug/m3			06/08/16 21:06	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			06/08/16 21:06	1
1,1-Dichloroethene	**29**		1.6	0.28	ug/m3			06/08/16 21:06	1
Ethylbenzene	ND		1.7	0.59	ug/m3			06/08/16 21:06	1
Methylene Chloride	**2.2**	**J**	3.5	2.3	ug/m3			06/08/16 21:06	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			06/08/16 21:06	1
Naphthalene	ND		1.0	1.0	ug/m3			06/08/16 21:06	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			06/08/16 21:06	1
Toluene	**3.1**		2.3	2.3	ug/m3			06/08/16 21:06	1
trans-1,2-Dichloroethene	**1.0**	**J**	1.6	0.40	ug/m3			06/08/16 21:06	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			06/08/16 21:06	1
1,1,1-Trichloroethane	**34**		2.2	0.33	ug/m3			06/08/16 21:06	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			06/08/16 21:06	1
Trichloroethene	**1.6**		1.1	0.38	ug/m3			06/08/16 21:06	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			06/08/16 21:06	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			06/08/16 21:06	1

Client Sample ID: A-MID-GAC

Date Collected: 06/02/16 15:48
Date Received: 06/07/16 09:30
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5091-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			06/08/16 21:06	1
Vinyl chloride	**0.39**	**J**	0.51	0.37	ug/m3			06/08/16 21:06	1
Xylenes, Total	**1.8**	**J**	3.5	0.52	ug/m3			06/08/16 21:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*06/08/16 21:06*	*1*

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-5091-3

Date Collected: 06/02/16 15:45

Matrix: Air

Date Received: 06/07/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.15**	**J**	0.40	0.12	ppb v/v			06/08/16 21:48	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			06/08/16 21:48	1
Chlorodifluoromethane	**3.5**		0.40	0.075	ppb v/v			06/08/16 21:48	1
Chloroform	**0.12**	**J**	0.40	0.075	ppb v/v			06/08/16 21:48	1
cis-1,2-Dichloroethene	**12**		0.40	0.12	ppb v/v			06/08/16 21:48	1
Dichlorodifluoromethane	ND		0.40	0.14	ppb v/v			06/08/16 21:48	1
1,1-Dichloroethane	**1.0**		0.40	0.050	ppb v/v			06/08/16 21:48	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			06/08/16 21:48	1
1,1-Dichloroethene	**2.1**		0.40	0.070	ppb v/v			06/08/16 21:48	1
Ethylbenzene	**0.15**	**J**	0.40	0.14	ppb v/v			06/08/16 21:48	1
Methylene Chloride	ND		1.0	0.65	ppb v/v			06/08/16 21:48	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			06/08/16 21:48	1
Naphthalene	ND		0.20	0.20	ppb v/v			06/08/16 21:48	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			06/08/16 21:48	1
Toluene	**1.0**		0.60	0.60	ppb v/v			06/08/16 21:48	1
trans-1,2-Dichloroethene	**0.16**	**J**	0.40	0.10	ppb v/v			06/08/16 21:48	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			06/08/16 21:48	1
1,1,1-Trichloroethane	**20**		0.40	0.060	ppb v/v			06/08/16 21:48	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			06/08/16 21:48	1
Trichloroethene	**3.3**		0.20	0.070	ppb v/v			06/08/16 21:48	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			06/08/16 21:48	1
1,2,4-Trimethylbenzene	ND		0.40	0.13	ppb v/v			06/08/16 21:48	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			06/08/16 21:48	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			06/08/16 21:48	1
Xylenes, Total	**0.43**	**J**	0.80	0.12	ppb v/v			06/08/16 21:48	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.47**	**J**	1.3	0.37	ug/m3			06/08/16 21:48	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			06/08/16 21:48	1
Chlorodifluoromethane	**13**		1.4	0.27	ug/m3			06/08/16 21:48	1
Chloroform	**0.61**	**J**	2.0	0.37	ug/m3			06/08/16 21:48	1
cis-1,2-Dichloroethene	**46**		1.6	0.48	ug/m3			06/08/16 21:48	1
Dichlorodifluoromethane	ND		2.0	0.67	ug/m3			06/08/16 21:48	1
1,1-Dichloroethane	**4.0**		1.6	0.20	ug/m3			06/08/16 21:48	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			06/08/16 21:48	1
1,1-Dichloroethene	**8.1**		1.6	0.28	ug/m3			06/08/16 21:48	1
Ethylbenzene	**0.66**	**J**	1.7	0.59	ug/m3			06/08/16 21:48	1
Methylene Chloride	ND		3.5	2.3	ug/m3			06/08/16 21:48	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			06/08/16 21:48	1
Naphthalene	ND		1.0	1.0	ug/m3			06/08/16 21:48	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			06/08/16 21:48	1
Toluene	**3.8**		2.3	2.3	ug/m3			06/08/16 21:48	1
trans-1,2-Dichloroethene	**0.63**	**J**	1.6	0.40	ug/m3			06/08/16 21:48	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			06/08/16 21:48	1
1,1,1-Trichloroethane	**110**		2.2	0.33	ug/m3			06/08/16 21:48	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			06/08/16 21:48	1
Trichloroethene	**18**		1.1	0.38	ug/m3			06/08/16 21:48	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			06/08/16 21:48	1
1,2,4-Trimethylbenzene	ND		2.0	0.61	ug/m3			06/08/16 21:48	1

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-5091-3

Date Collected: 06/02/16 15:45

Matrix: Air

Date Received: 06/07/16 09:30

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			06/08/16 21:48	1
Vinyl chloride	ND		0.51	0.37	ug/m3			06/08/16 21:48	1
Xylenes, Total	**1.9**	**J**	3.5	0.52	ug/m3			06/08/16 21:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*106*		*60 - 140*		*06/08/16 21:48*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-5091-1	A-INFLUENT	103
140-5091-2	A-MID-GAC	105
140-5091-3	A-EFFLUENT	106
LCS 140-5183/1002	Lab Control Sample	108
MB 140-5183/6	Method Blank	105

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-5183/6
Matrix: Air
Analysis Batch: 5183

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			06/08/16 14:10	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			06/08/16 14:10	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			06/08/16 14:10	1
Chloroform	ND		0.080	0.015	ppb v/v			06/08/16 14:10	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			06/08/16 14:10	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			06/08/16 14:10	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			06/08/16 14:10	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			06/08/16 14:10	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			06/08/16 14:10	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			06/08/16 14:10	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			06/08/16 14:10	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			06/08/16 14:10	1
Naphthalene	ND		0.040	0.040	ppb v/v			06/08/16 14:10	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			06/08/16 14:10	1
Toluene	ND		0.12	0.12	ppb v/v			06/08/16 14:10	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			06/08/16 14:10	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			06/08/16 14:10	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			06/08/16 14:10	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			06/08/16 14:10	1
Trichloroethene	ND		0.040	0.014	ppb v/v			06/08/16 14:10	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			06/08/16 14:10	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			06/08/16 14:10	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			06/08/16 14:10	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			06/08/16 14:10	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			06/08/16 14:10	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			06/08/16 14:10	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			06/08/16 14:10	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			06/08/16 14:10	1
Chloroform	ND		0.39	0.073	ug/m3			06/08/16 14:10	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			06/08/16 14:10	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			06/08/16 14:10	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			06/08/16 14:10	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			06/08/16 14:10	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			06/08/16 14:10	1
Ethylbenzene	ND		0.35	0.12	ug/m3			06/08/16 14:10	1
Methylene Chloride	ND		0.69	0.45	ug/m3			06/08/16 14:10	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			06/08/16 14:10	1
Naphthalene	ND		0.21	0.21	ug/m3			06/08/16 14:10	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			06/08/16 14:10	1
Toluene	ND		0.45	0.45	ug/m3			06/08/16 14:10	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			06/08/16 14:10	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			06/08/16 14:10	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			06/08/16 14:10	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			06/08/16 14:10	1
Trichloroethene	ND		0.21	0.075	ug/m3			06/08/16 14:10	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			06/08/16 14:10	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-5183/6
Matrix: Air
Analysis Batch: 5183

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			06/08/16 14:10	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			06/08/16 14:10	1
Vinyl chloride	ND		0.10	0.074	ug/m3			06/08/16 14:10	1
Xylenes, Total	ND		0.69	0.10	ug/m3			06/08/16 14:10	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*06/08/16 14:10*	*1*

Lab Sample ID: LCS 140-5183/1002
Matrix: Air
Analysis Batch: 5183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.25		ppb v/v		113	70 - 130
Carbon tetrachloride	2.00	2.50		ppb v/v		125	70 - 130
Chlorodifluoromethane	2.00	2.24		ppb v/v		112	60 - 140
Chloroform	2.00	2.19		ppb v/v		109	70 - 130
cis-1,2-Dichloroethene	2.00	2.16		ppb v/v		108	70 - 130
Dichlorodifluoromethane	2.00	2.45		ppb v/v		122	60 - 140
1,1-Dichloroethane	2.00	2.24		ppb v/v		112	70 - 130
1,2-Dichloroethane	2.00	2.23		ppb v/v		111	70 - 130
1,1-Dichloroethene	2.00	2.46		ppb v/v		123	70 - 130
Ethylbenzene	2.00	2.18		ppb v/v		109	70 - 130
Methylene Chloride	2.00	2.23		ppb v/v		111	70 - 130
Methyl tert-butyl ether	2.00	2.13		ppb v/v		106	60 - 140
Naphthalene	2.00	1.88		ppb v/v		94	60 - 140
Tetrachloroethene	2.00	2.18		ppb v/v		109	70 - 130
Toluene	2.00	2.07		ppb v/v		103	70 - 130
trans-1,2-Dichloroethene	2.00	2.12		ppb v/v		106	70 - 130
1,2,4-Trichlorobenzene	2.00	1.43		ppb v/v		72	60 - 140
1,1,1-Trichloroethane	2.00	2.22		ppb v/v		111	70 - 130
1,1,2-Trichloroethane	2.00	2.23		ppb v/v		111	70 - 130
Trichloroethene	2.00	2.32		ppb v/v		116	70 - 130
1,2,3-Trimethylbenzene	2.00	2.19		ppb v/v		110	70 - 130
1,2,4-Trimethylbenzene	2.00	2.18		ppb v/v		109	70 - 130
1,3,5-Trimethylbenzene	2.00	2.13		ppb v/v		106	70 - 130
Vinyl chloride	2.00	2.43		ppb v/v		121	70 - 130
Xylenes, Total	6.00	6.59		ppb v/v		110	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	7.20		ug/m3		113	70 - 130
Carbon tetrachloride	13	15.7		ug/m3		125	70 - 130
Chlorodifluoromethane	7.1	7.91		ug/m3		112	60 - 140
Chloroform	9.8	10.7		ug/m3		109	70 - 130
cis-1,2-Dichloroethene	7.9	8.57		ug/m3		108	70 - 130
Dichlorodifluoromethane	9.9	12.1		ug/m3		122	60 - 140
1,1-Dichloroethane	8.1	9.06		ug/m3		112	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-5183/1002
Matrix: Air
Analysis Batch: 5183

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,2-Dichloroethane			8.1	9.01		ug/m3		111	70 - 130		
1,1-Dichloroethene			7.9	9.75		ug/m3		123	70 - 130		
Ethylbenzene			8.7	9.45		ug/m3		109	70 - 130		
Methylene Chloride			7.0	7.75		ug/m3		111	70 - 130		
Methyl tert-butyl ether			7.2	7.67		ug/m3		106	60 - 140		
Naphthalene			10	9.88		ug/m3		94	60 - 140		
Tetrachloroethene			14	14.8		ug/m3		109	70 - 130		
Toluene			7.5	7.79		ug/m3		103	70 - 130		
trans-1,2-Dichloroethene			7.9	8.39		ug/m3		106	70 - 130		
1,2,4-Trichlorobenzene			15	10.6		ug/m3		72	60 - 140		
1,1,1-Trichloroethane			11	12.1		ug/m3		111	70 - 130		
1,1,2-Trichloroethane			11	12.2		ug/m3		111	70 - 130		
Trichloroethene			11	12.5		ug/m3		116	70 - 130		
1,2,3-Trimethylbenzene			9.8	10.8		ug/m3		110	70 - 130		
1,2,4-Trimethylbenzene			9.8	10.7		ug/m3		109	70 - 130		
1,3,5-Trimethylbenzene			9.8	10.5		ug/m3		106	70 - 130		
Vinyl chloride			5.1	6.21		ug/m3		121	70 - 130		
Xylenes, Total			26	28.6		ug/m3		110	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Air - GC/MS VOA

Analysis Batch: 5183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5091-1	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-5091-2	A-MID-GAC	Total/NA	Air	TO 15 LL	
140-5091-3	A-EFFLUENT	Total/NA	Air	TO 15 LL	
LCS 140-5183/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	
MB 140-5183/6	Method Blank	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Client Sample ID: A-INFLUENT
Date Collected: 06/02/16 15:52
Date Received: 06/07/16 09:30

Lab Sample ID: 140-5091-1
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	11 mL	500 mL	5183	06/08/16 20:25	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: A-MID-GAC
Date Collected: 06/02/16 15:48
Date Received: 06/07/16 09:30

Lab Sample ID: 140-5091-2
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5183	06/08/16 21:06	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: A-EFFLUENT
Date Collected: 06/02/16 15:45
Date Received: 06/07/16 09:30

Lab Sample ID: 140-5091-3
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5183	06/08/16 21:48	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-5183/1002
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	5183	06/08/16 10:36	HMT	TAL KNX
	Instrument ID: MG									

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 140-5183/6
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	5183	06/08/16 14:10	HMT	TAL KNX
	Instrument ID: MG									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC-MRC

TestAmerica Job ID: 140-5091-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5091-1	A-INFLUENT	Air	06/02/16 15:52	06/07/16 09:30
140-5091-2	A-MID-GAC	Air	06/02/16 15:48	06/07/16 09:30
140-5091-3	A-EFFLUENT	Air	06/02/16 15:45	06/07/16 09:30

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
A-INFLUENT	140-5091-1	103
A-MID-GAC	140-5091-2	105
A-EFFLUENT	140-5091-3	106
	MB 140-5183/6	105
	LCS 140-5183/1002	108

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Matrix: Air Level: Low Lab File ID: GCCVF08-LCS.d

Lab ID: LCS 140-5183/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.25	113	70-130	
Carbon tetrachloride	2.00	2.50	125	70-130	
Chlorodifluoromethane	2.00	2.24	112	60-140	
Chloroform	2.00	2.19	109	70-130	
cis-1,2-Dichloroethene	2.00	2.16	108	70-130	
Dichlorodifluoromethane	2.00	2.45	122	60-140	
1,1-Dichloroethane	2.00	2.24	112	70-130	
1,2-Dichloroethane	2.00	2.23	111	70-130	
1,1-Dichloroethene	2.00	2.46	123	70-130	
Ethylbenzene	2.00	2.18	109	70-130	
Methylene Chloride	2.00	2.23	111	70-130	
Methyl tert-butyl ether	2.00	2.13	106	60-140	
Naphthalene	2.00	1.88	94	60-140	
Tetrachloroethene	2.00	2.18	109	70-130	
Toluene	2.00	2.07	103	70-130	
trans-1,2-Dichloroethene	2.00	2.12	106	70-130	
1,2,4-Trichlorobenzene	2.00	1.43	72	60-140	
1,1,1-Trichloroethane	2.00	2.22	111	70-130	
1,1,2-Trichloroethane	2.00	2.23	111	70-130	
Trichloroethene	2.00	2.32	116	70-130	
1,2,3-Trimethylbenzene	2.00	2.19	110	70-130	
1,2,4-Trimethylbenzene	2.00	2.18	109	70-130	
1,3,5-Trimethylbenzene	2.00	2.13	106	70-130	
Vinyl chloride	2.00	2.43	121	70-130	
Xylenes, Total	6.00	6.59	110	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab File ID: GMB500F08.D Lab Sample ID: MB 140-5183/6

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MG Date Analyzed: 06/08/2016 14:10

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
A-INFLUENT	140-5091-1	GF08P109.D	06/08/2016 20:25
A-MID-GAC	140-5091-2	GF08P110.D	06/08/2016 21:06
A-EFFLUENT	140-5091-3	GF08P111.D	06/08/2016 21:48

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab File ID: GBFBE23.D BFB Injection Date: 05/23/2016

Instrument ID: MG BFB Injection Time: 13:11

Analysis Batch No.: 5077

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.4	
75	30.0 - 60.0 % of mass 95	50.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	71.6	
175	5.0 - 9.0 % of mass 174	4.9	(6.9) 1
176	95.0 - 101.0 % of mass 174	68.9	(96.2) 1
177	5.0 - 9.0 % of mass 176	4.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5077/2	GE23ICL1.D	05/23/2016	13:43
	IC 140-5077/3	GE23ICL2.D	05/23/2016	14:25
	IC 140-5077/4	GE23ICL3.D	05/23/2016	15:07
	IC 140-5077/5	GE23ICL4.D	05/23/2016	15:49
	IC 140-5077/6	GE23ICL5.D	05/23/2016	16:34
	ICIS 140-5077/7	GE23ICL6.D	05/23/2016	17:18
	IC 140-5077/8	GE23ICL7.D	05/23/2016	18:01
	IC 140-5077/9	GE23ICL8.D	05/23/2016	18:43
	IC 140-5077/10	GE23ICL9.D	05/23/2016	19:26
	ICV 140-5077/12	GE19ICV.D	05/23/2016	20:50

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab File ID: GBFBF08.D BFB Injection Date: 06/08/2016

Instrument ID: MG BFB Injection Time: 10:02

Analysis Batch No.: 5183

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.1	
75	30.0 - 60.0 % of mass 95	51.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.3	(0.5) 1
174	50.0 - 120.00 % of mass 95	63.9	
175	5.0 - 9.0 % of mass 174	4.4	(6.9) 1
176	95.0 - 101.0 % of mass 174	61.0	(95.5) 1
177	5.0 - 9.0 % of mass 176	3.9	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-5183/2	GCCVF08.D	06/08/2016	10:36
	LCS 140-5183/1002	GCCVF08-LCS.d	06/08/2016	10:36
	MB 140-5183/6	GMB500F08.D	06/08/2016	14:10
A-INFLUENT	140-5091-1	GF08P109.D	06/08/2016	20:25
A-MID-GAC	140-5091-2	GF08P110.D	06/08/2016	21:06
A-EFFLUENT	140-5091-3	GF08P111.D	06/08/2016	21:48

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Sample No.: ICIS 140-5077/7 Date Analyzed: 05/23/2016 17:18

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GE23ICL6.D Heated Purge: (Y/N) N

Calibration ID: 555

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		350491	8.54	1697995	10.71	1572028	15.48
UPPER LIMIT		490687	8.87	2377193	11.04	2200839	15.81
LOWER LIMIT		210295	8.21	1018797	10.38	943217	15.15
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5077/12		318849	8.54	1421809	10.71	1374396	15.48

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Sample No.: CCVIS 140-5183/2 Date Analyzed: 06/08/2016 10:36

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): GCCVF08.D Heated Purge: (Y/N) N

Calibration ID: 555

		CBM		DFB		CBZ	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		281217	8.55	1208815	10.71	1156942	15.48
UPPER LIMIT		393704	8.88	1692341	11.04	1619719	15.81
LOWER LIMIT		168730	8.22	725289	10.38	694165	15.15
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-5183/1002		281217	8.55	1208815	10.71	1156942	15.48
MB 140-5183/6		297759	8.54	1456045	10.70	1347180	15.47
140-5091-1	A-INFLUENT	301639	8.54	1428937	10.71	1370012	15.47
140-5091-2	A-MID-GAC	323643	8.52	1612899	10.69	1488419	15.46
140-5091-3	A-EFFLUENT	291484	8.53	1370996	10.69	1333445	15.47

CBM = Chlorobromomethane (IS)
DFB = 1,4-Difluorobenzene
CBZ = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-5091-1

Matrix: Air Lab File ID: GF08P109.D

Analysis Method: TO 15 LL Date Collected: 06/02/2016 15:52

Sample wt/vol: 11(mL) Date Analyzed: 06/08/2016 20:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	9.8		3.6	1.0
56-23-5	Carbon tetrachloride	153.81	ND		3.6	0.68
75-45-6	Chlorodifluoromethane	86.47	18		3.6	0.68
67-66-3	Chloroform	119.38	ND		3.6	0.68
156-59-2	cis-1,2-Dichloroethene	96.94	39		3.6	1.1
75-71-8	Dichlorodifluoromethane	120.91	ND		3.6	1.2
75-34-3	1,1-Dichloroethane	98.96	6.5		3.6	0.45
107-06-2	1,2-Dichloroethane	98.96	ND		3.6	0.86
75-35-4	1,1-Dichloroethene	96.94	35		3.6	0.64
100-41-4	Ethylbenzene	106.17	ND		3.6	1.2
75-09-2	Methylene Chloride	84.93	ND		9.1	5.9
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		1.8	1.8
127-18-4	Tetrachloroethene	165.83	ND		3.6	0.73
108-88-3	Toluene	92.14	ND		5.5	5.5
156-60-5	trans-1,2-Dichloroethene	96.94	0.92	J	3.6	0.91
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.6	1.8
71-55-6	1,1,1-Trichloroethane	133.41	120		3.6	0.55
79-00-5	1,1,2-Trichloroethane	133.41	ND		3.6	0.95
79-01-6	Trichloroethene	131.39	210		1.8	0.64
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		3.6	1.5
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		3.6	1.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		3.6	1.2
75-01-4	Vinyl chloride	62.50	ND		1.8	1.3
1330-20-7	Xylenes, Total	106.17	ND		7.3	1.1

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-5091-1

Matrix: Air Lab File ID: GF08P109.D

Analysis Method: TO 15 LL Date Collected: 06/02/2016 15:52

Sample wt/vol: 11(mL) Date Analyzed: 06/08/2016 20:25

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	31		12	3.3
56-23-5	Carbon tetrachloride	153.81	ND		23	4.3
75-45-6	Chlorodifluoromethane	86.47	63		13	2.4
67-66-3	Chloroform	119.38	ND		18	3.3
156-59-2	cis-1,2-Dichloroethene	96.94	150		14	4.3
75-71-8	Dichlorodifluoromethane	120.91	ND		18	6.1
75-34-3	1,1-Dichloroethane	98.96	26		15	1.8
107-06-2	1,2-Dichloroethane	98.96	ND		15	3.5
75-35-4	1,1-Dichloroethene	96.94	140		14	2.5
100-41-4	Ethylbenzene	106.17	ND		16	5.3
75-09-2	Methylene Chloride	84.93	ND		32	21
1634-04-4	Methyl tert-butyl ether	88.15	ND		66	11
91-20-3	Naphthalene	128.17	ND		9.5	9.5
127-18-4	Tetrachloroethene	165.83	ND		25	4.9
108-88-3	Toluene	92.14	ND		21	21
156-60-5	trans-1,2-Dichloroethene	96.94	3.6	J	14	3.6
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		27	13
71-55-6	1,1,1-Trichloroethane	133.41	670		20	3.0
79-00-5	1,1,2-Trichloroethane	133.41	ND		20	5.2
79-01-6	Trichloroethene	131.39	1100		9.8	3.4
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		18	7.6
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		18	5.6
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		18	5.8
75-01-4	Vinyl chloride	62.50	ND		4.6	3.4
1330-20-7	Xylenes, Total	106.17	ND		32	4.7

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D
Lims ID: 140-5091-A-1
Client ID: A-INFLUENT
Sample Type: Client
Inject. Date: 08-Jun-2016 20:25:30 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-5091-a-1
Misc. Info.: G060816,TO15,140-0002946-015
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Jun-2016 08:10:21 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: tajh Date: 09-Jun-2016 07:44:29

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.541	8.551	-0.010	95	301639	4.00	
*	2 1,4-Difluorobenzene	114	10.708	10.714	-0.006	97	1428937	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.470	15.475	-0.005	92	1370012	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.120	17.131	-0.011	82	1024647	4.12	
	6 Chlorodifluoromethane	67	3.714	3.714	0.000	98	10280	0.3898	
	27 1,1-Dichloroethene	96	5.790	5.796	-0.006	93	57246	0.7768	
	31 Methylene Chloride	84	6.114	6.119	-0.005	97	5549	0.0645	
	34 trans-1,2-Dichloroethene	96	6.885	6.890	-0.005	93	1921	0.0202	
	37 1,1-Dichloroethane	63	7.284	7.290	-0.006	100	28138	0.1421	
	42 cis-1,2-Dichloroethene	96	8.228	8.233	-0.005	98	84220	0.8588	
	47 1,1,1-Trichloroethane	97	9.560	9.565	-0.005	96	601912	2.72	
	49 Benzene	78	10.153	10.158	-0.005	98	57835	0.2158	
	59 Trichloroethene	130	11.420	11.425	-0.005	92	639086	4.68	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

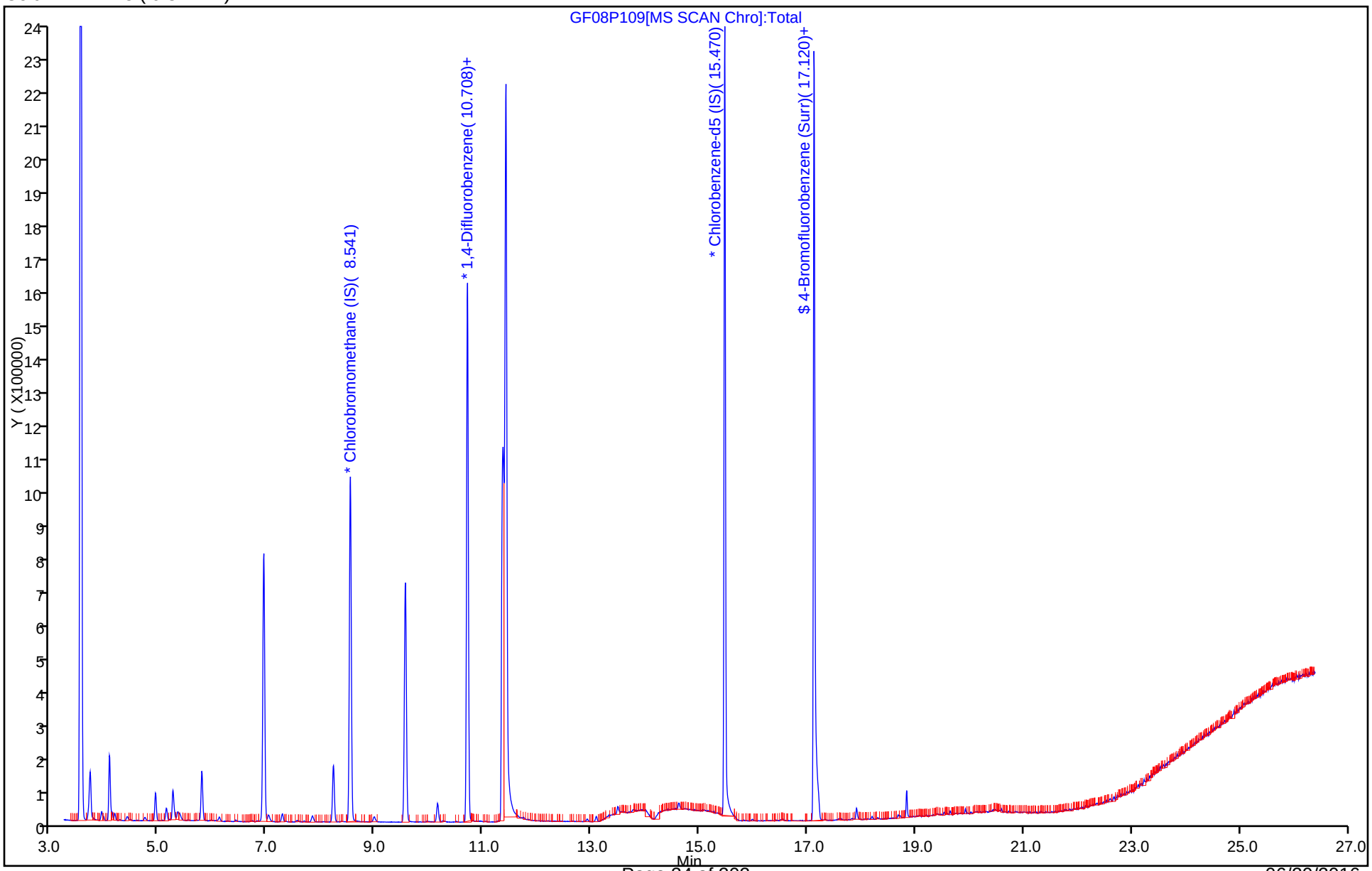
Report Date: 09-Jun-2016 08:10:47 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D

Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1	Worklist Smp#:	15
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D				
Lims ID:	140-5091-A-1				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	08-Jun-2016 20:25:30	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-5091-a-1				
Misc. Info.:	G060816,TO15,140-0002946-015				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jun-2016 08:10:21	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK009				

First Level Reviewer: tajh Date: 09-Jun-2016 07:44:29

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.12	102.99

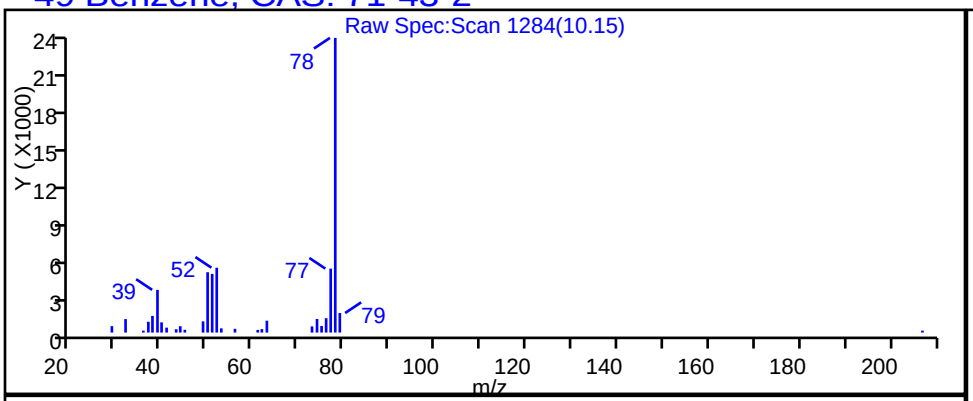
Report Date: 09-Jun-2016 08:10:47 Chrom Revision: 2.2 07-Jun-2016 12:31:34

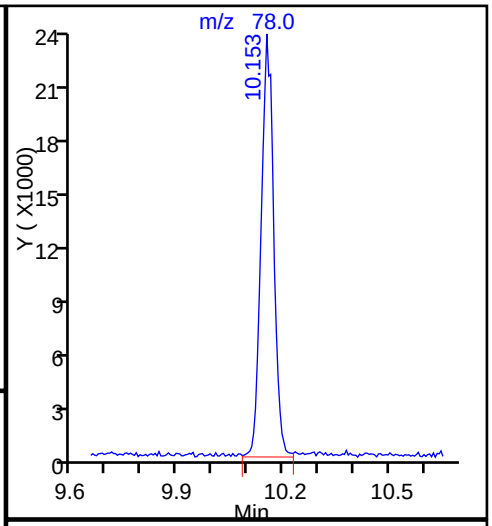
TestAmerica Knoxville

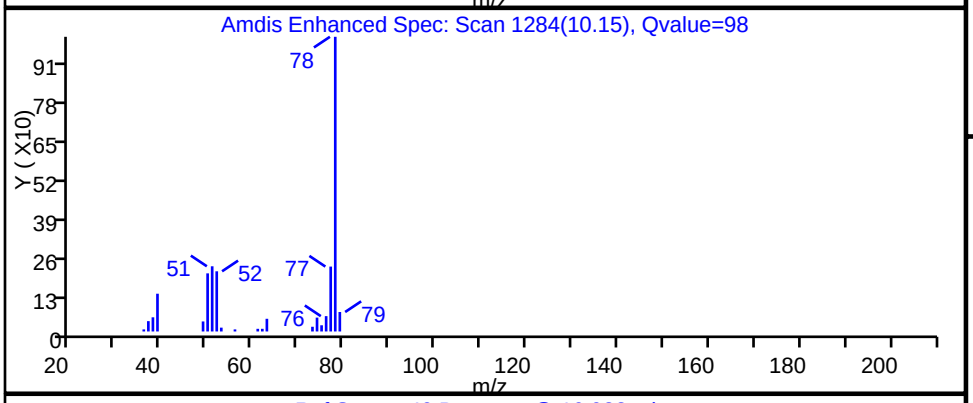
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D

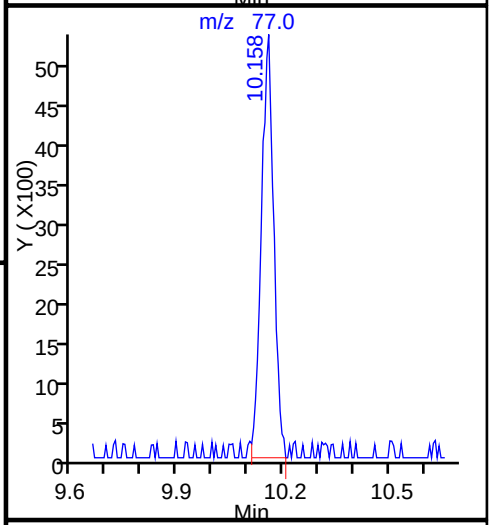
Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1
Client ID:	A-INFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

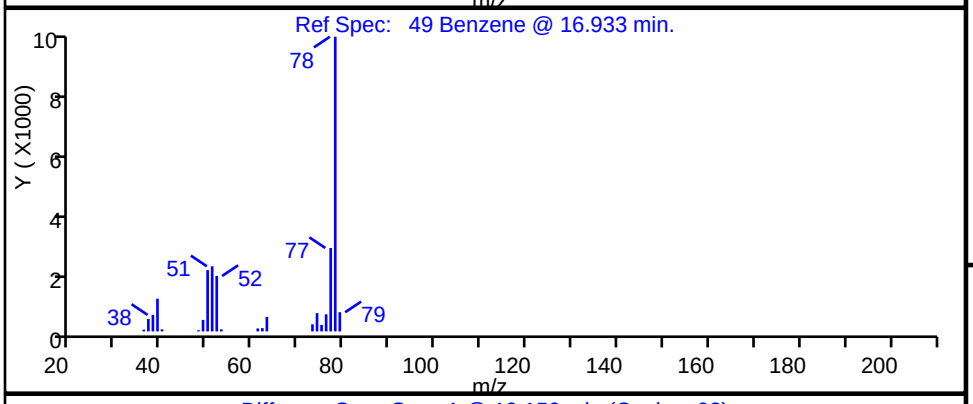
49 Benzene, CAS: 71-43-2

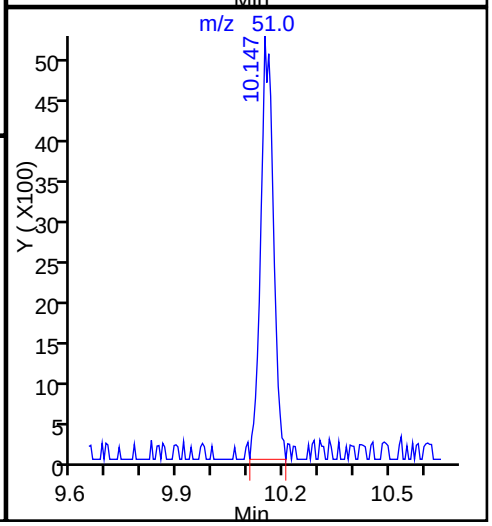


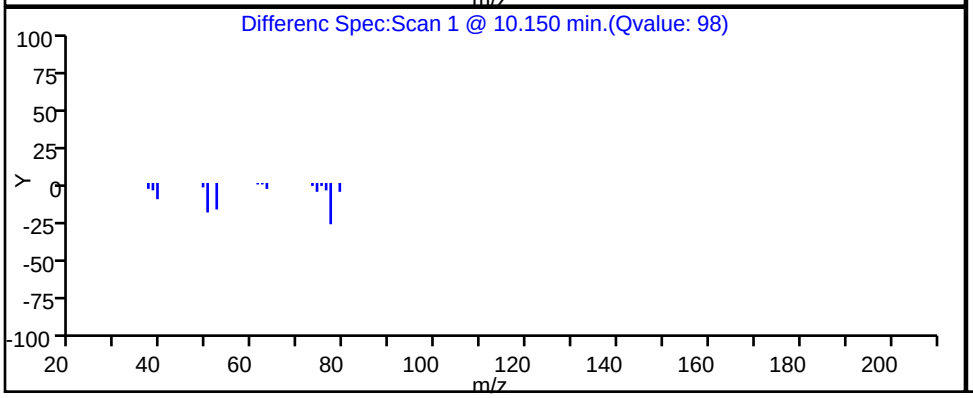








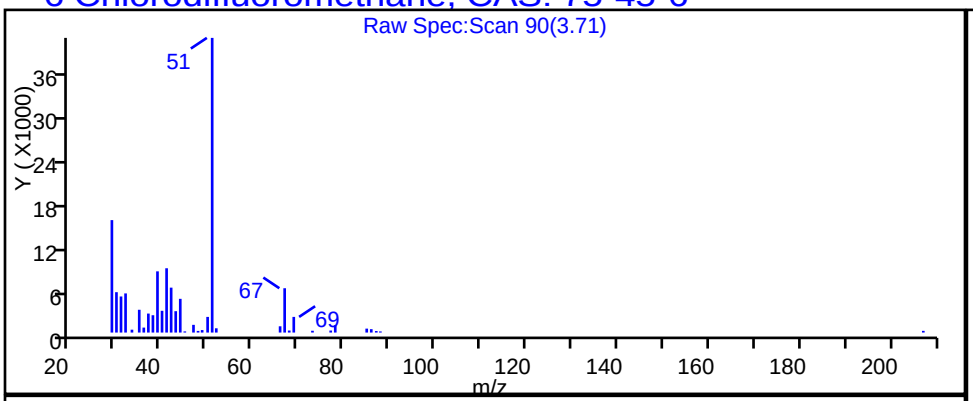


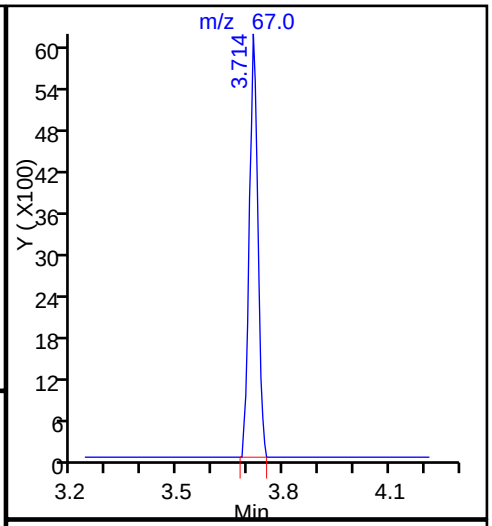


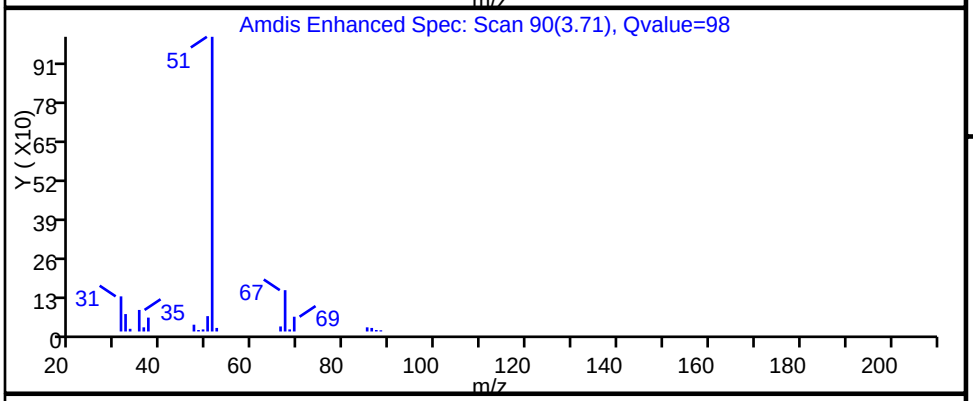
TestAmerica Knoxville

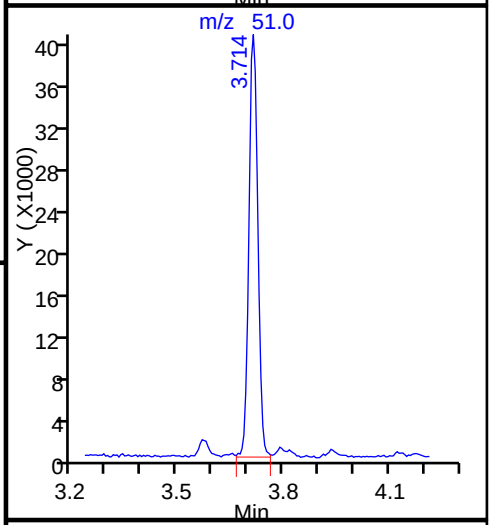
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D				
Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG		
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

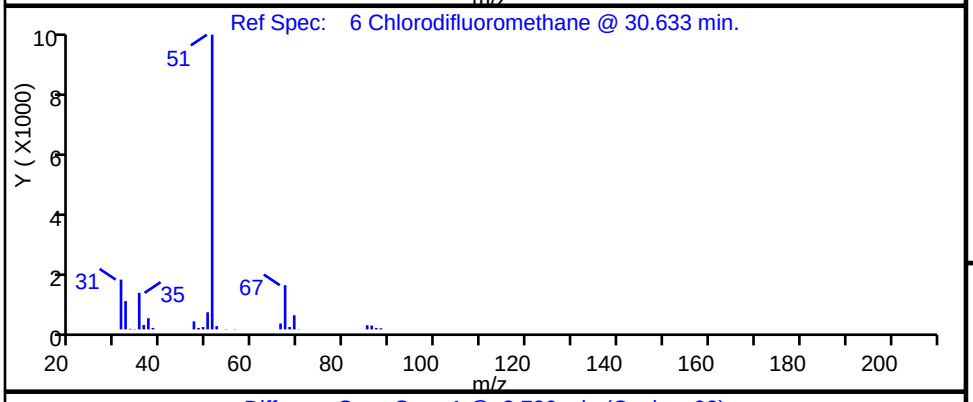
6 Chlorodifluoromethane, CAS: 75-45-6

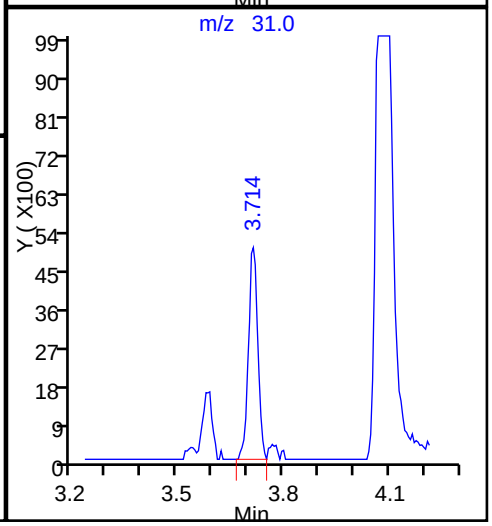


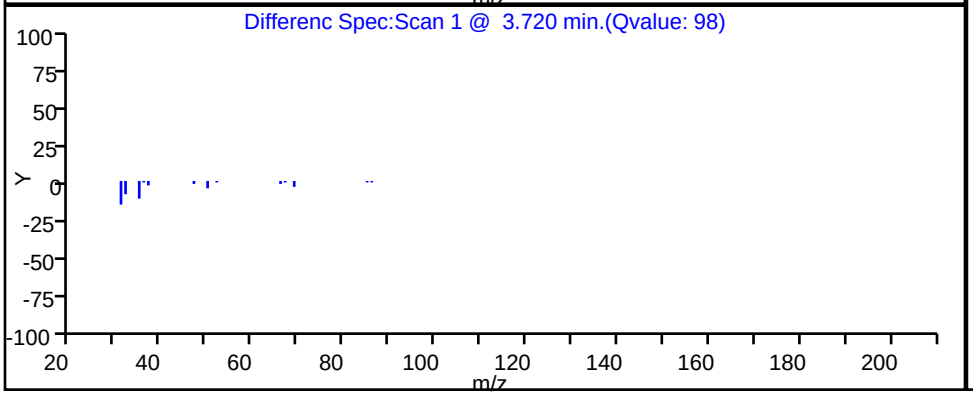








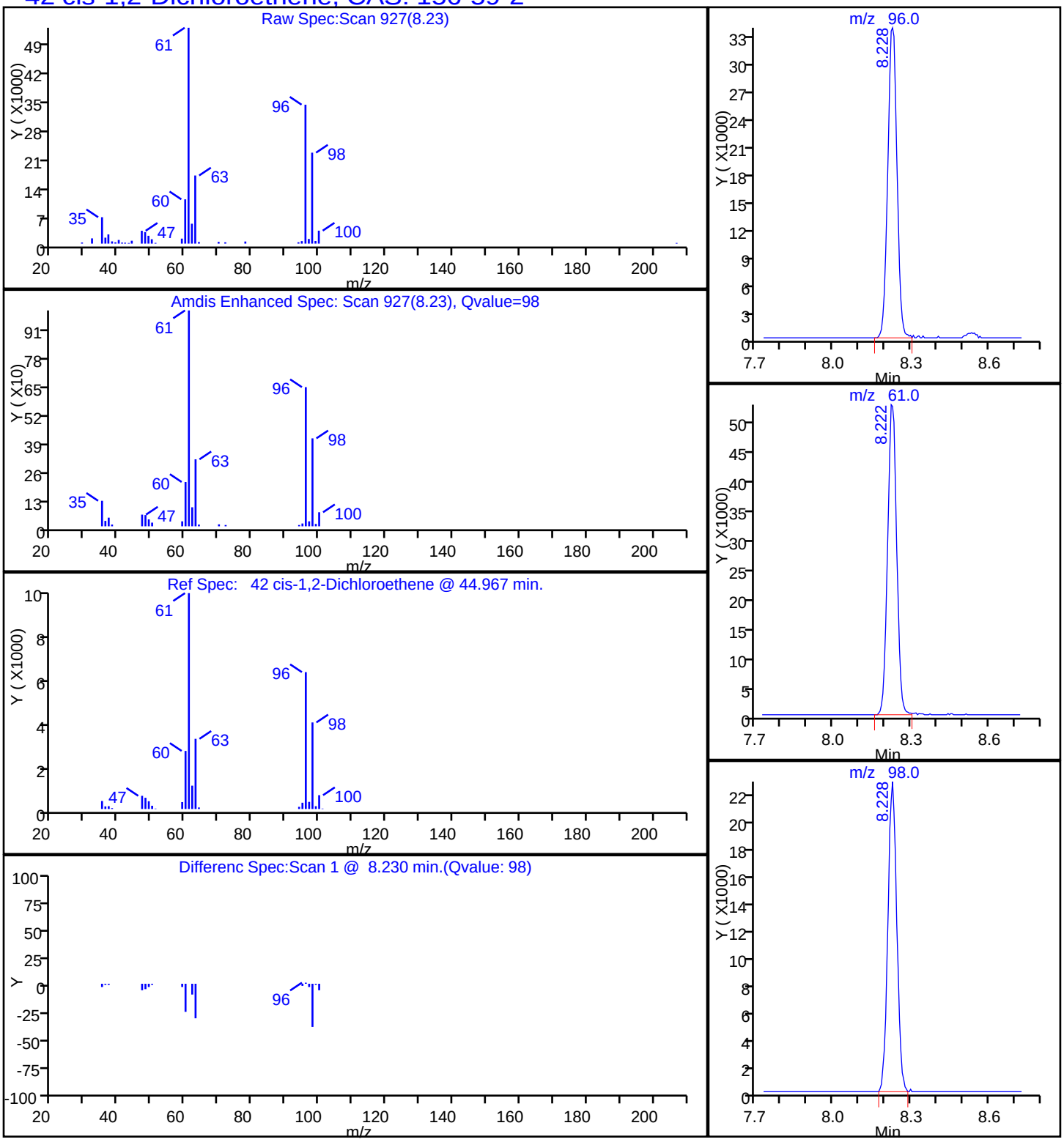




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D				
Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG		
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

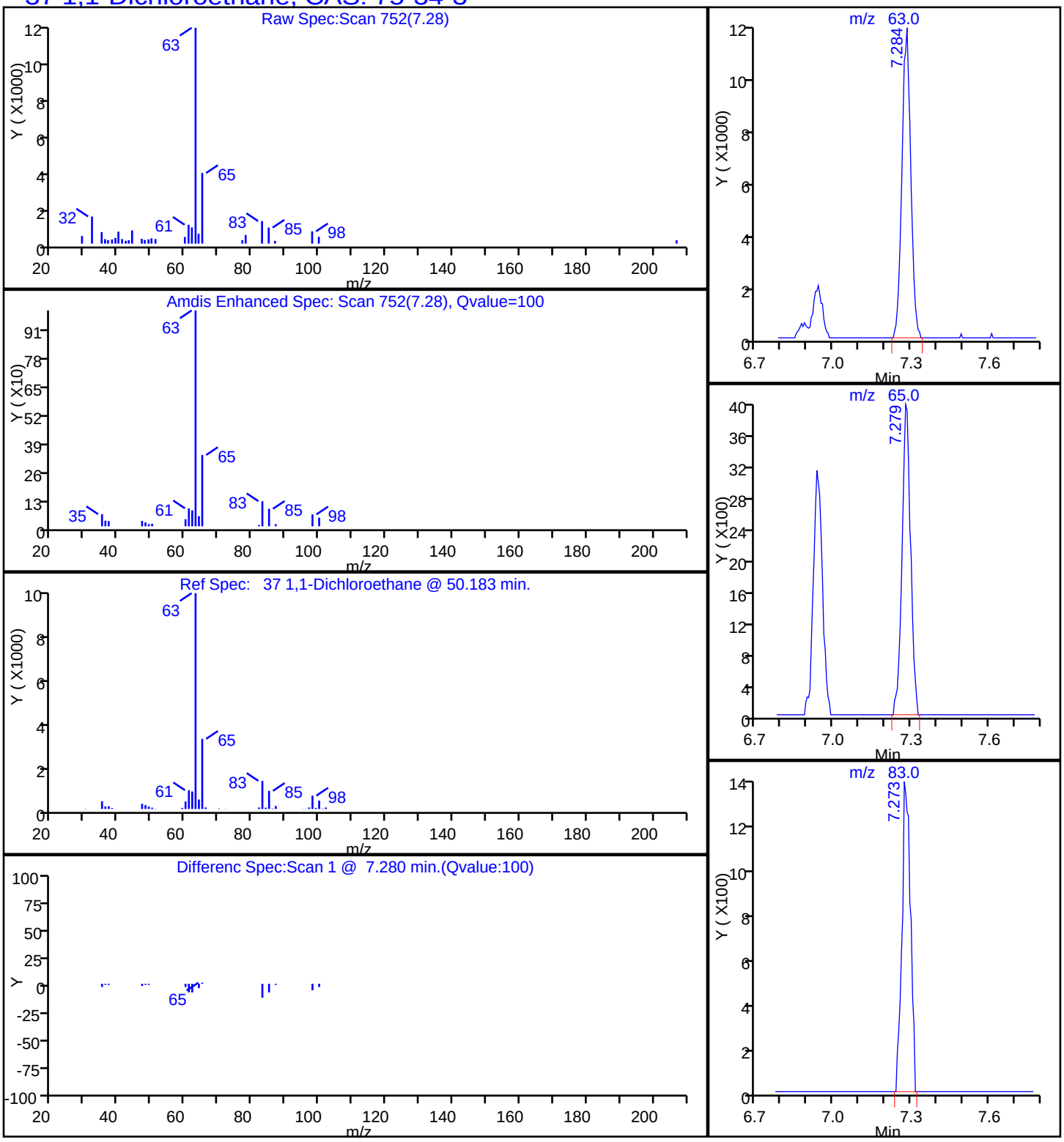
42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D
Injection Date: 08-Jun-2016 20:25:30 Instrument ID: MG
Lims ID: 140-5091-A-1 Lab Sample ID: 140-5091-1
Client ID: A-INFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

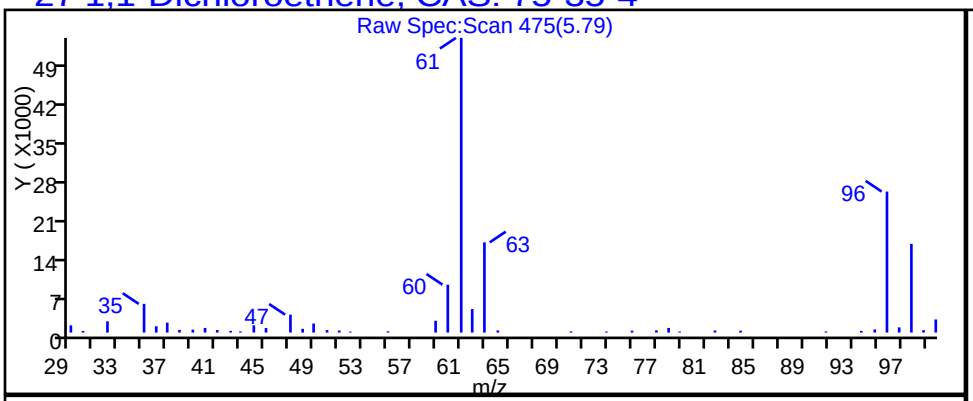


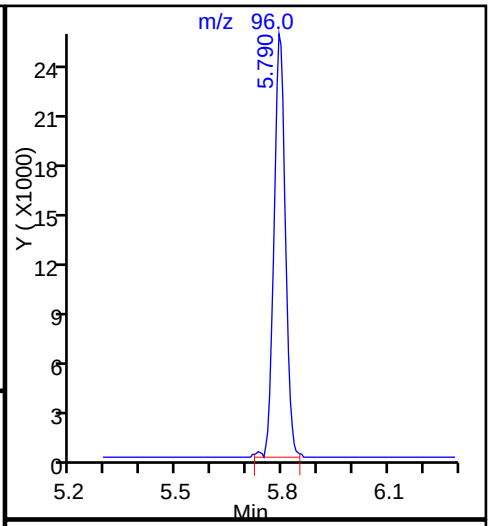
TestAmerica Knoxville

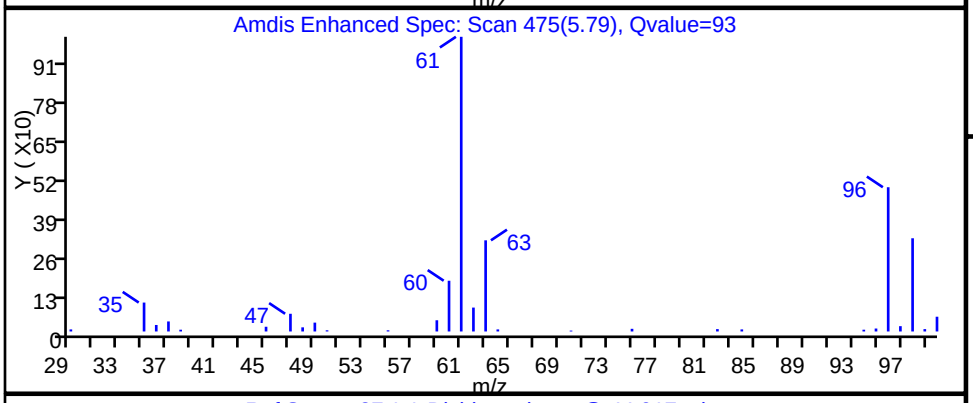
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D

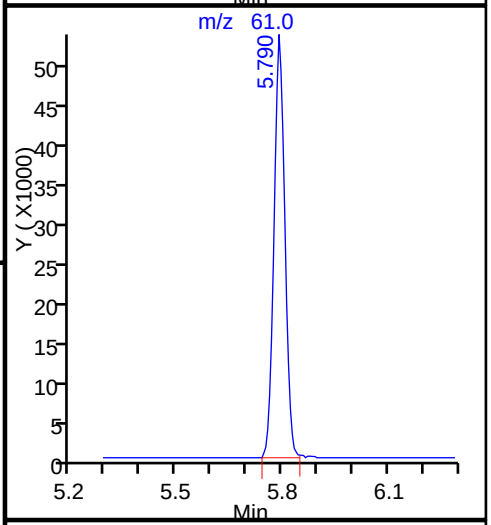
Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1
Client ID:	A-INFLUENT		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

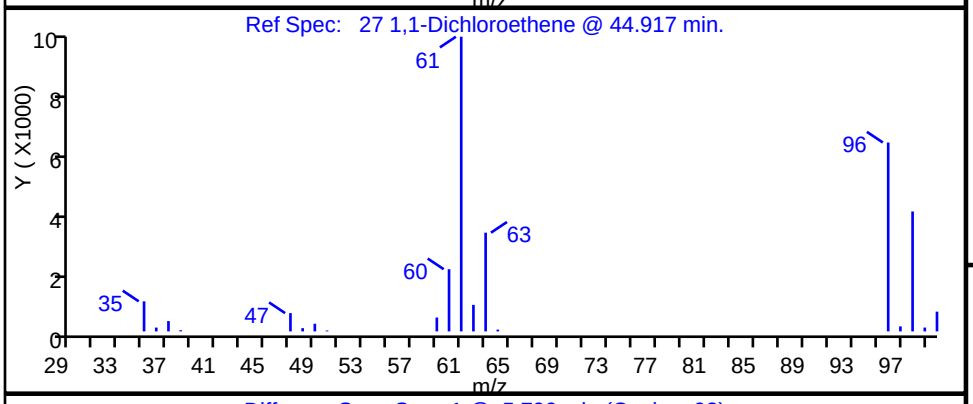
27 1,1-Dichloroethene, CAS: 75-35-4

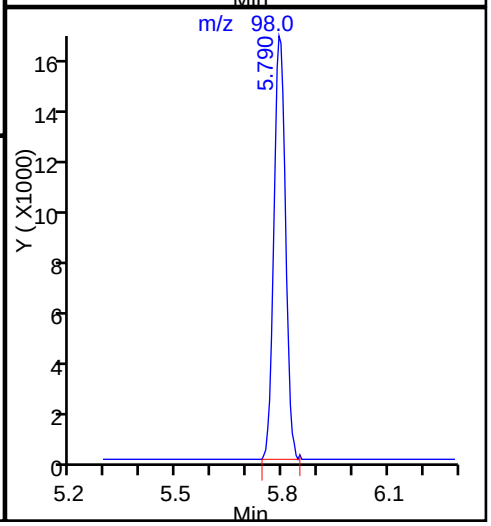


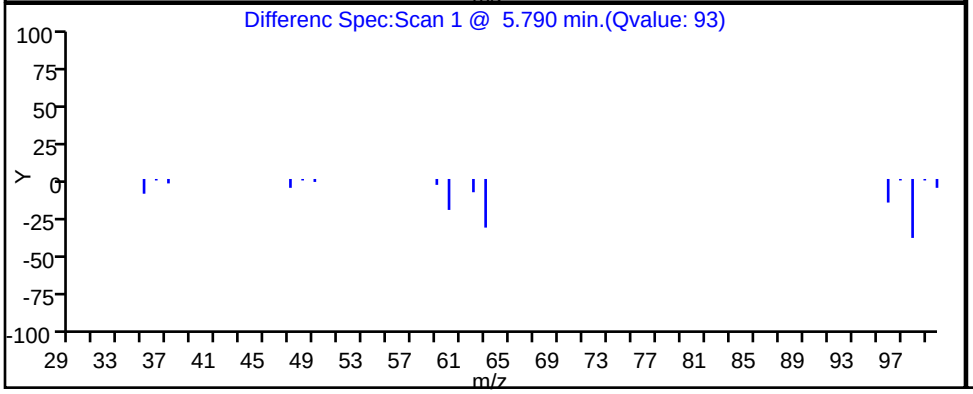








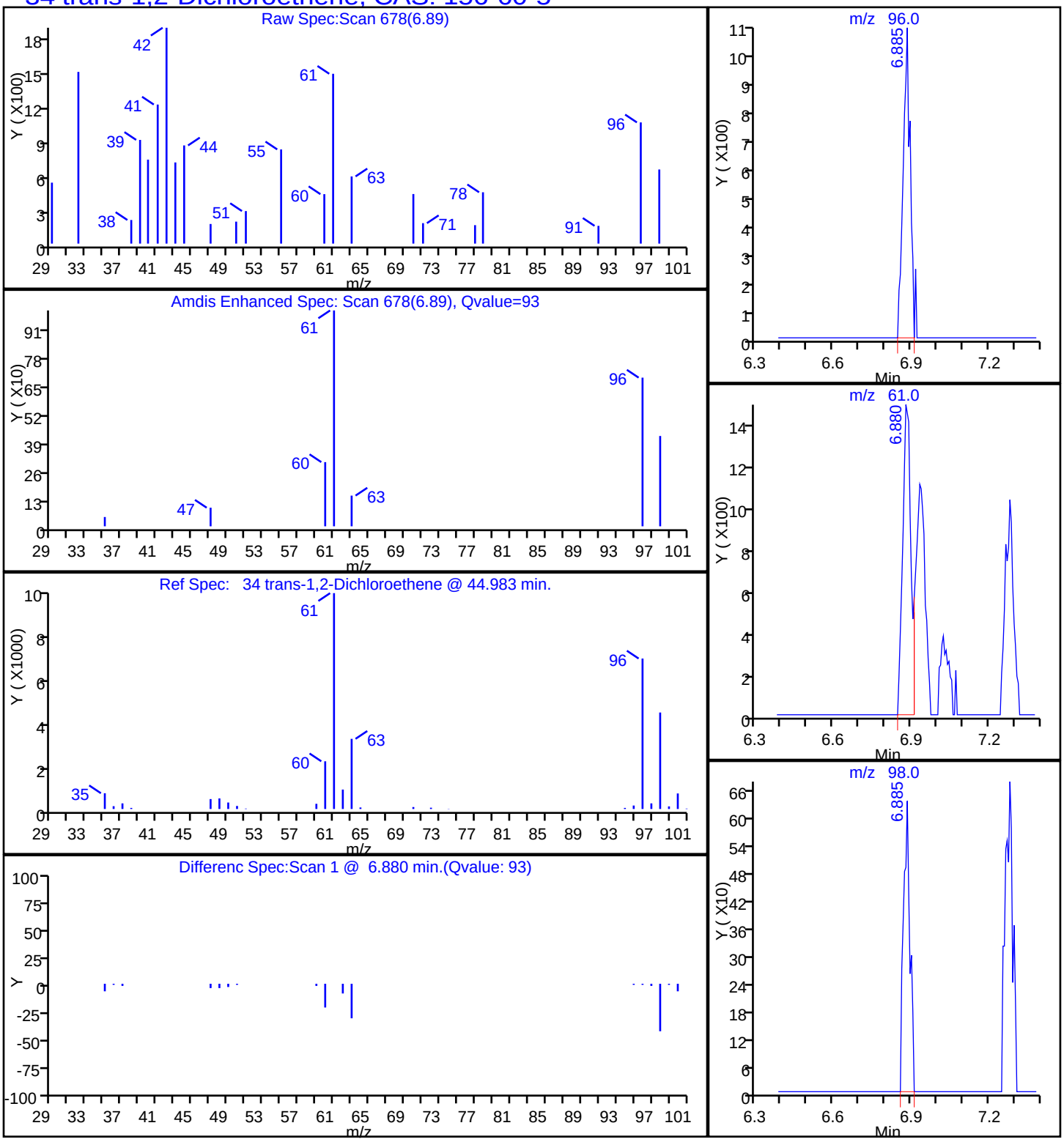




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D				
Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG		
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

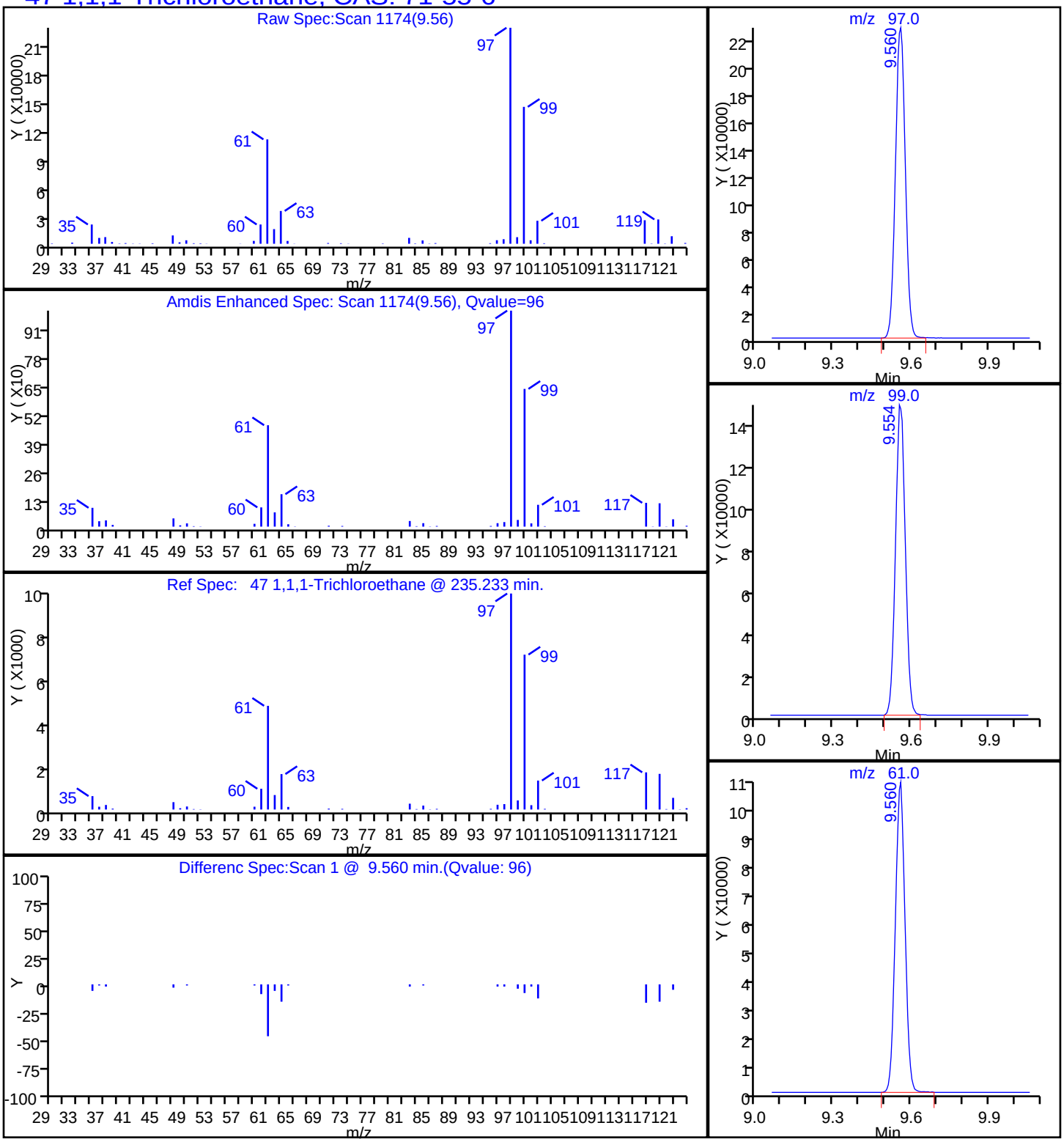
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D				
Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG		
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6

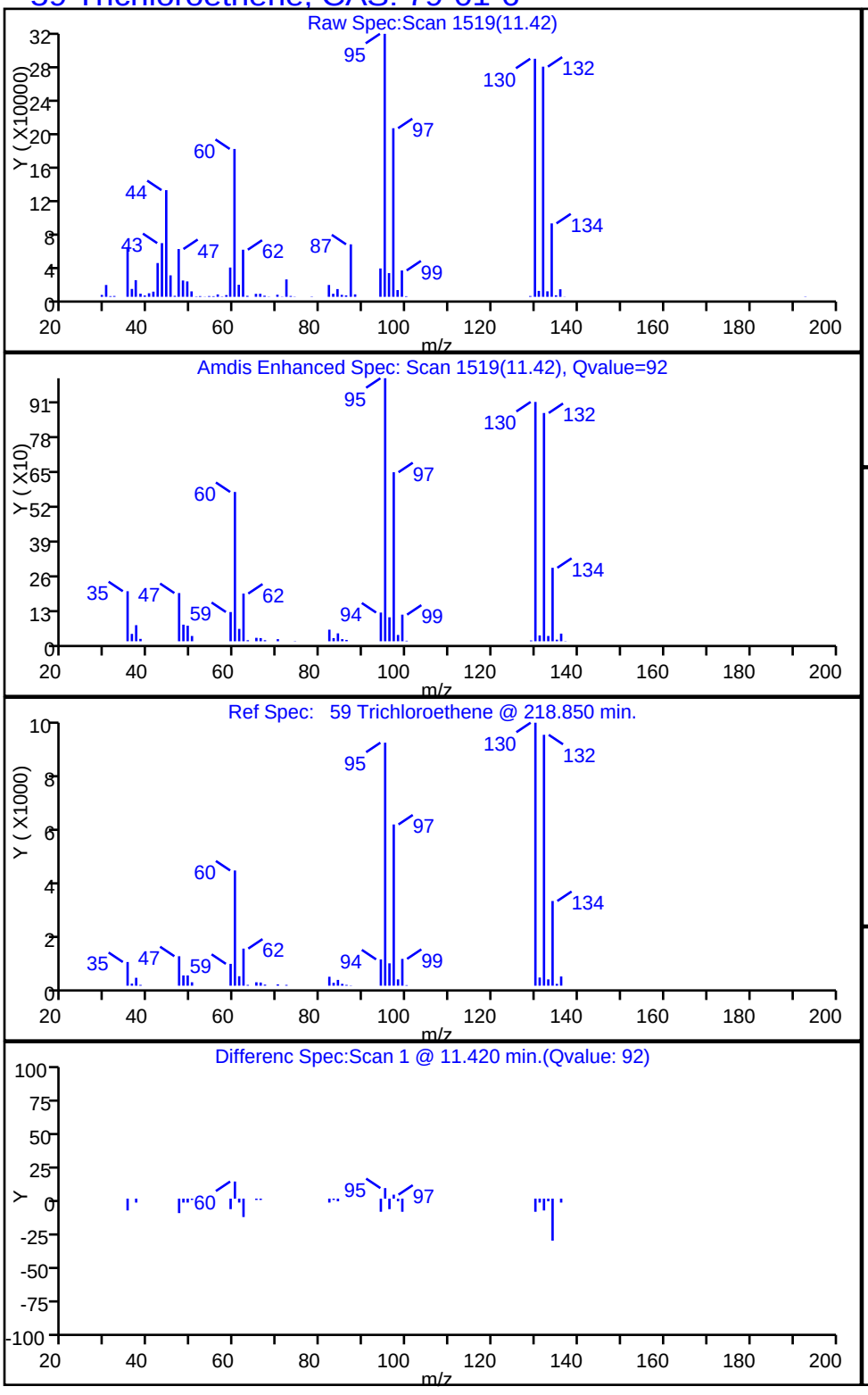


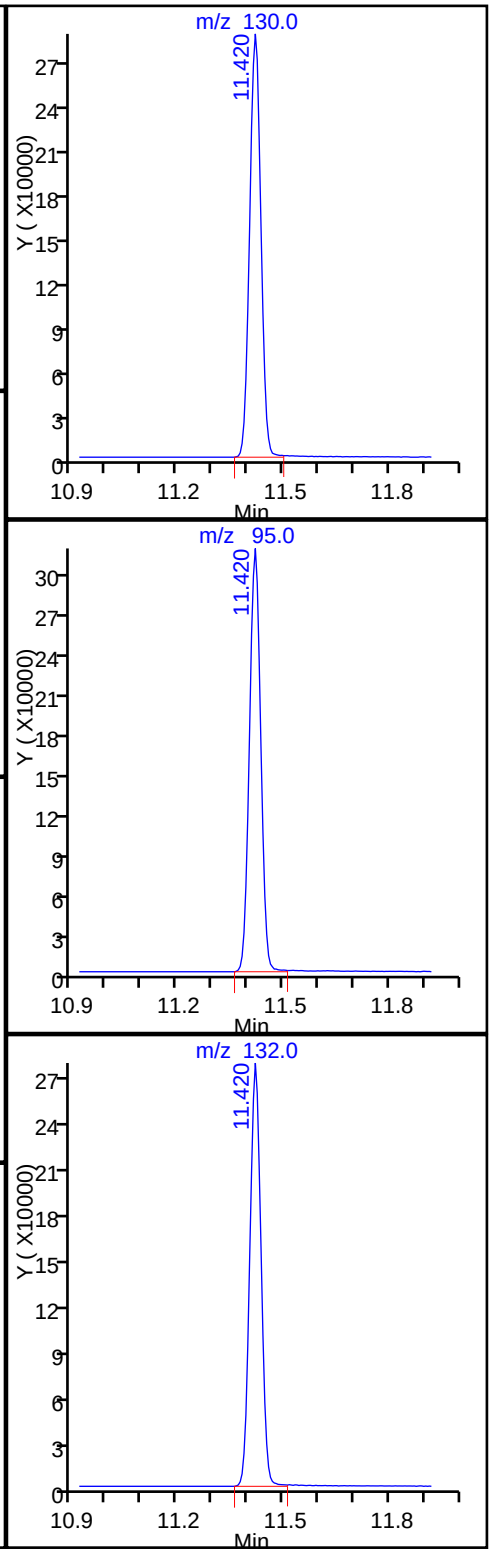
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P109.D

Injection Date:	08-Jun-2016 20:25:30	Instrument ID:	MG		
Lims ID:	140-5091-A-1	Lab Sample ID:	140-5091-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: A-MID-GAC Lab Sample ID: 140-5091-2

Matrix: Air Lab File ID: GF08P110.D

Analysis Method: TO 15 LL Date Collected: 06/02/2016 15:48

Sample wt/vol: 100(mL) Date Analyzed: 06/08/2016 21:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.80		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	24		0.40	0.075
67-66-3	Chloroform	119.38	0.22	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	16		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.48		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	7.3		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.65	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.82		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.26	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	6.2		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.29		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.15	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.41	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: A-MID-GAC Lab Sample ID: 140-5091-2

Matrix: Air Lab File ID: GF08P110.D

Analysis Method: TO 15 LL Date Collected: 06/02/2016 15:48

Sample wt/vol: 100(mL) Date Analyzed: 06/08/2016 21:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.6		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	85		1.4	0.27
67-66-3	Chloroform	119.38	1.1	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	64		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	5.6		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	29		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.2	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.0	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	34		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.6		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.39	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D
Lims ID: 140-5091-A-2
Client ID: A-MID-GAC
Sample Type: Client
Inject. Date: 08-Jun-2016 21:06:30 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-5091-a-2
Misc. Info.: G060816,TO15,140-0002946-016
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Jun-2016 13:17:31 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK053

First Level Reviewer: liul Date: 09-Jun-2016 14:09:33

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.524	8.551	-0.027	95	323643	4.00	
*	2 1,4-Difluorobenzene	114	10.692	10.714	-0.022	97	1612899	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.464	15.475	-0.011	93	1488419	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.120	17.131	-0.011	82	1139256	4.22	
	6 Chlorodifluoromethane	67	3.698	3.714	-0.016	98	136509	4.82	
	8 Dichlorodifluoromethane	85	3.758	3.774	-0.016	100	26661	0.0961	
	12 Vinyl chloride	62	4.081	4.097	-0.016	96	3216	0.0305	
	27 1,1-Dichloroethene	96	5.774	5.796	-0.022	93	115291	1.46	
	31 Methylene Chloride	84	6.098	6.119	-0.021	94	11940	0.1294	
	34 trans-1,2-Dichloroethene	96	6.869	6.890	-0.021	90	5285	0.0517	
	37 1,1-Dichloroethane	63	7.263	7.290	-0.027	99	58914	0.2773	
	42 cis-1,2-Dichloroethene	96	8.212	8.233	-0.021	98	341921	3.25	
	44 Chloroform	83	8.546	8.573	-0.027	90	10026	0.0442	
	47 1,1,1-Trichloroethane	97	9.544	9.565	-0.021	97	295077	1.24	
	49 Benzene	78	10.137	10.158	-0.021	97	48675	0.1609	
	59 Trichloroethene	130	11.409	11.425	-0.016	94	9057	0.0587	
	68 Toluene	91	13.480	13.496	-0.016	93	57913	0.1647	
	81 m-Xylene & p-Xylene	91	15.971	15.987	-0.016	97	19187	0.0551	
	85 o-Xylene	91	16.500	16.510	-0.010	98	9560	0.0252	
S	126 Xylenes, Total	100				0		0.0803	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

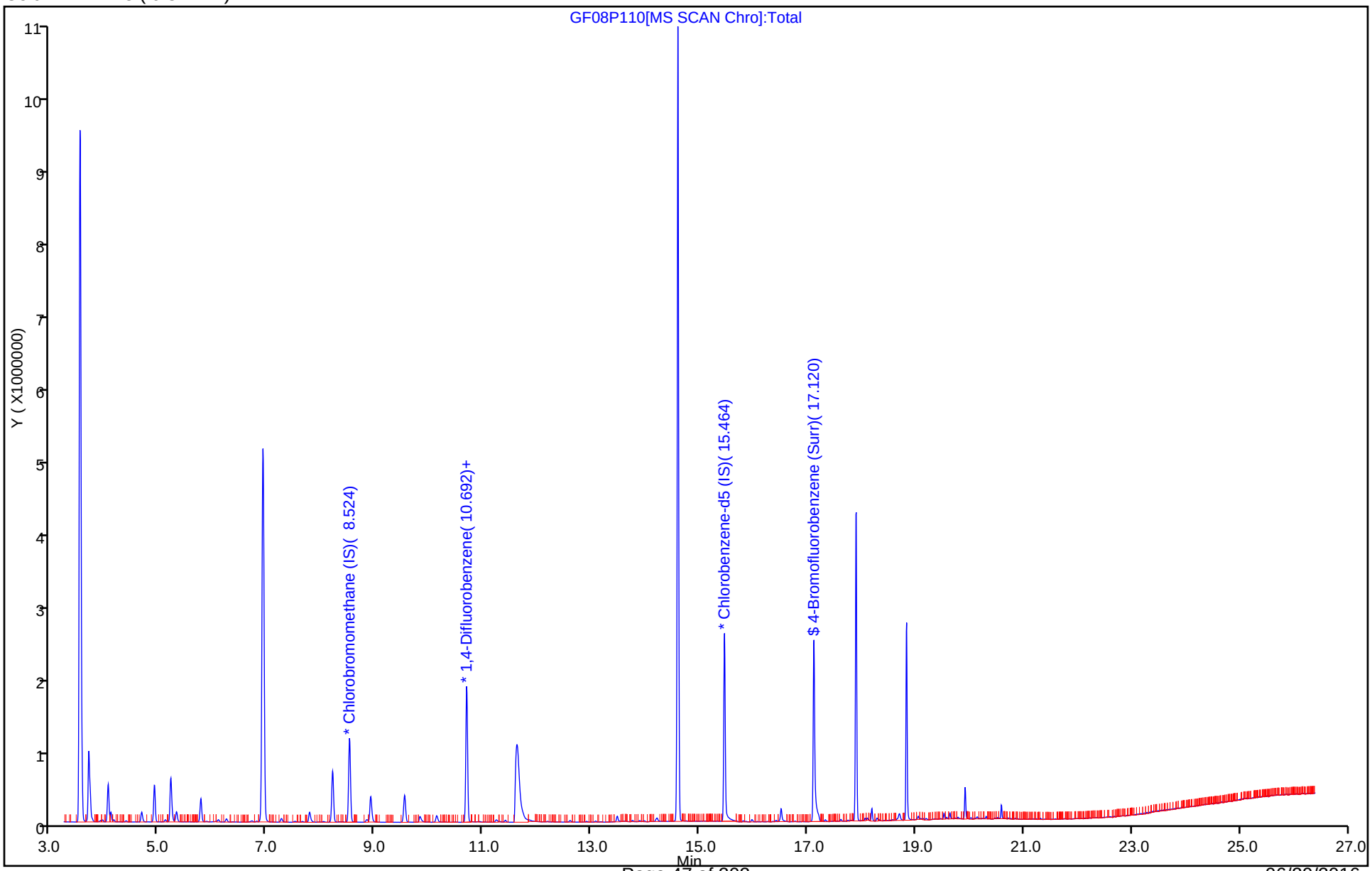
Report Date: 09-Jun-2016 14:09:36 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D

Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2	Worklist Smp#:	16
Client ID:	A-MID-GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

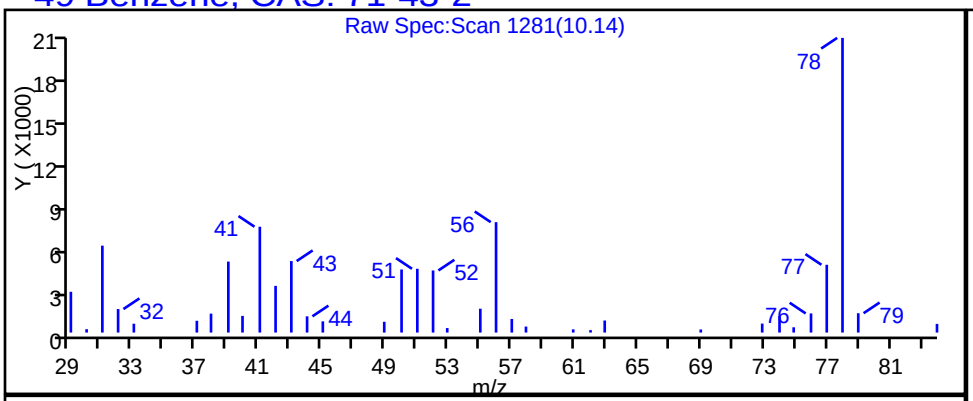
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Lims ID:	140-5091-A-2				
Client ID:	A-MID-GAC				
Sample Type:	Client				
Inject. Date:	08-Jun-2016 21:06:30	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-5091-a-2				
Misc. Info.:	G060816,TO15,140-0002946-016				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jun-2016 13:17:31	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK053				

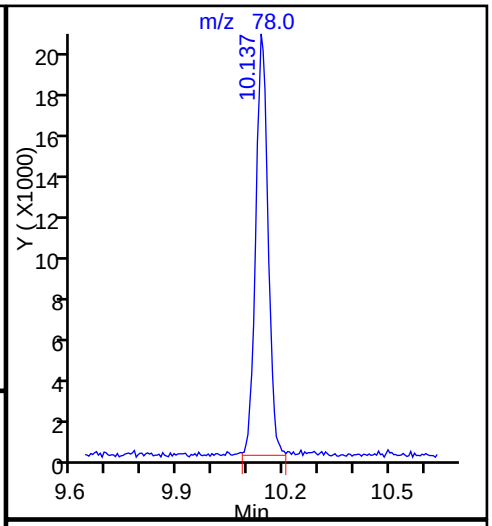
First Level Reviewer: liul Date: 09-Jun-2016 14:09:33

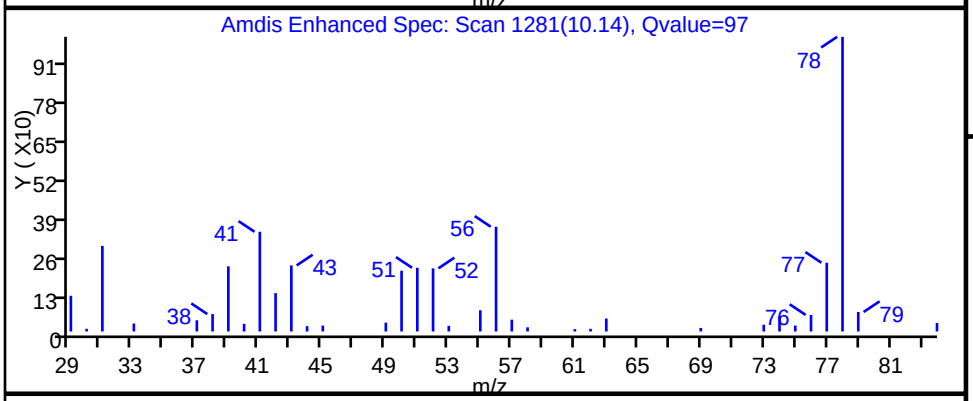
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.22	105.40

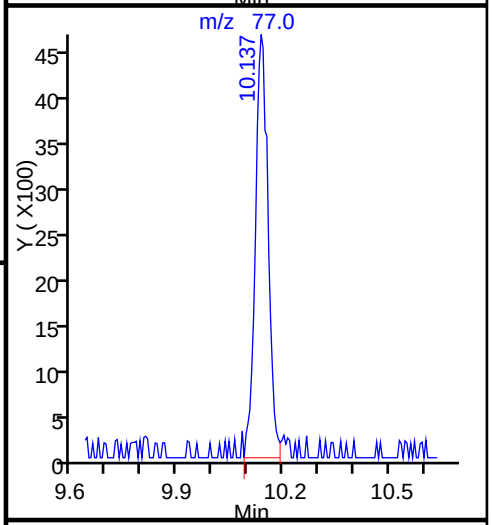
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D
Injection Date: 08-Jun-2016 21:06:30 Instrument ID: MG
Lims ID: 140-5091-A-2 Lab Sample ID: 140-5091-2
Client ID: A-MID-GAC
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

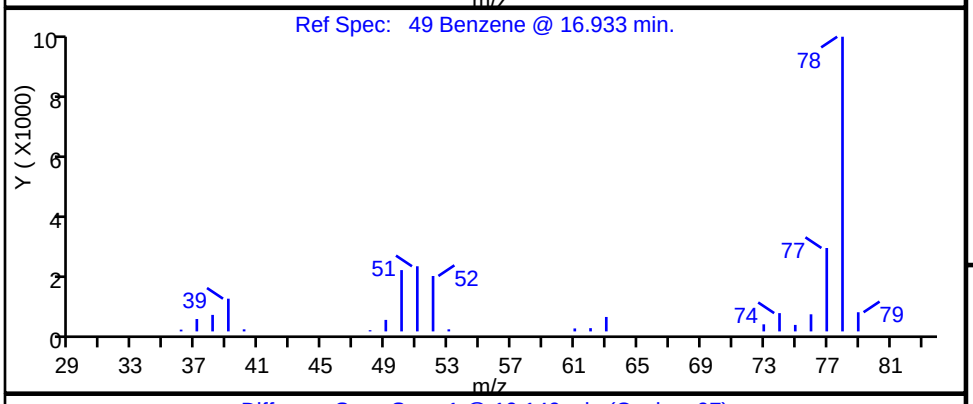
49 Benzene, CAS: 71-43-2

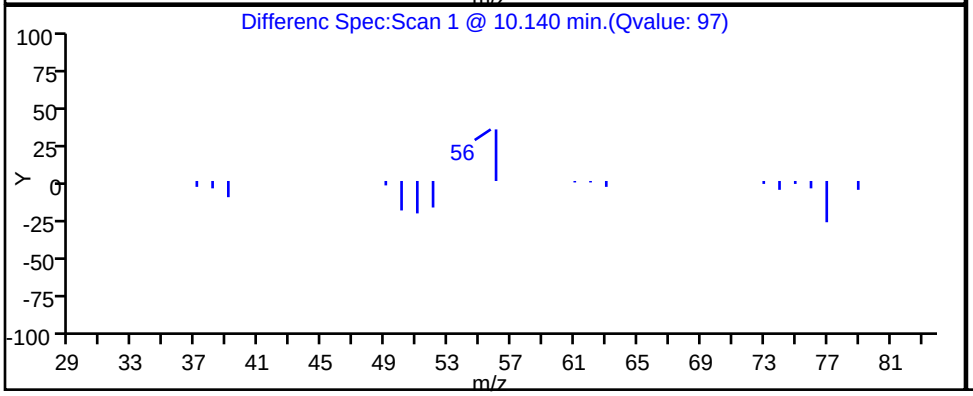


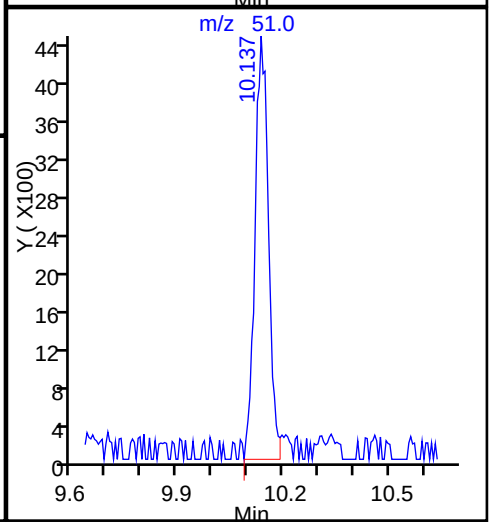








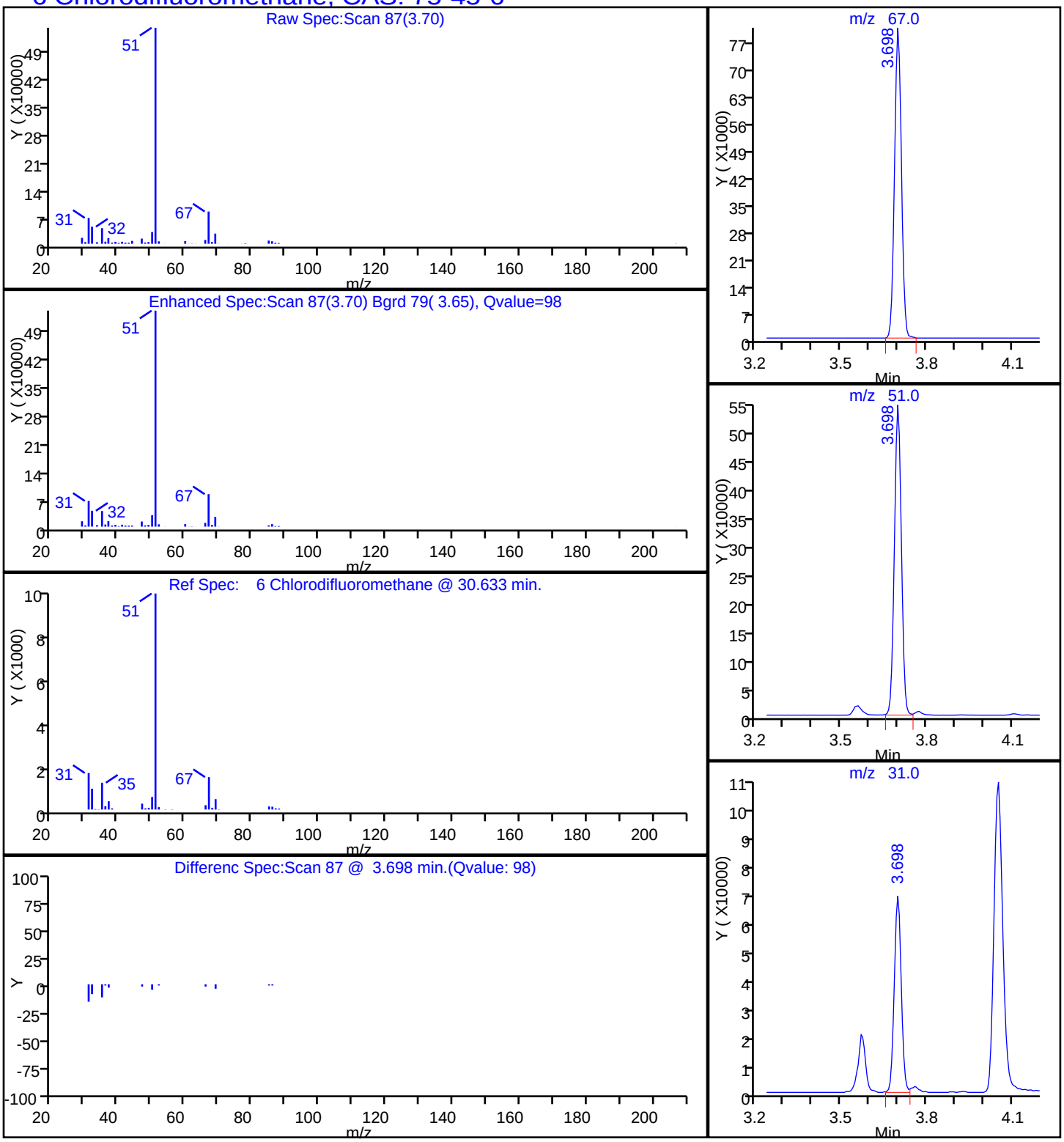




TestAmerica Knoxville

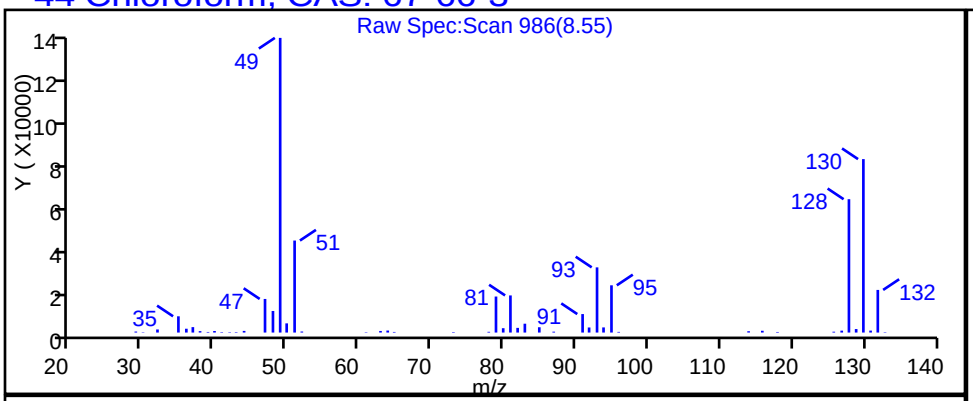
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

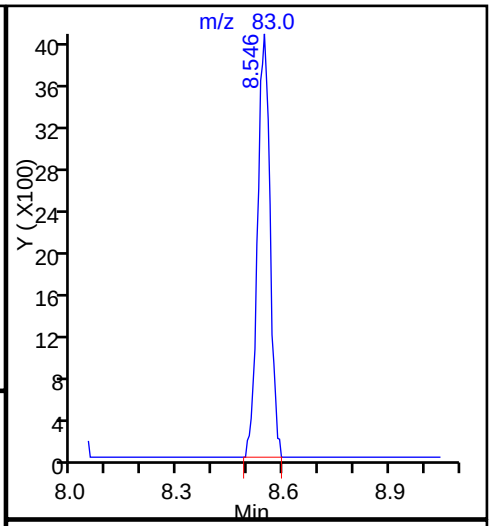
6 Chlorodifluoromethane, CAS: 75-45-6

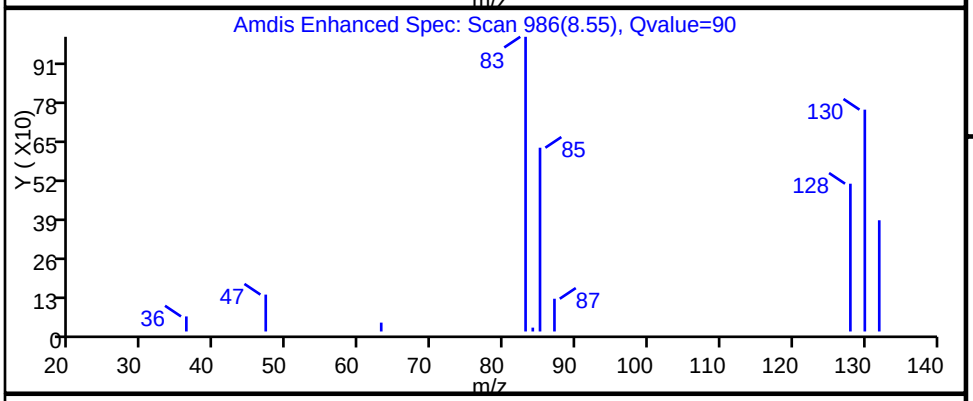


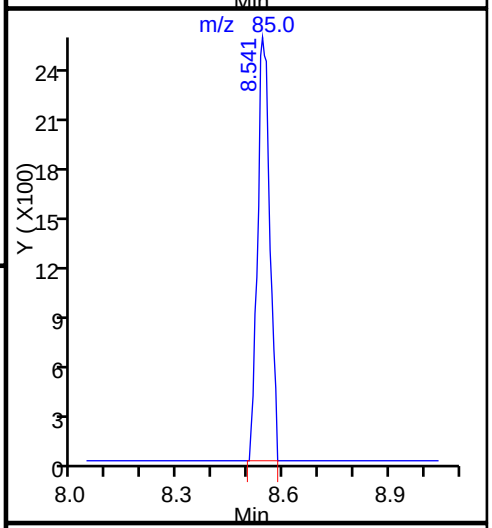
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D
Injection Date: 08-Jun-2016 21:06:30 Instrument ID: MG
Lims ID: 140-5091-A-2 Lab Sample ID: 140-5091-2
Client ID: A-MID-GAC
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

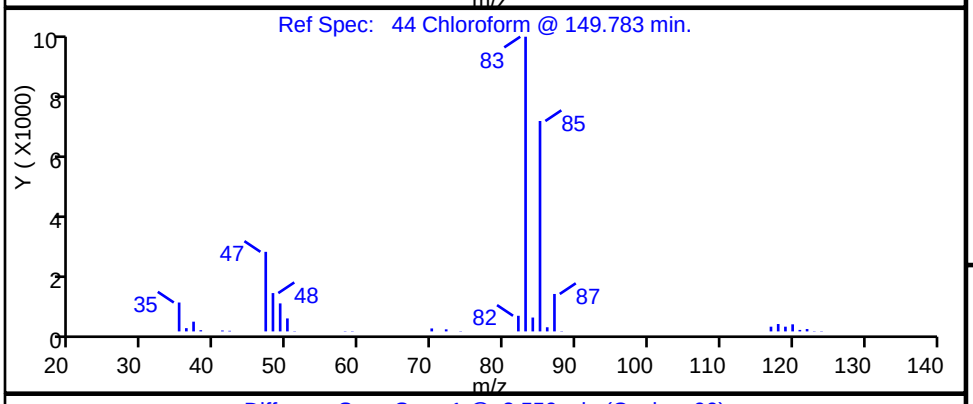
44 Chloroform, CAS: 67-66-3

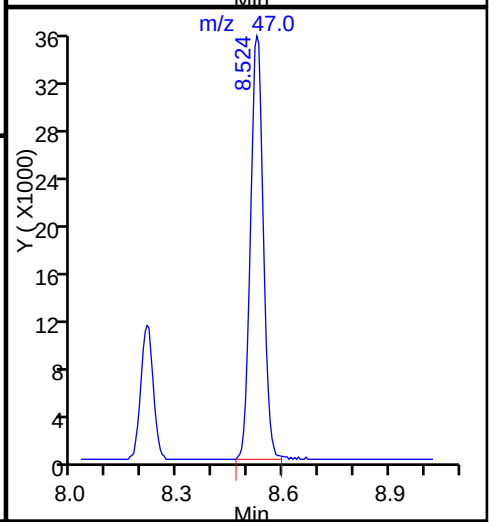


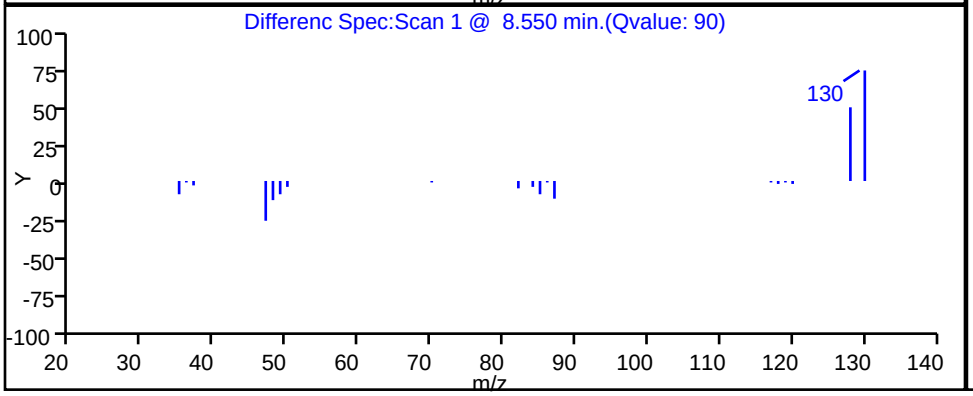












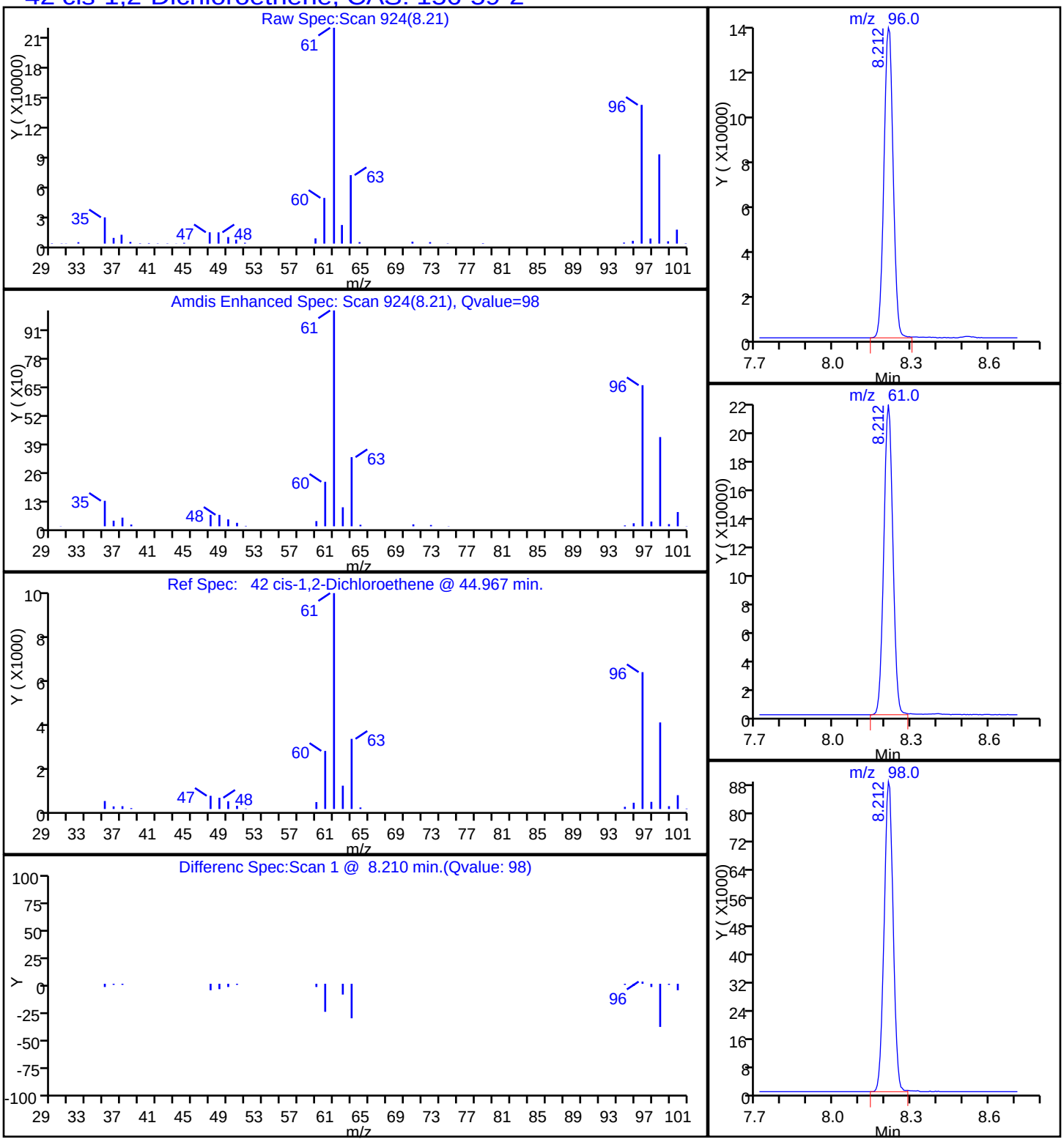
Report Date: 09-Jun-2016 14:09:36 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D

Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

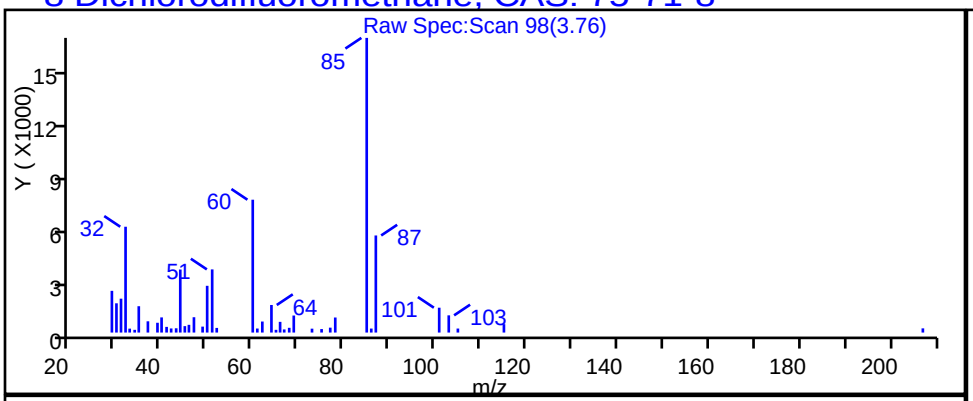
42 cis-1,2-Dichloroethene, CAS: 156-59-2

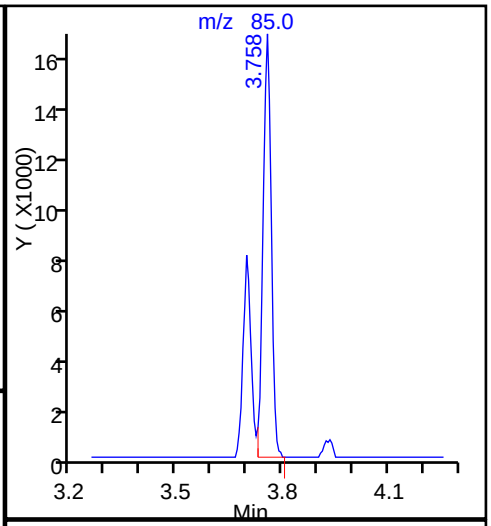


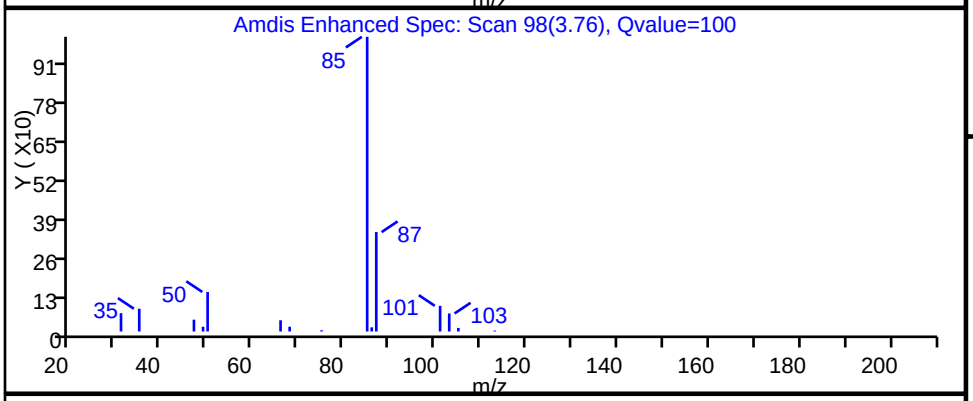
TestAmerica Knoxville

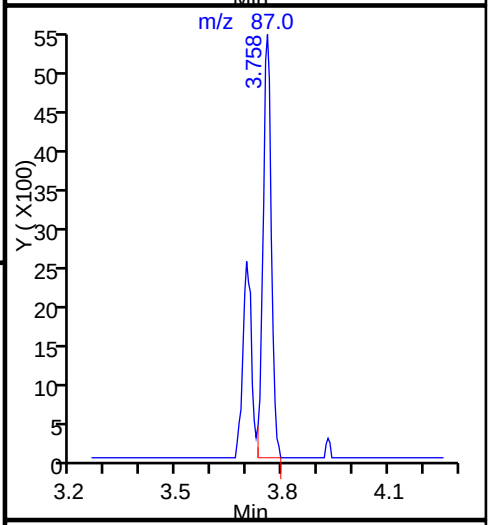
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

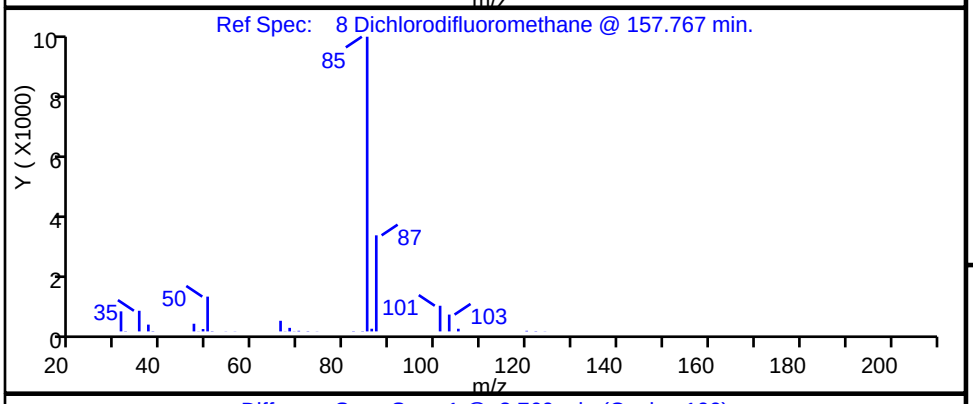
8 Dichlorodifluoromethane, CAS: 75-71-8

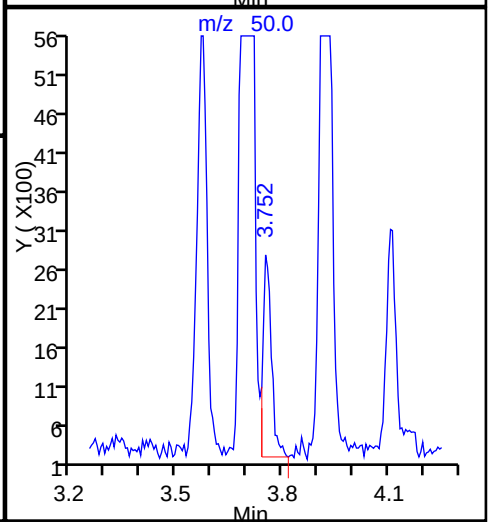


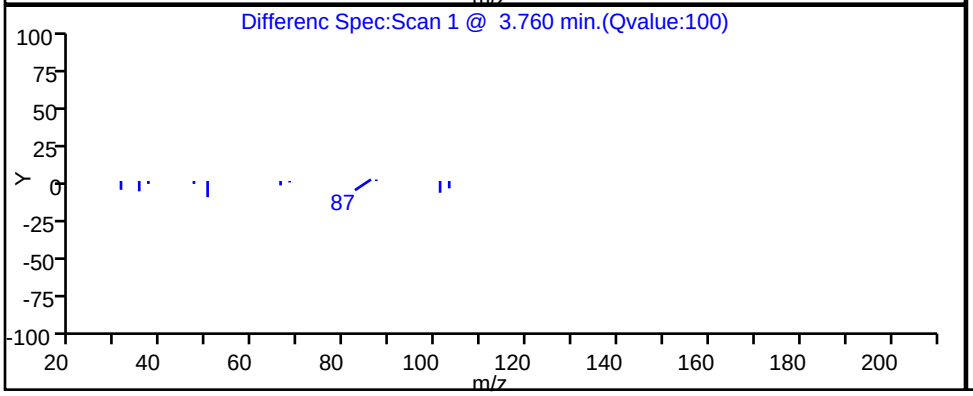








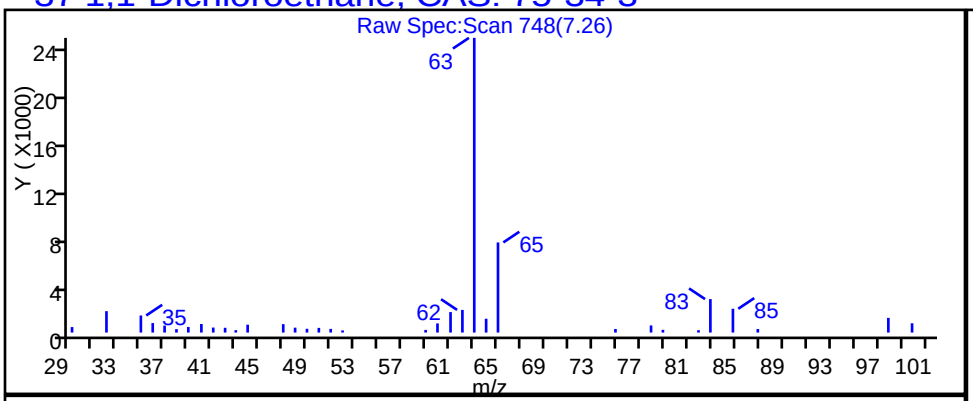


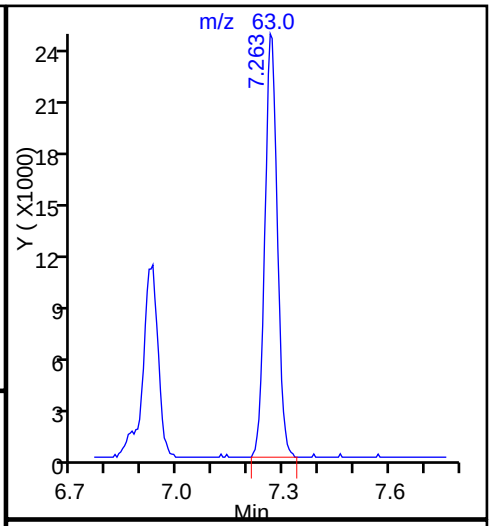


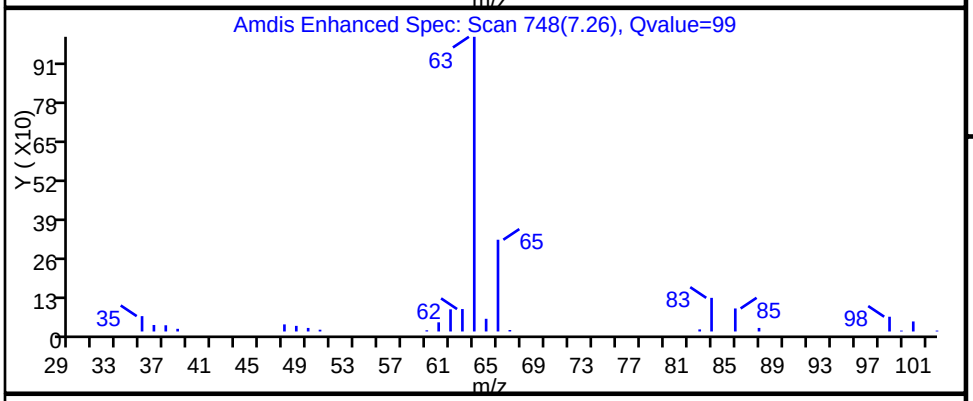
TestAmerica Knoxville

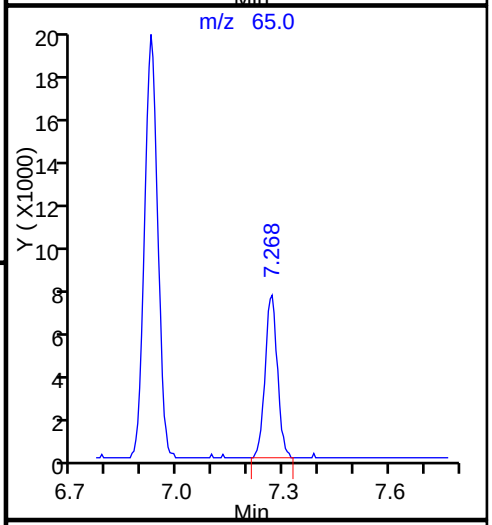
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

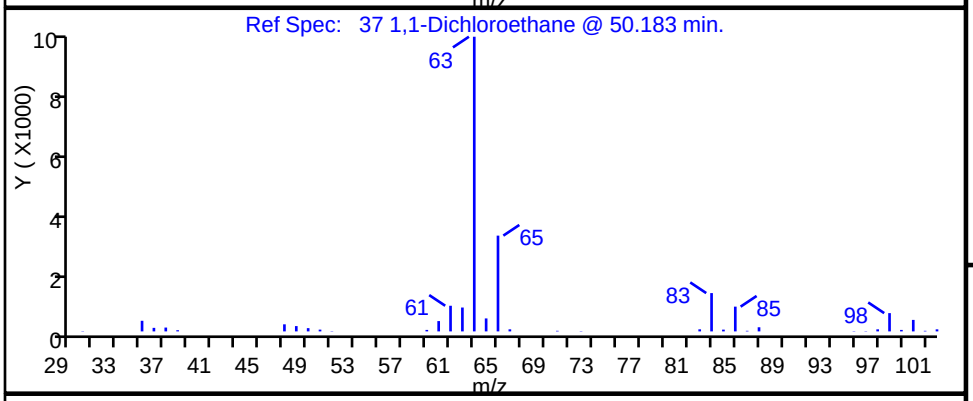
37 1,1-Dichloroethane, CAS: 75-34-3

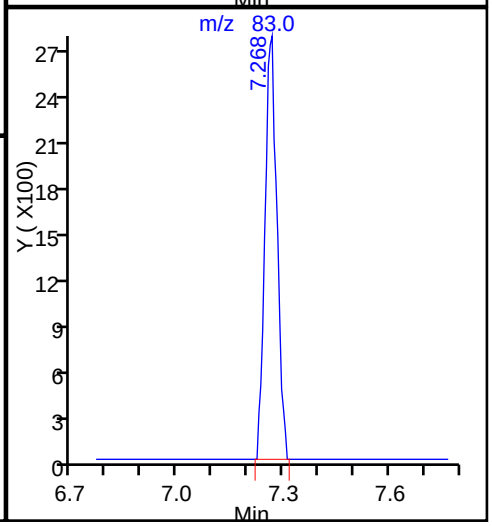


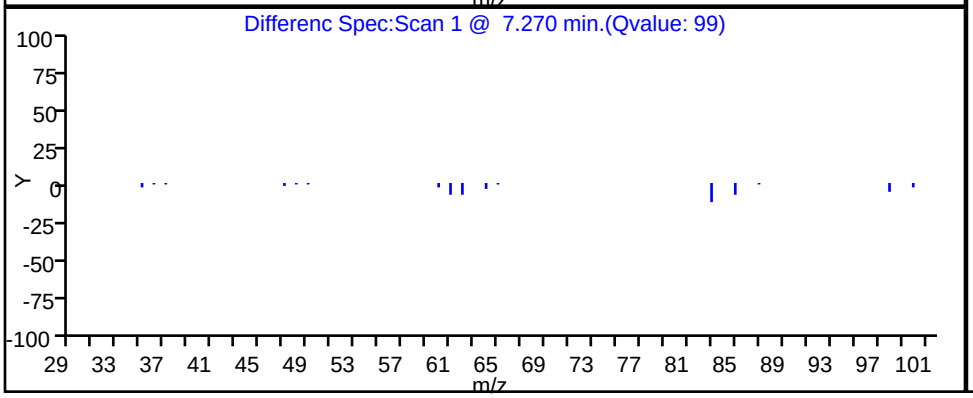








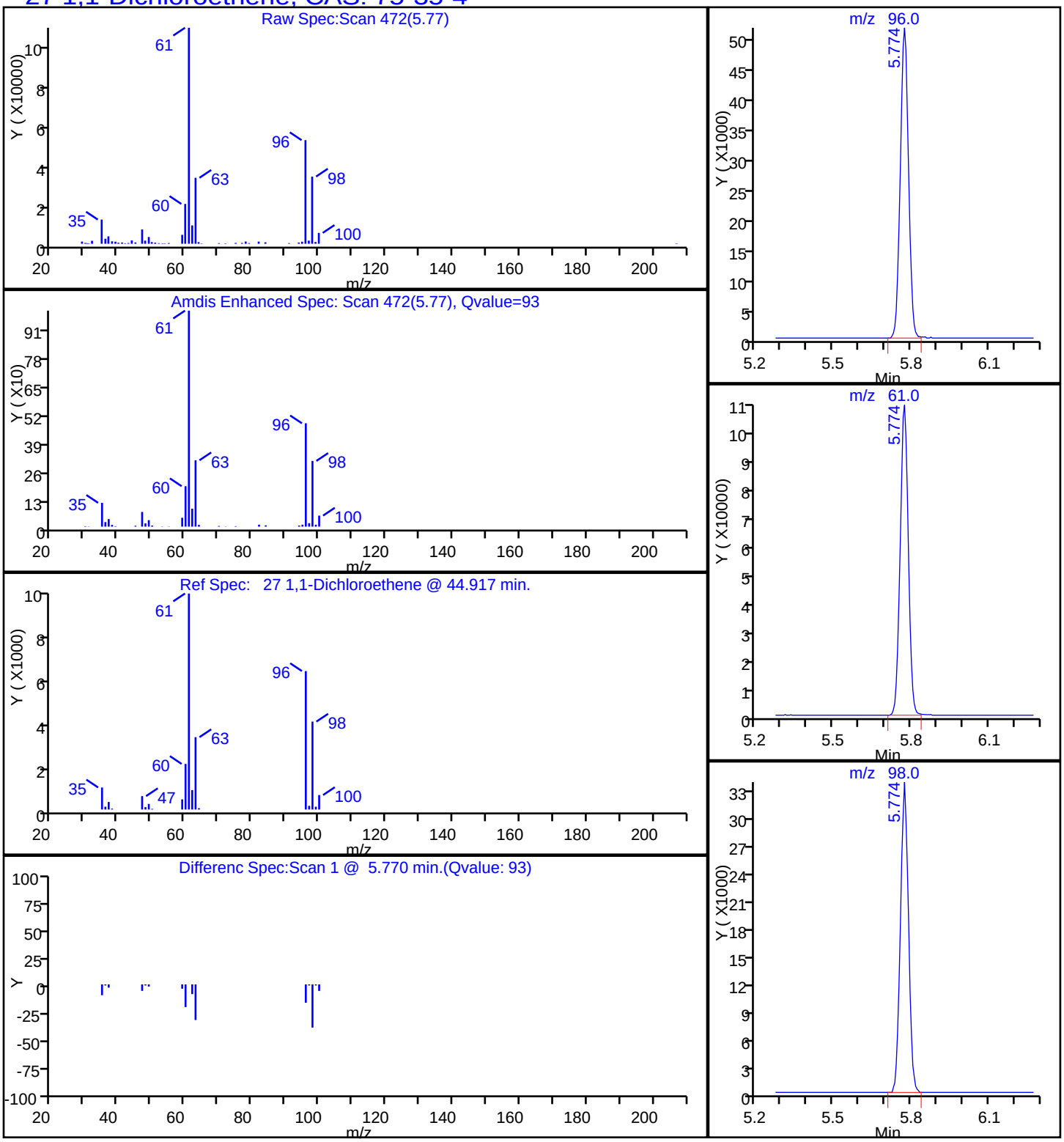




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

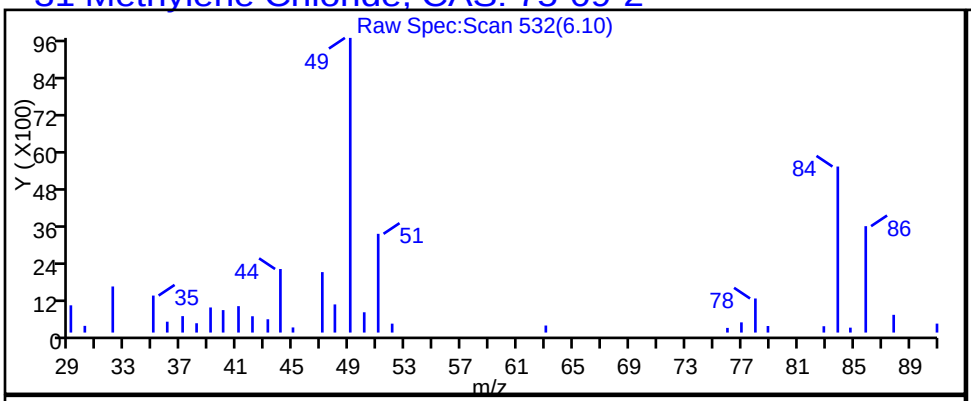
27 1,1-Dichloroethene, CAS: 75-35-4

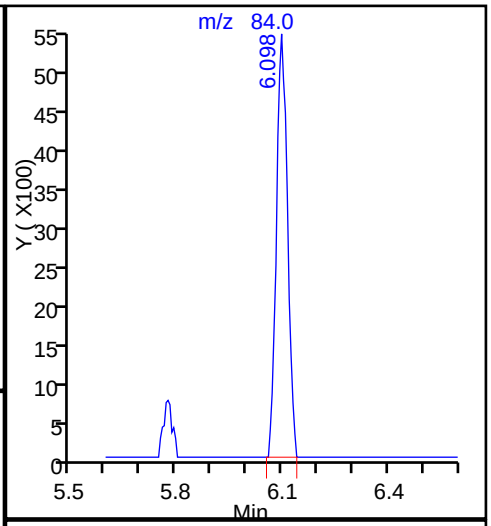


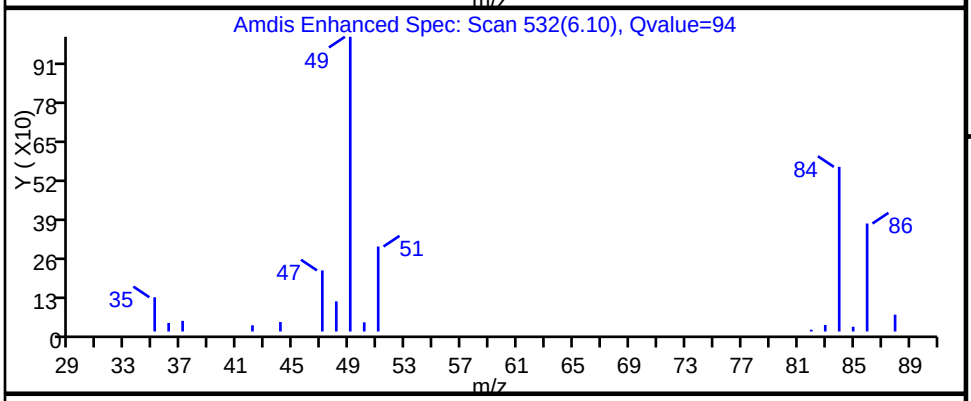
TestAmerica Knoxville

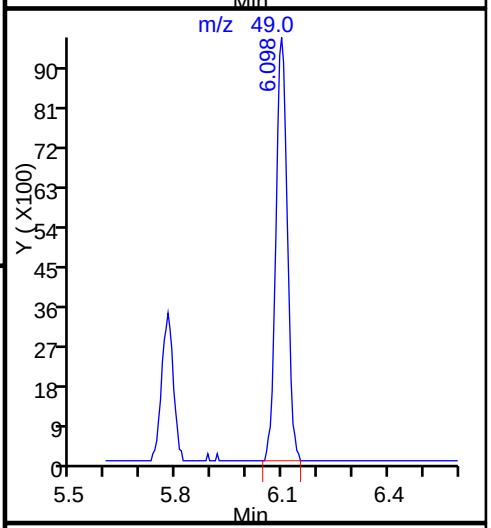
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

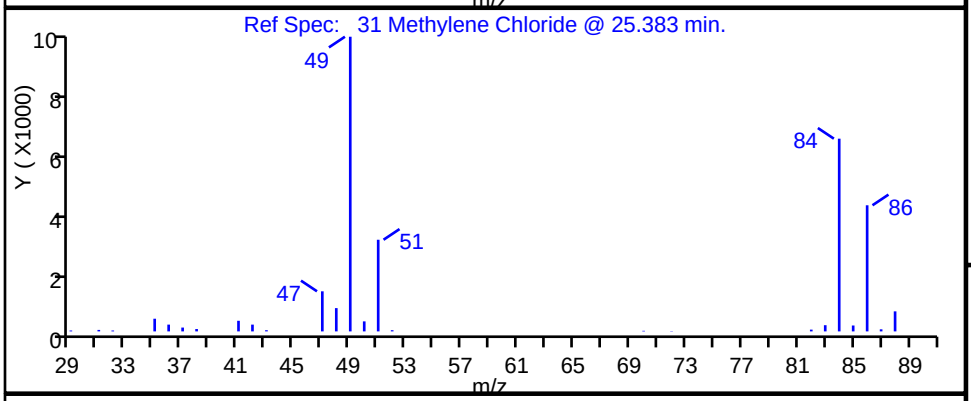
31 Methylene Chloride, CAS: 75-09-2

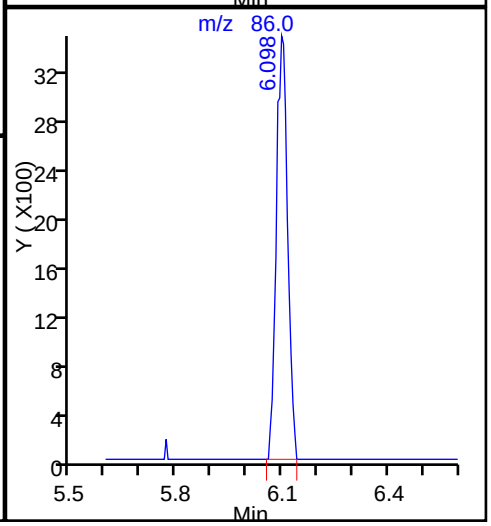


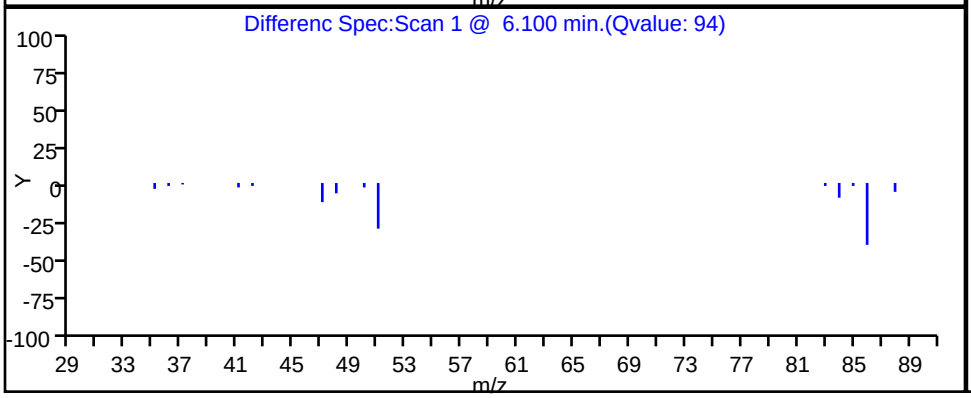








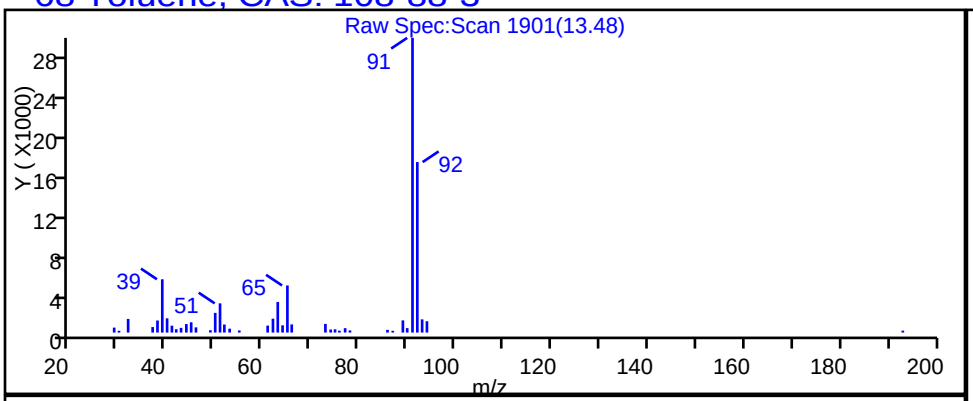


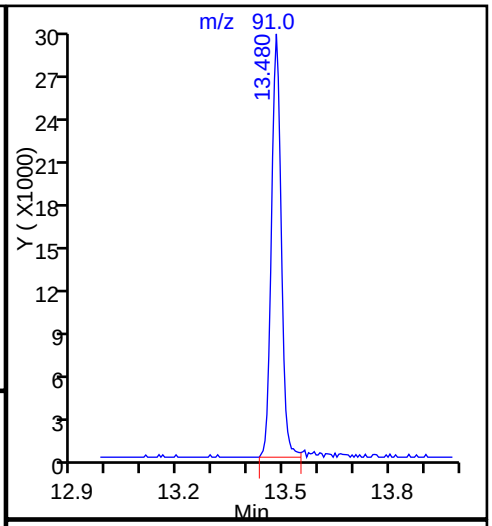


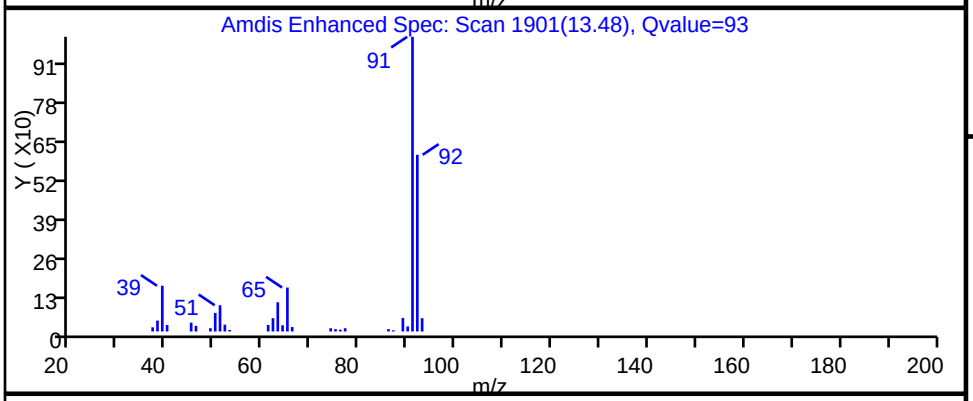
TestAmerica Knoxville

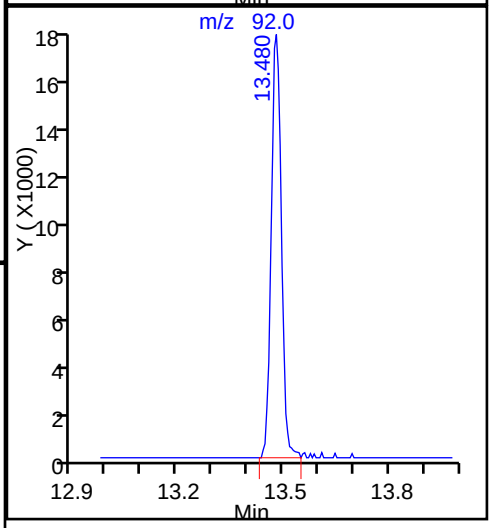
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D				
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

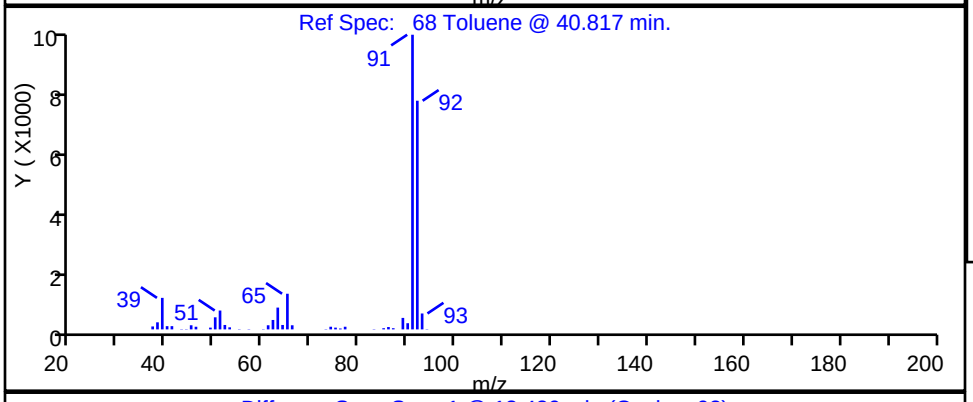
68 Toluene, CAS: 108-88-3

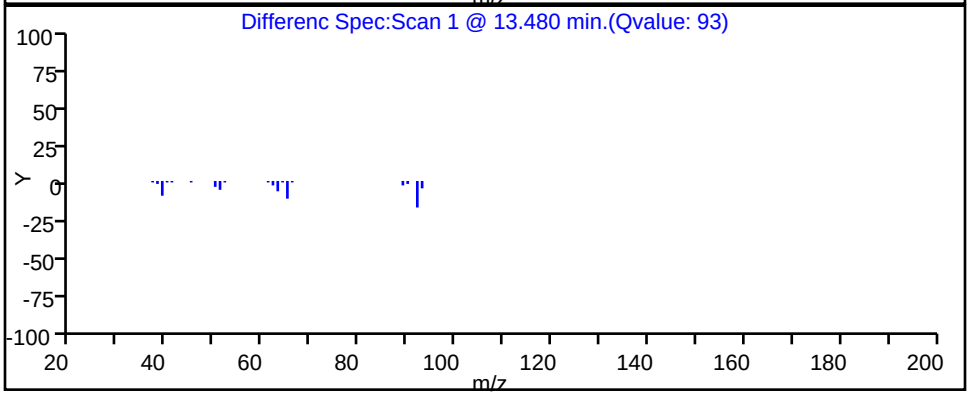












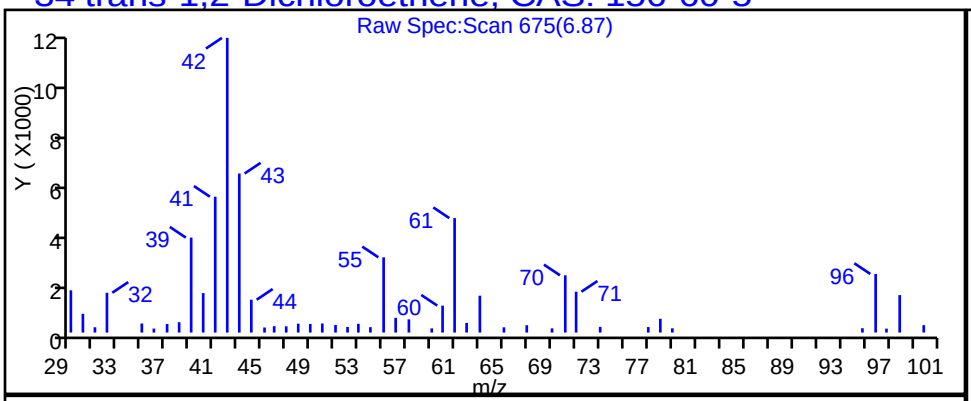
Report Date: 09-Jun-2016 14:09:36 Chrom Revision: 2.2 07-Jun-2016 12:31:34

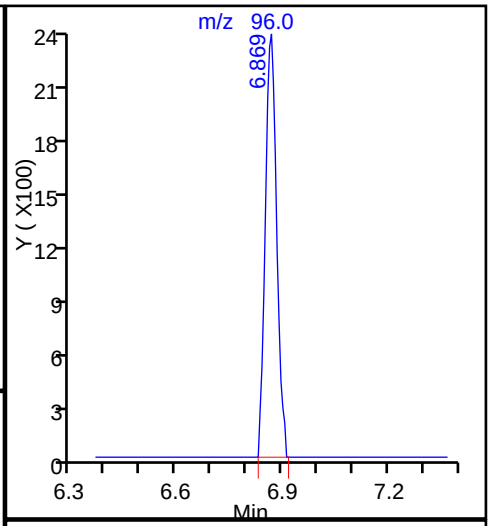
TestAmerica Knoxville

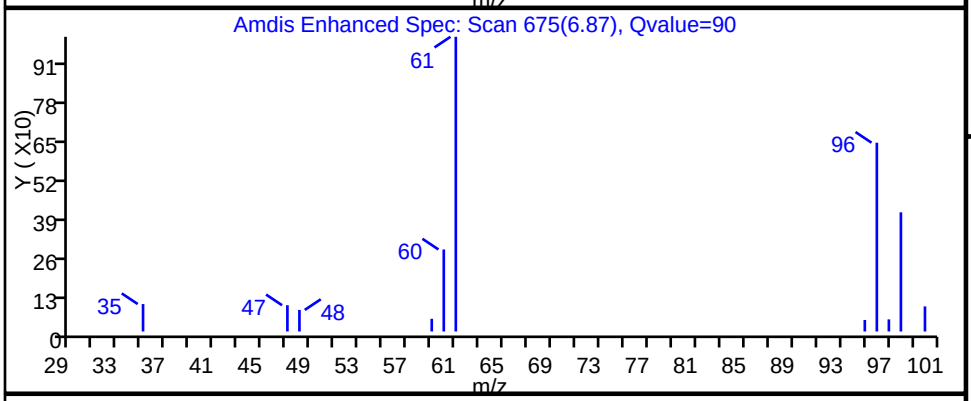
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D

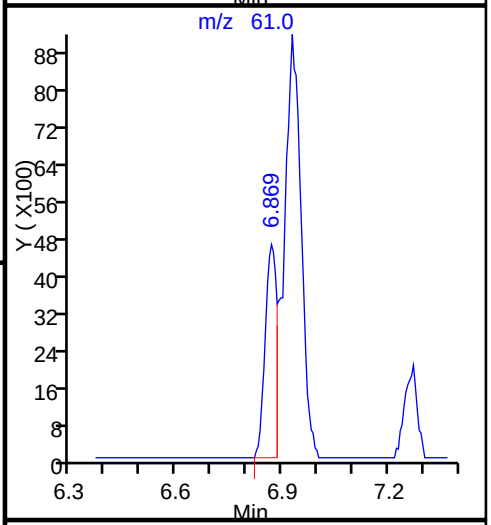
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

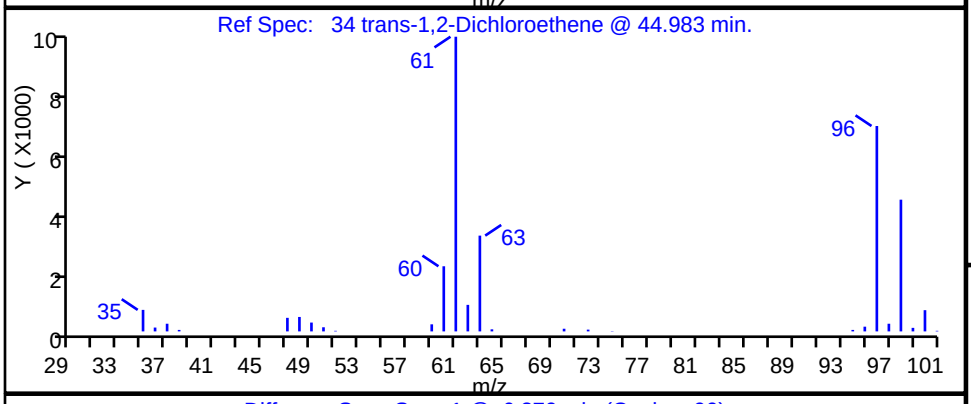
34 trans-1,2-Dichloroethene, CAS: 156-60-5

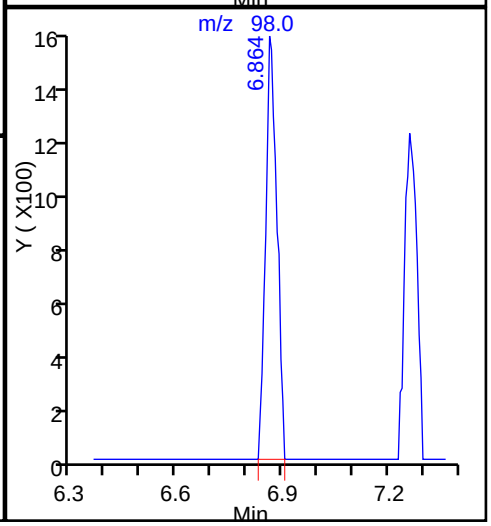


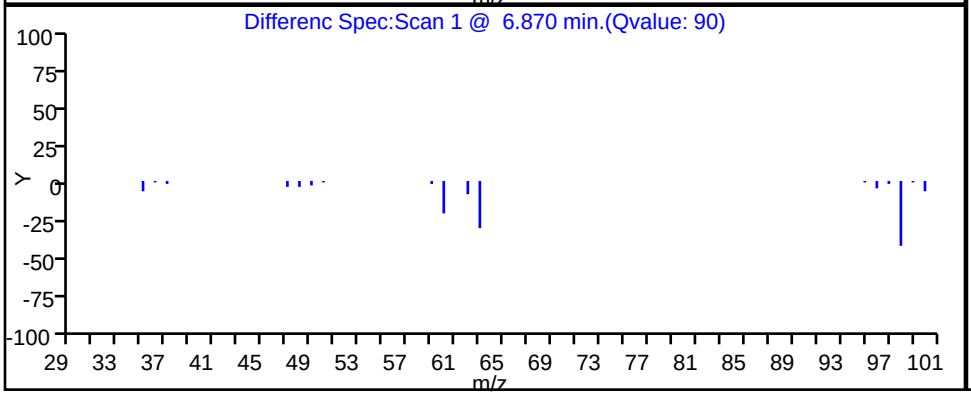












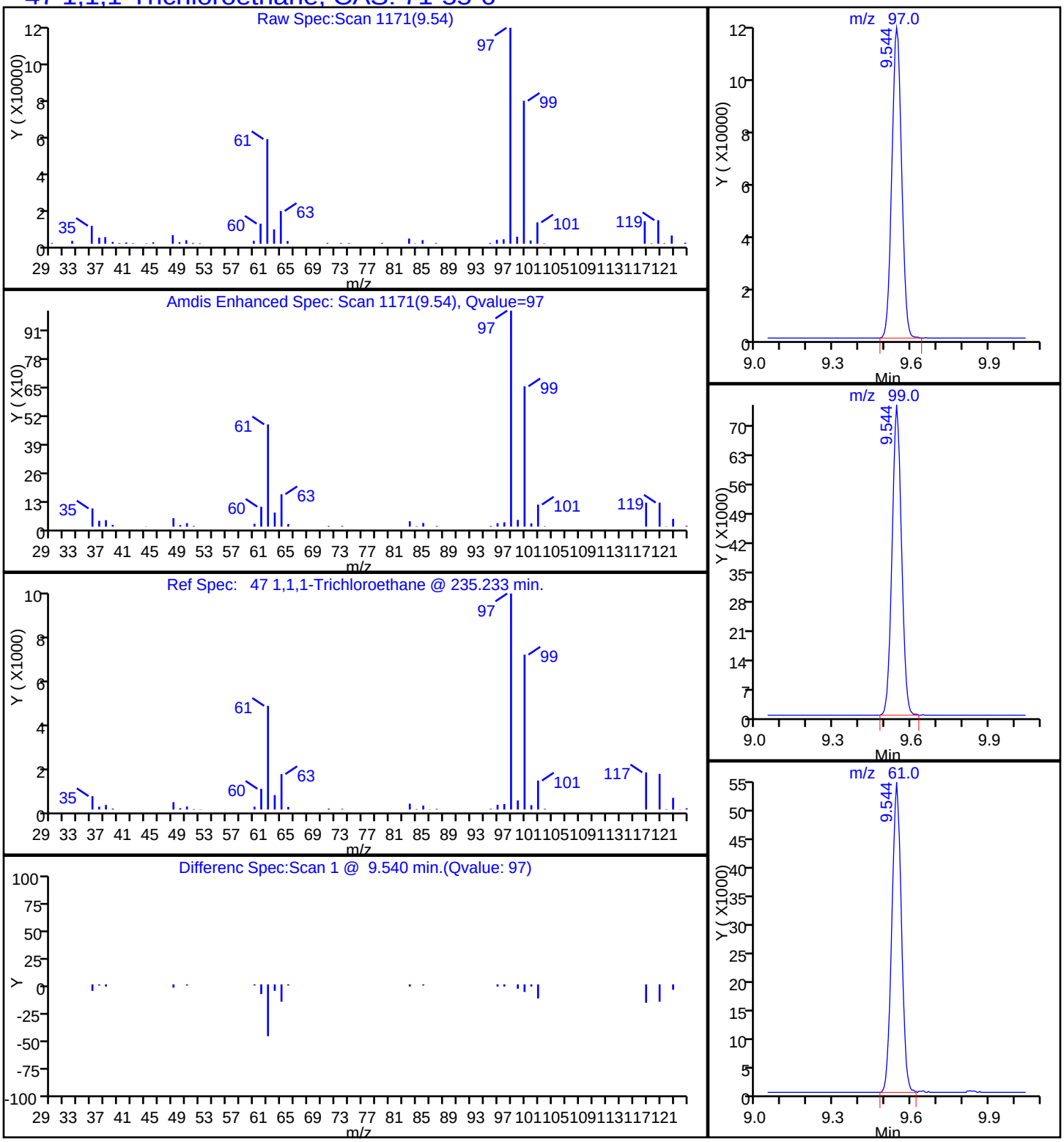
Report Date: 09-Jun-2016 14:09:36 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D

Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6

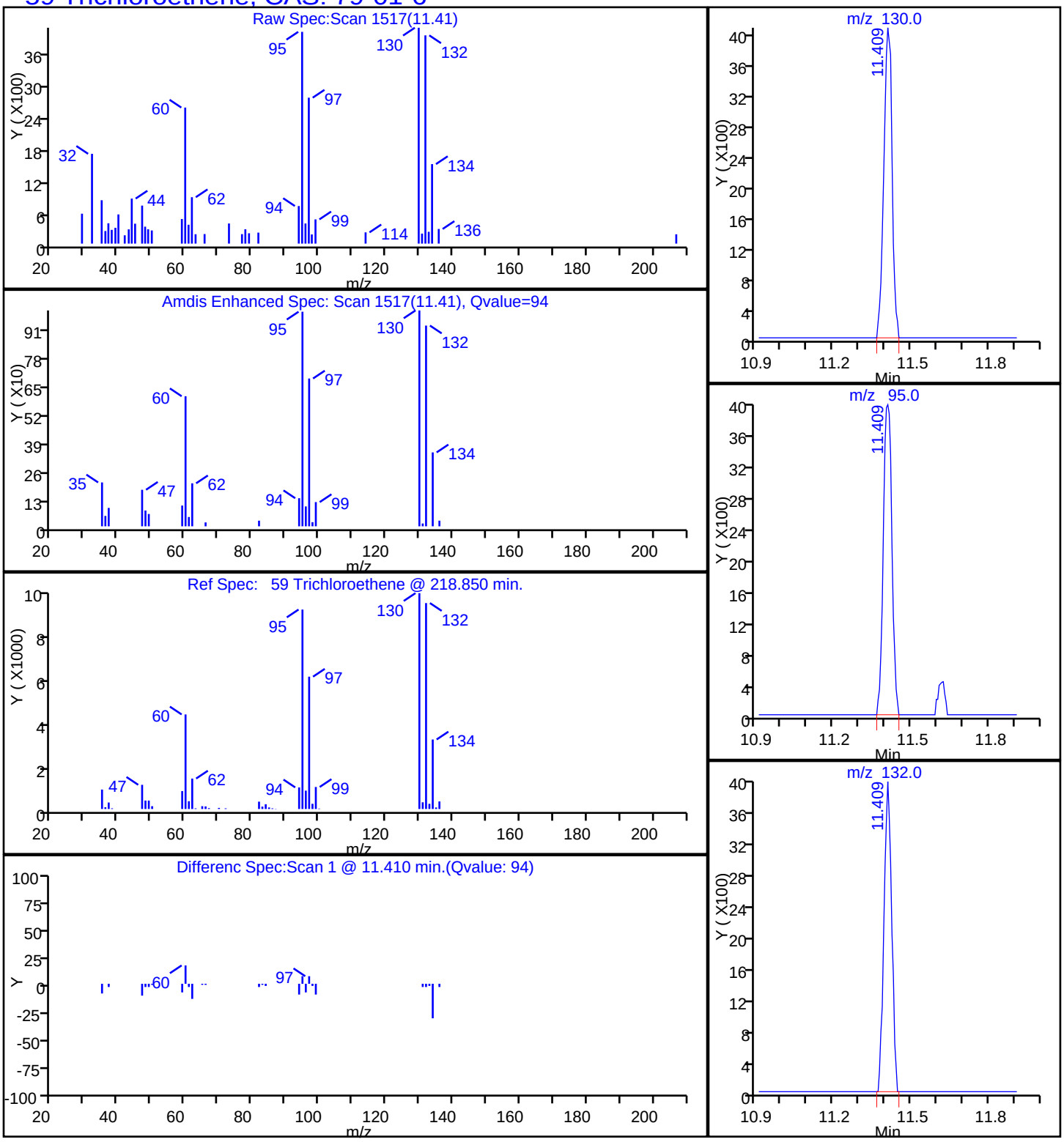


TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D

Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG		
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2		
Client ID:	A-MID-GAC				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

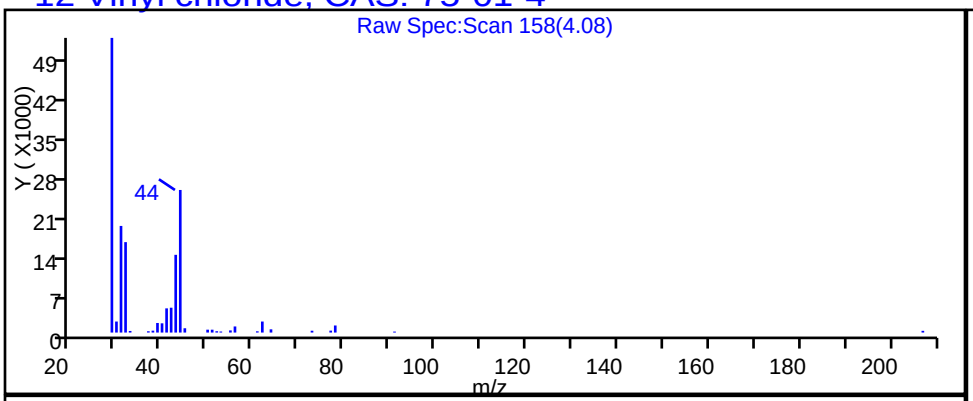
59 Trichloroethene, CAS: 79-01-6

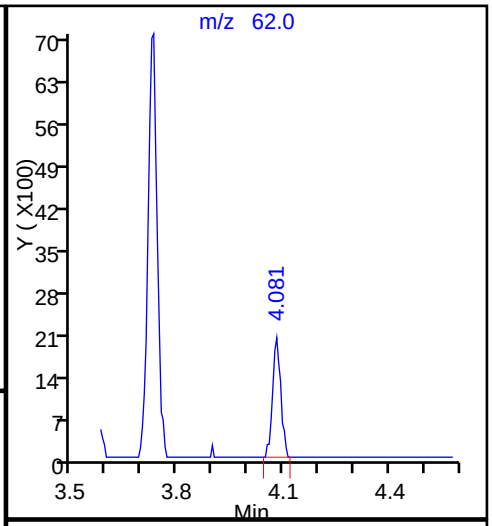


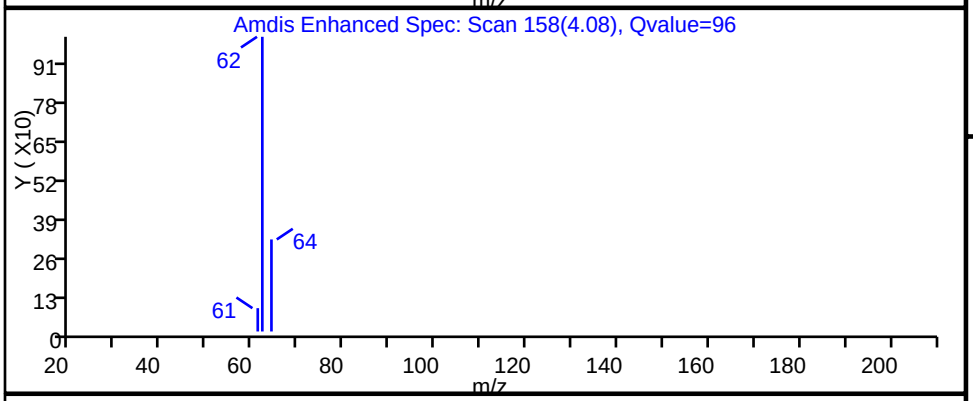
TestAmerica Knoxville

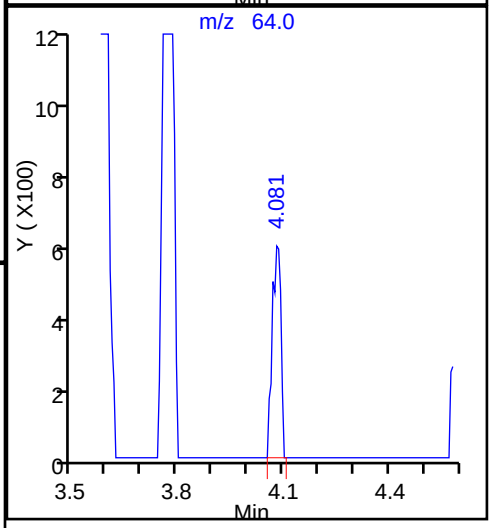
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D		
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

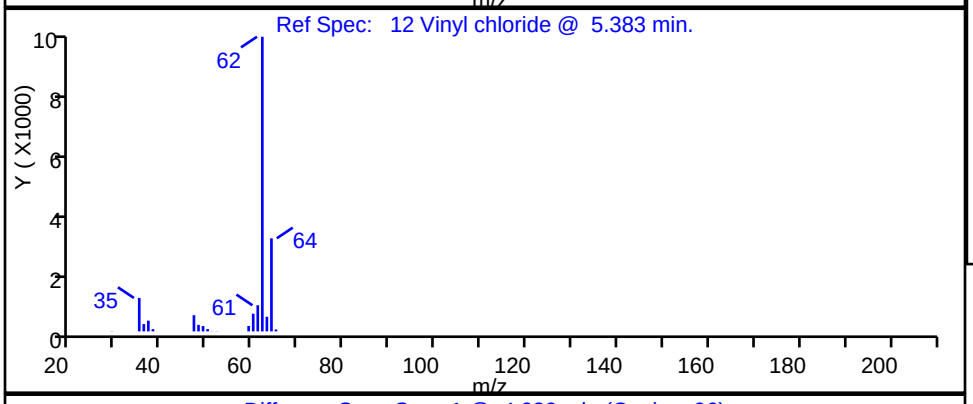
12 Vinyl chloride, CAS: 75-01-4

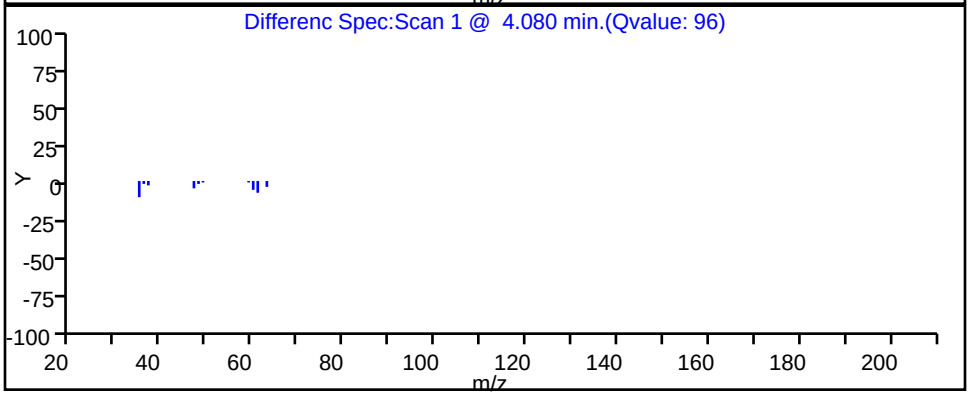






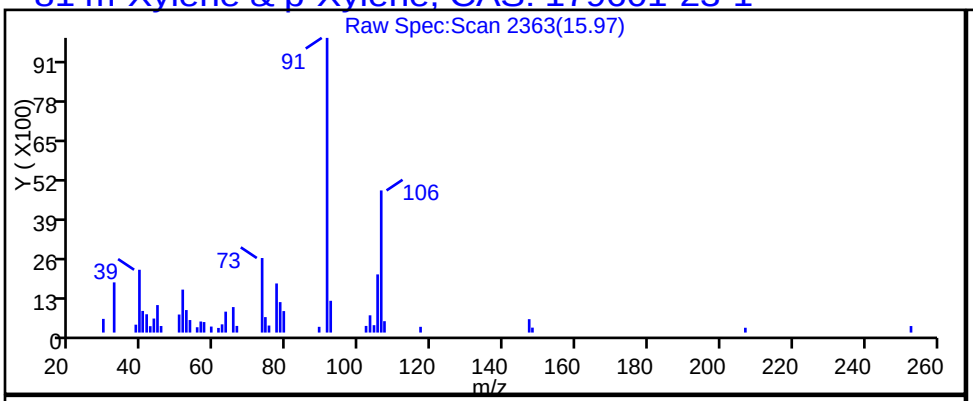


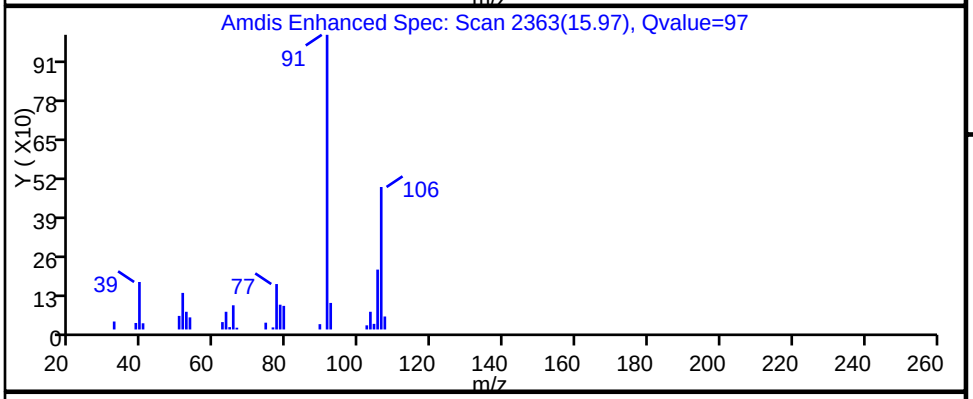


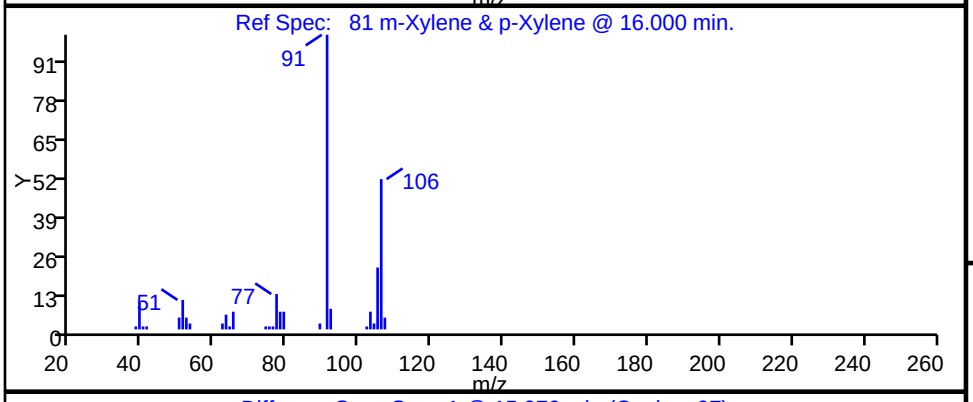


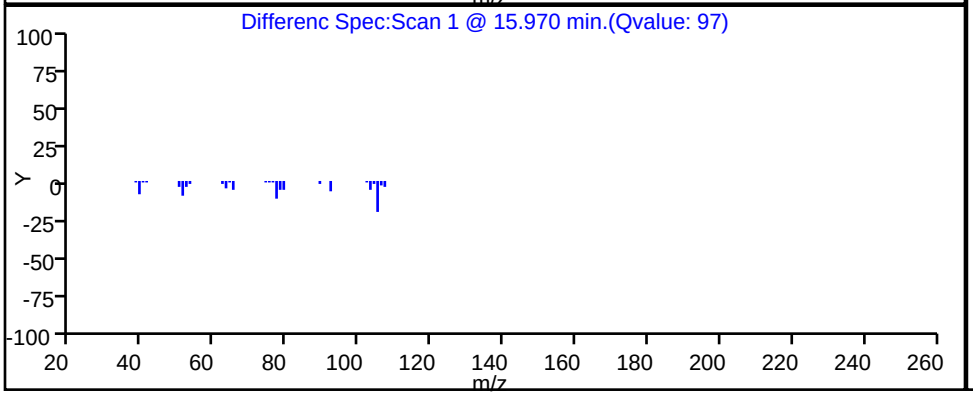
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D
Injection Date: 08-Jun-2016 21:06:30 Instrument ID: MG
Lims ID: 140-5091-A-2 Lab Sample ID: 140-5091-2
Client ID: A-MID-GAC
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

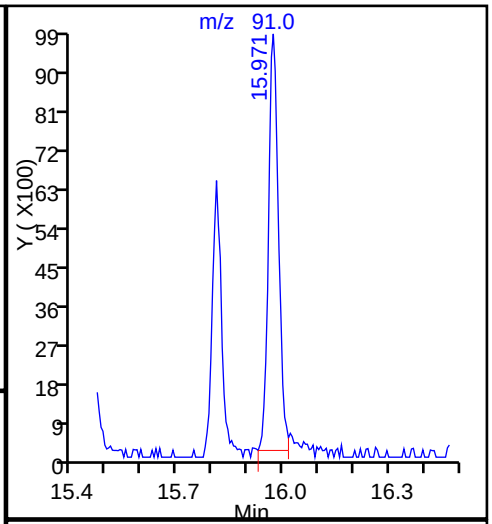
81 m-Xylene & p-Xylene, CAS: 179601-23-1

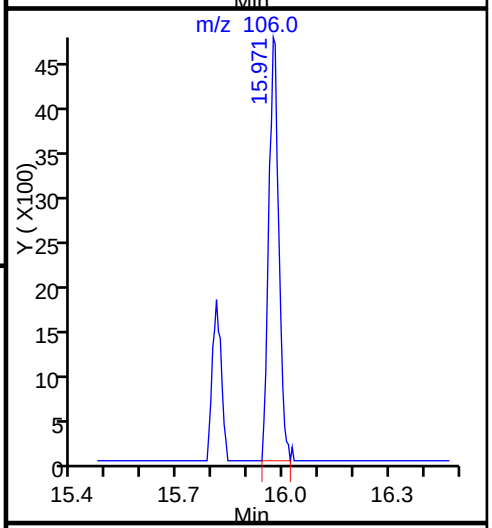


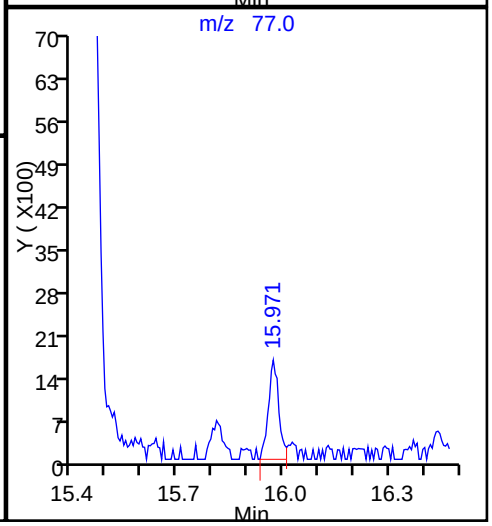








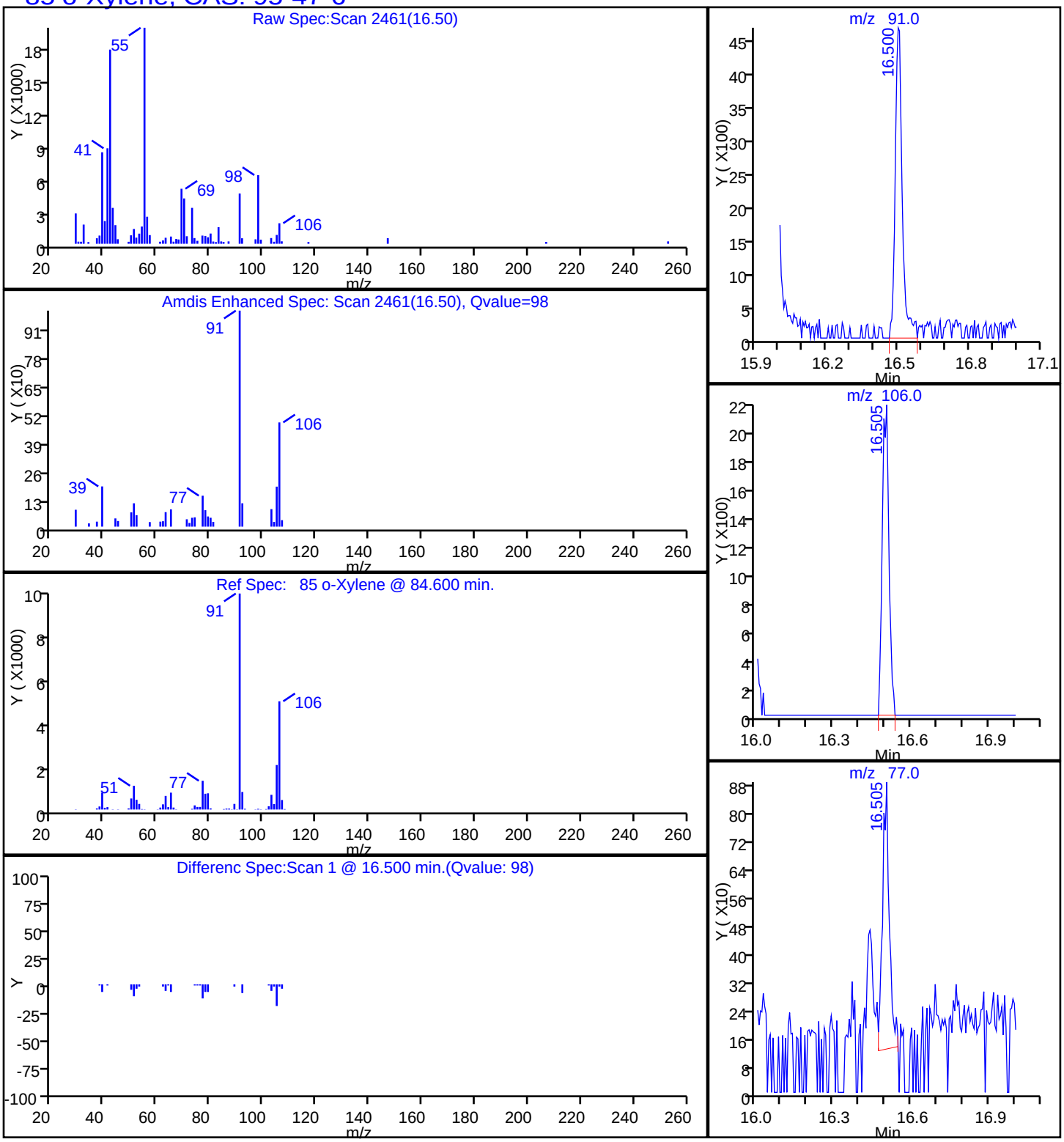




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P110.D		
Injection Date:	08-Jun-2016 21:06:30	Instrument ID:	MG
Lims ID:	140-5091-A-2	Lab Sample ID:	140-5091-2
Client ID:	A-MID-GAC		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5091-1

SDG No.:

Client Sample ID: A-EFFLUENT | Lab Sample ID: 140-5091-3

Matrix: Air | Lab File ID: GF08P111.D

Analysis Method: TO 15 LL | Date Collected: 06/02/2016 15:45

Sample wt/vol: 100(mL) | Date Analyzed: 06/08/2016 21:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5183 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.15	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.5		0.40	0.075
67-66-3	Chloroform	119.38	0.12	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	12		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.0		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	2.1		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.15	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	ND		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.0		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.16	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	20		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.43	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-5091-3

Matrix: Air Lab File ID: GF08P111.D

Analysis Method: TO 15 LL Date Collected: 06/02/2016 15:45

Sample wt/vol: 100(mL) Date Analyzed: 06/08/2016 21:48

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.47	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	0.61	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	46		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	4.0		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	8.1		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.66	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	ND		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	3.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	0.63	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	110		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	18		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.9	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	106		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Lims ID:	140-5091-A-3				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	08-Jun-2016 21:48:30	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-5091-a-3				
Misc. Info.:	G060816,TO15,140-0002946-017				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jun-2016 08:10:21	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK009				
First Level Reviewer: tajh		Date:	09-Jun-2016 07:44:56		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.525	8.551	-0.026	95	291484	4.00	
* 2 1,4-Difluorobenzene	114	10.692	10.714	-0.022	97	1370996	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.465	15.475	-0.010	93	1333445	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.120	17.131	-0.011	81	1025529	4.24	
6 Chlorodifluoromethane	67	3.698	3.714	-0.016	98	18082	0.7096	
27 1,1-Dichloroethene	96	5.775	5.796	-0.022	94	29238	0.4106	
31 Methylene Chloride	84	6.098	6.119	-0.021	94	7121	0.0857	
34 trans-1,2-Dichloroethene	96	6.869	6.890	-0.021	91	2927	0.0318	
37 1,1-Dichloroethane	63	7.263	7.290	-0.027	99	38104	0.1991	
42 cis-1,2-Dichloroethene	96	8.212	8.233	-0.021	98	220095	2.32	
44 Chloroform	83	8.541	8.573	-0.032	86	5070	0.0248	
47 1,1,1-Trichloroethane	97	9.544	9.565	-0.021	96	859509	4.01	
49 Benzene	78	10.142	10.158	-0.016	56	7530	0.0293	
59 Trichloroethene	130	11.410	11.425	-0.015	92	87337	0.6660	
68 Toluene	91	13.480	13.496	-0.016	93	63211	0.2007	
79 Ethylbenzene	91	15.810	15.820	-0.010	98	12559	0.0302	
81 m-Xylene & p-Xylene	91	15.971	15.987	-0.016	98	19123	0.0613	
85 o-Xylene	91	16.500	16.510	-0.010	97	8398	0.0247	
S 126 Xylenes, Total	100				0		0.0860	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

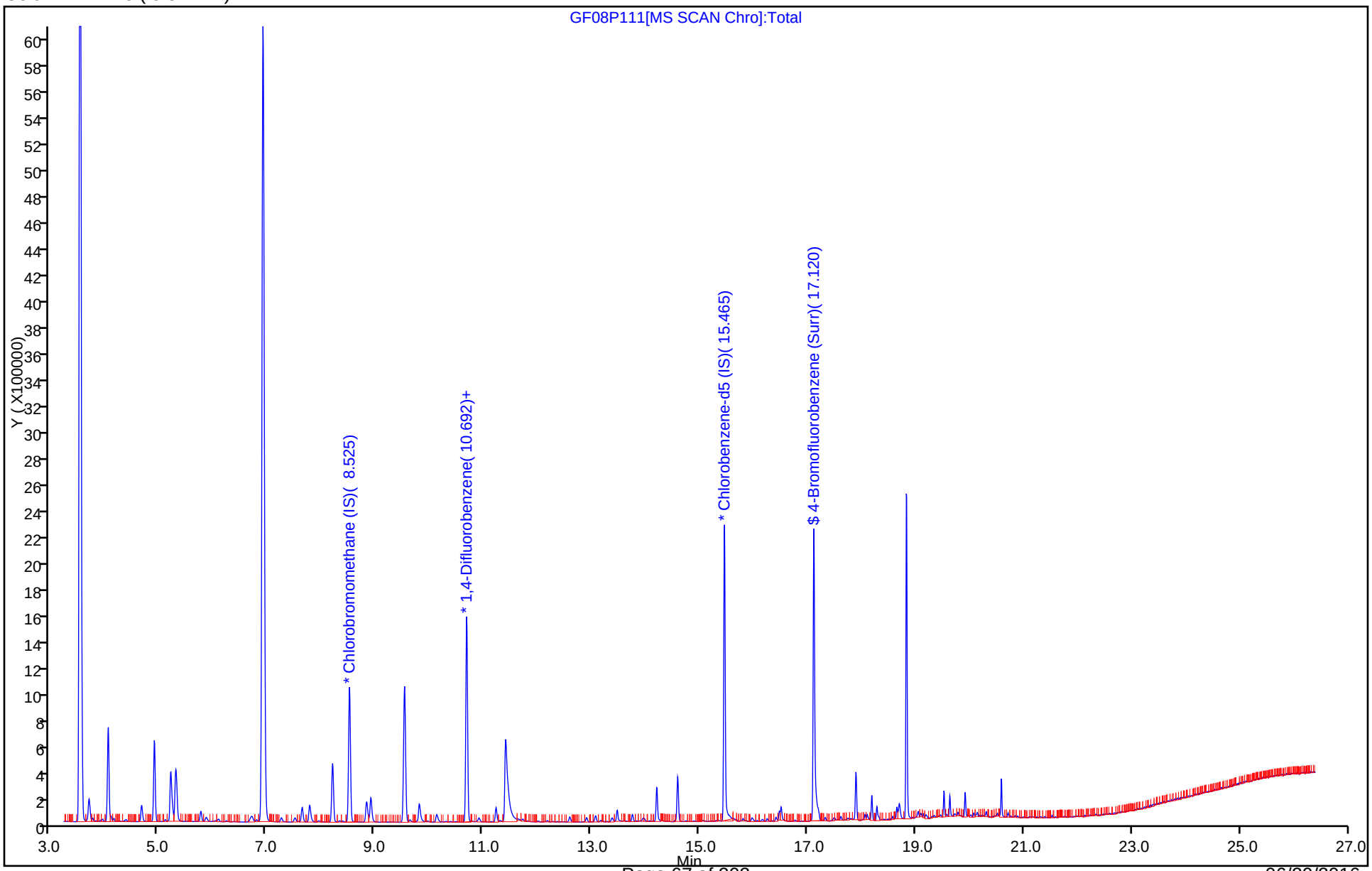
Report Date: 09-Jun-2016 08:10:50 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D

Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3	Worklist Smp#:	17
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Lims ID:	140-5091-A-3				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	08-Jun-2016 21:48:30	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-5091-a-3				
Misc. Info.:	G060816,TO15,140-0002946-017				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jun-2016 08:10:21	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK009				

First Level Reviewer: tajh Date: 09-Jun-2016 07:44:56

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.24	105.91

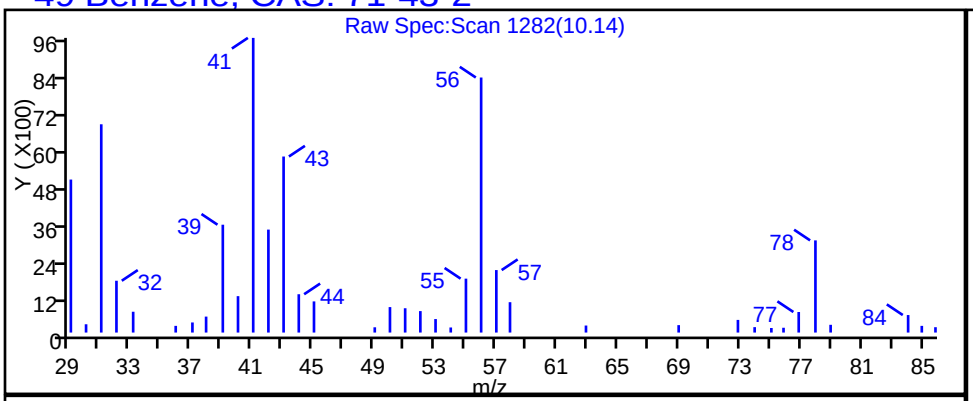
Report Date: 09-Jun-2016 08:10:50 Chrom Revision: 2.2 07-Jun-2016 12:31:34

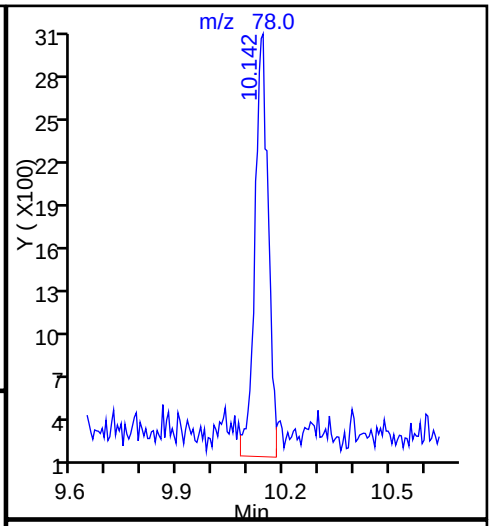
TestAmerica Knoxville

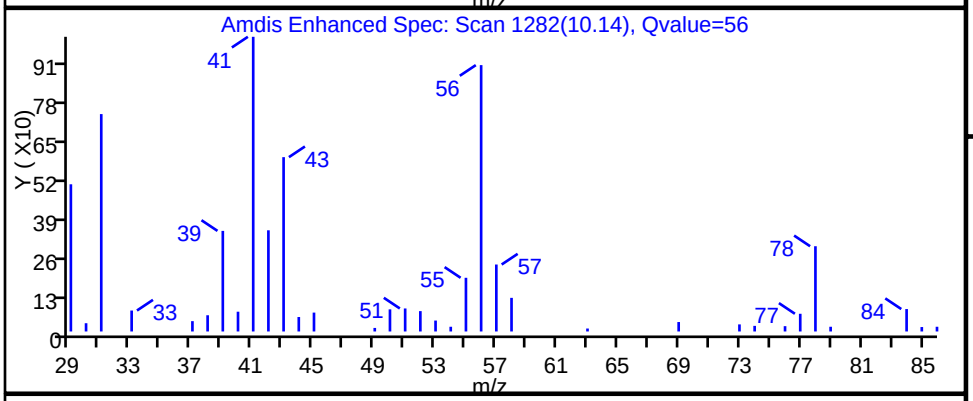
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D

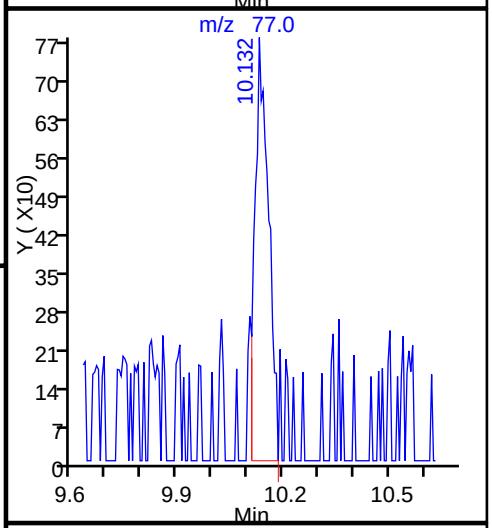
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

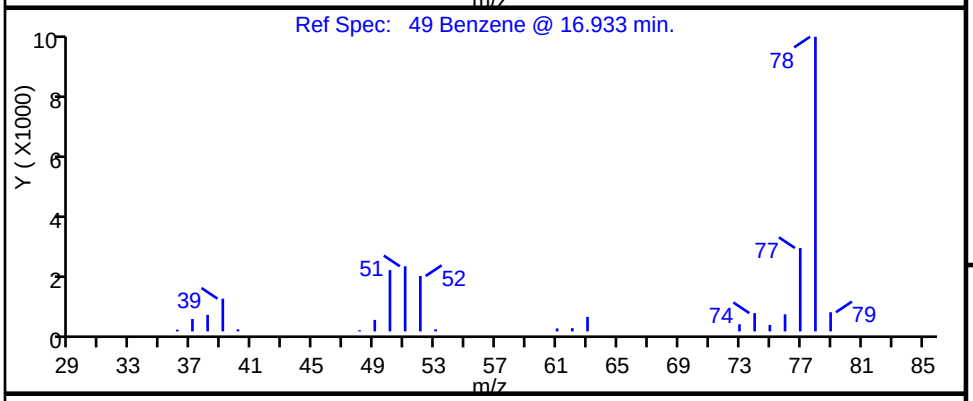
49 Benzene, CAS: 71-43-2

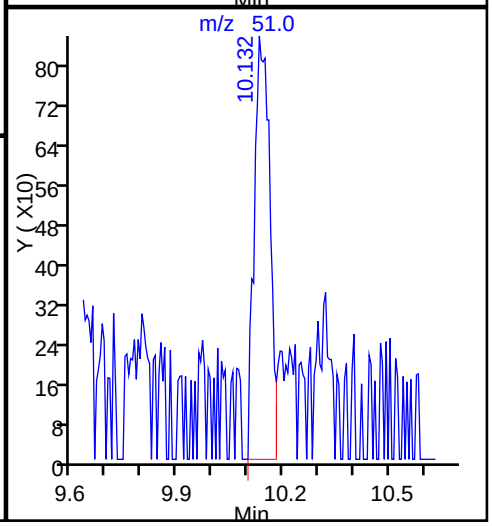


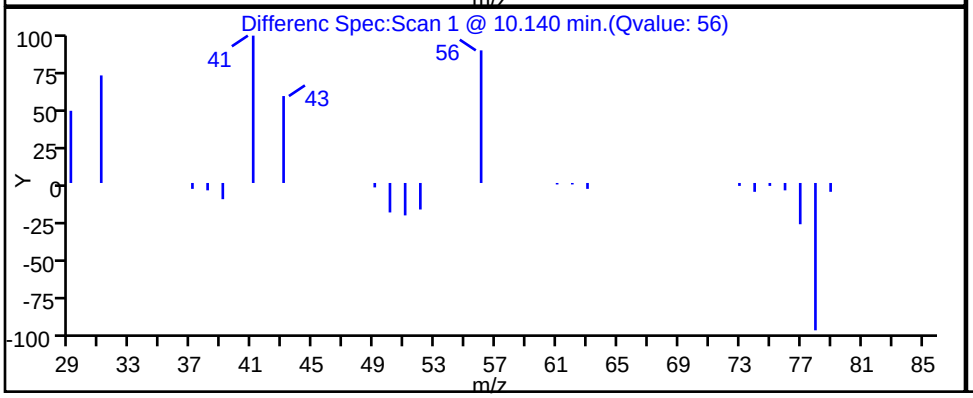








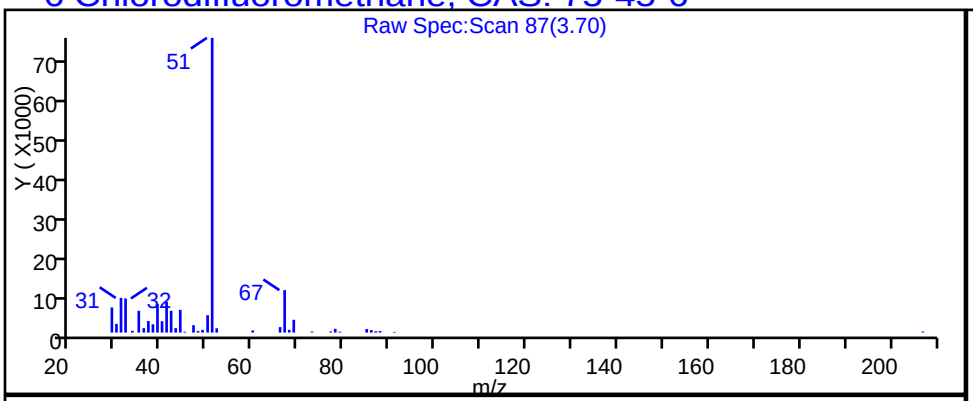


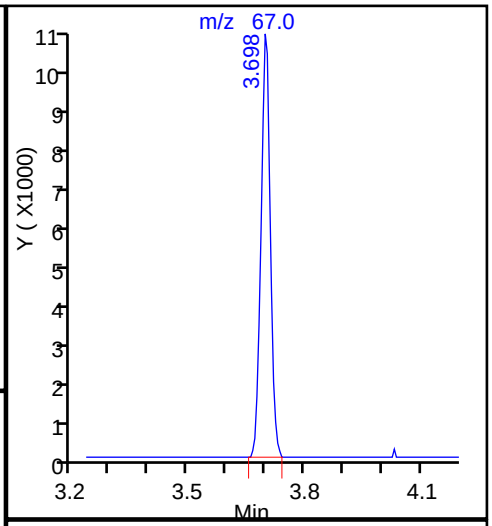


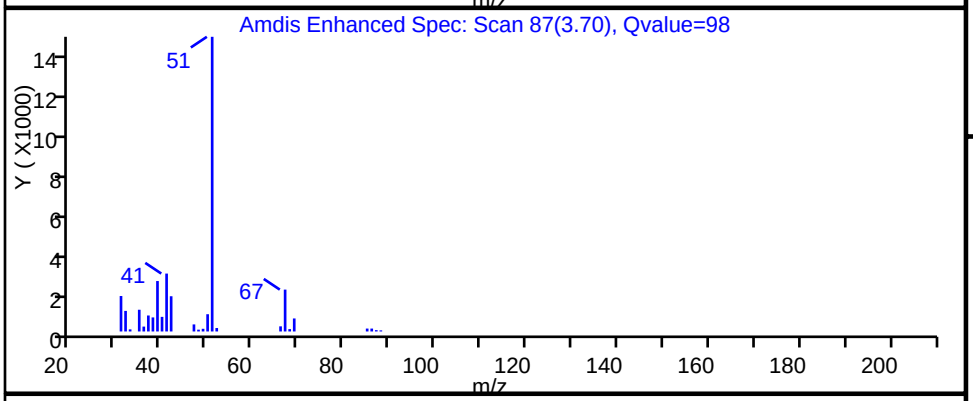
TestAmerica Knoxville

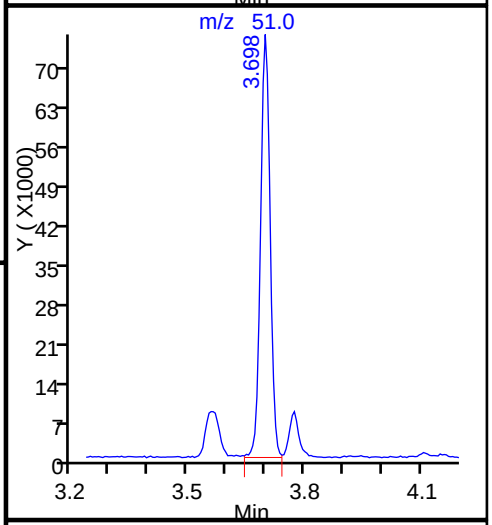
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

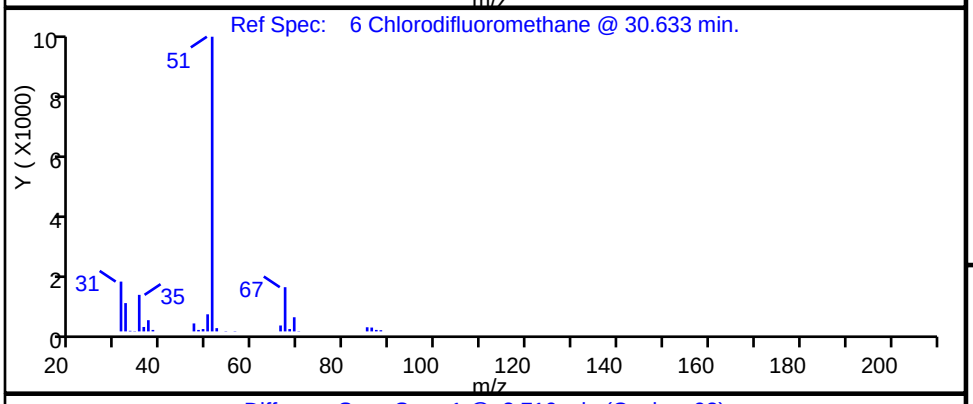
6 Chlorodifluoromethane, CAS: 75-45-6

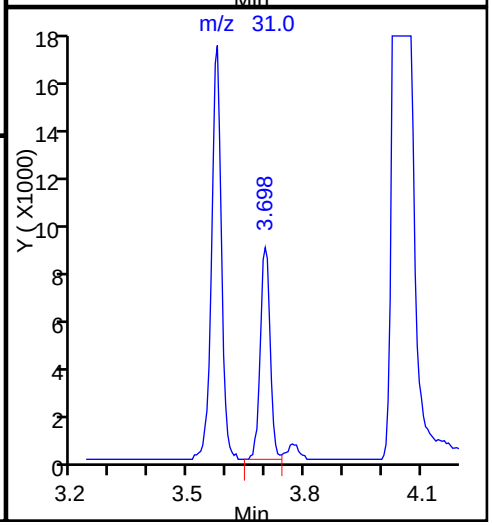


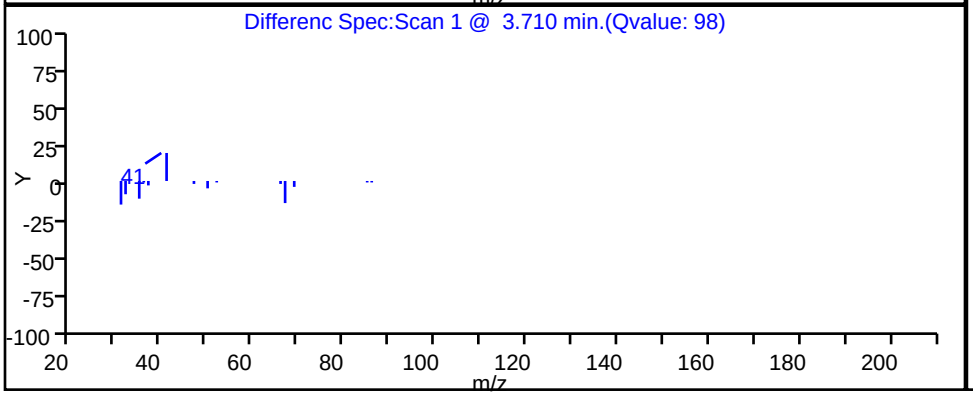








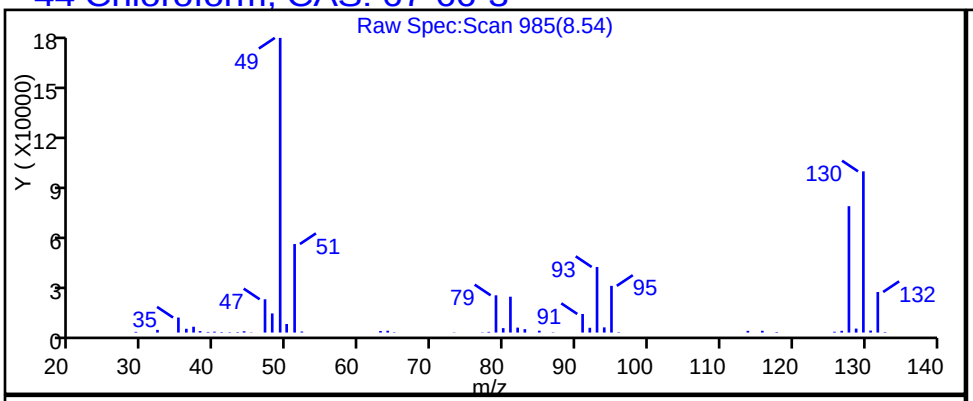


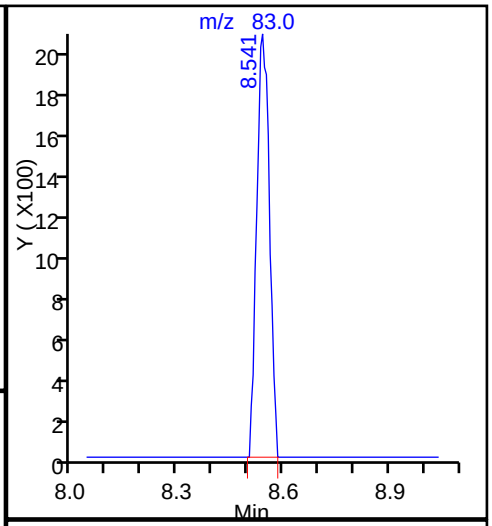


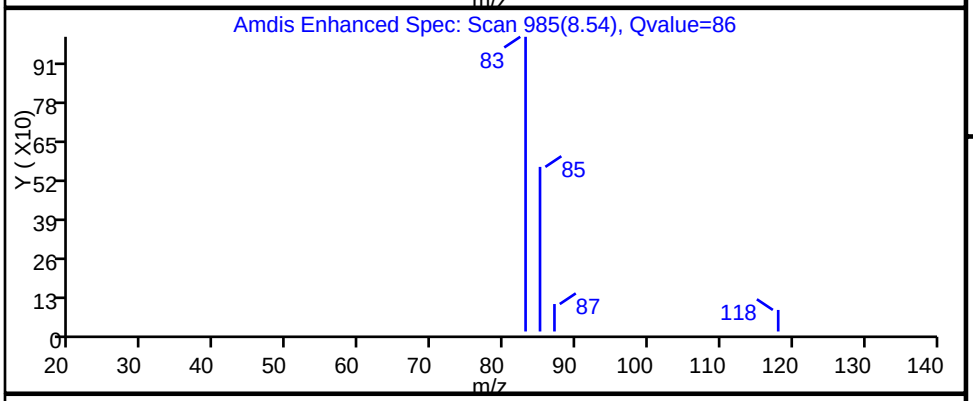
TestAmerica Knoxville

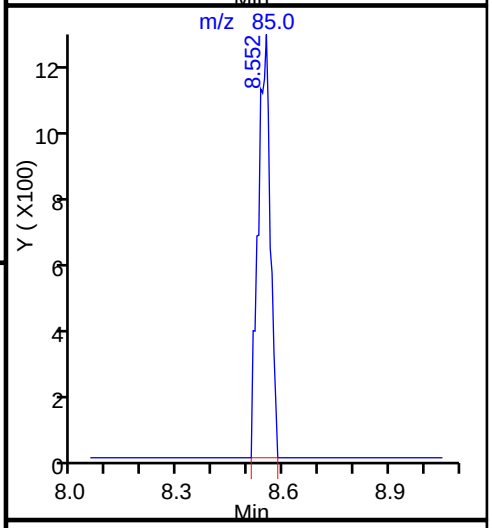
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

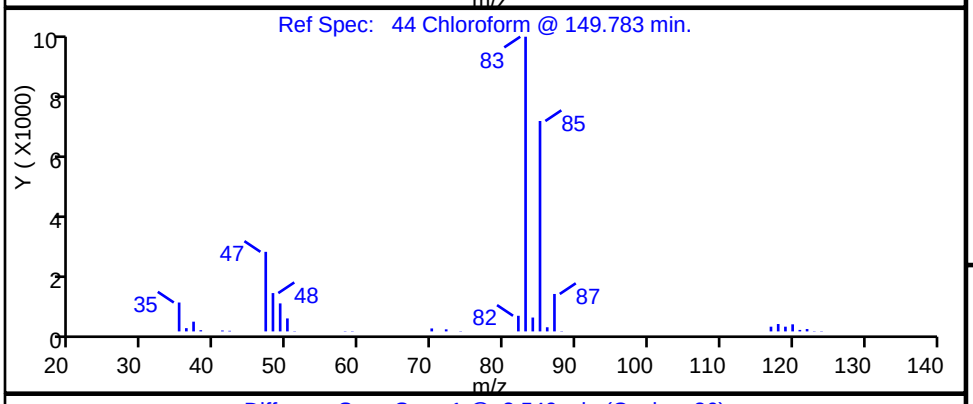
44 Chloroform, CAS: 67-66-3

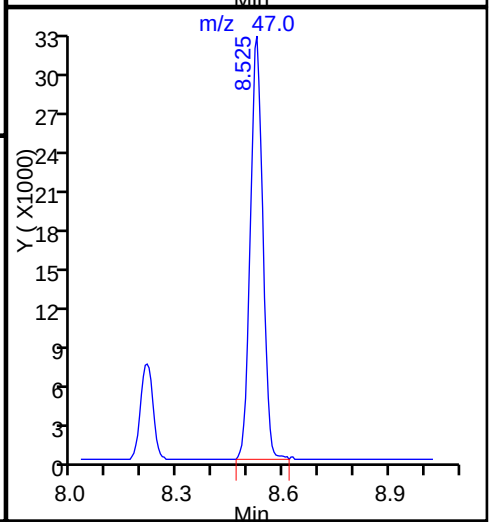


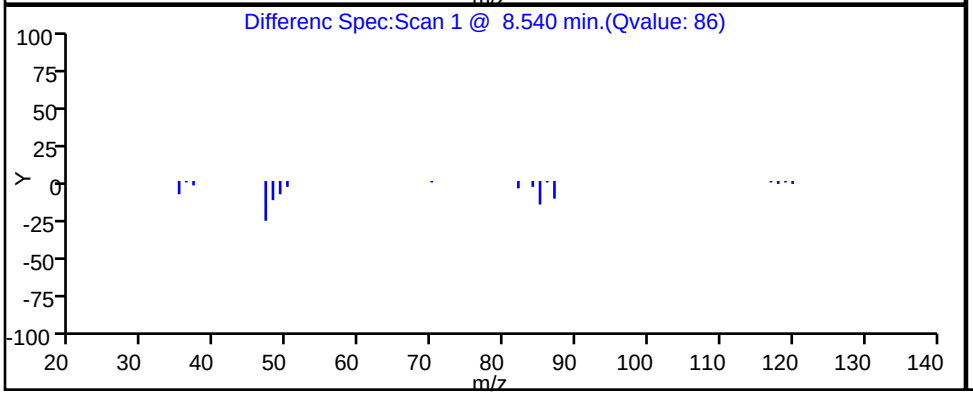












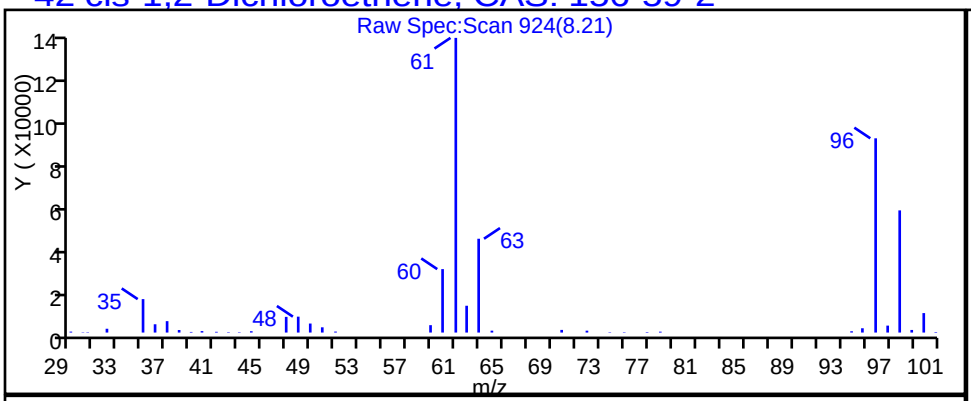
Report Date: 09-Jun-2016 08:10:50 Chrom Revision: 2.2 07-Jun-2016 12:31:34

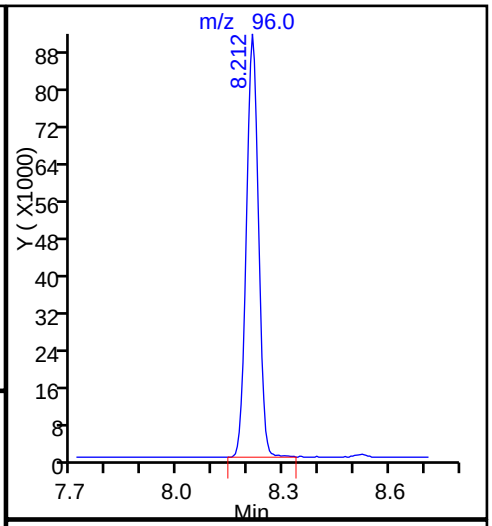
TestAmerica Knoxville

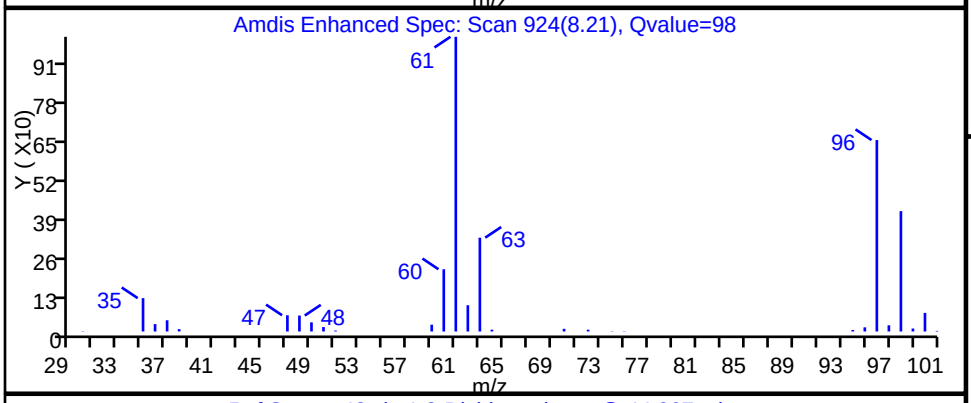
Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D

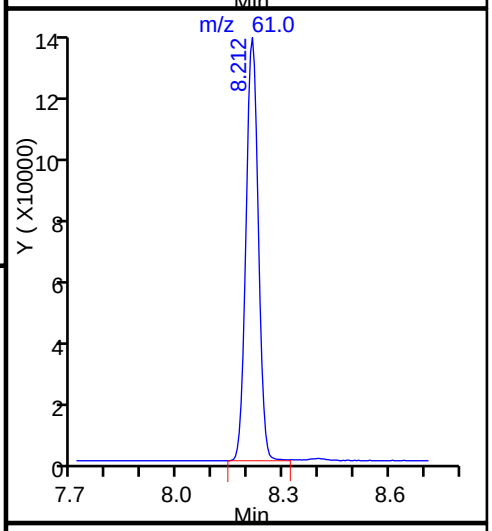
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

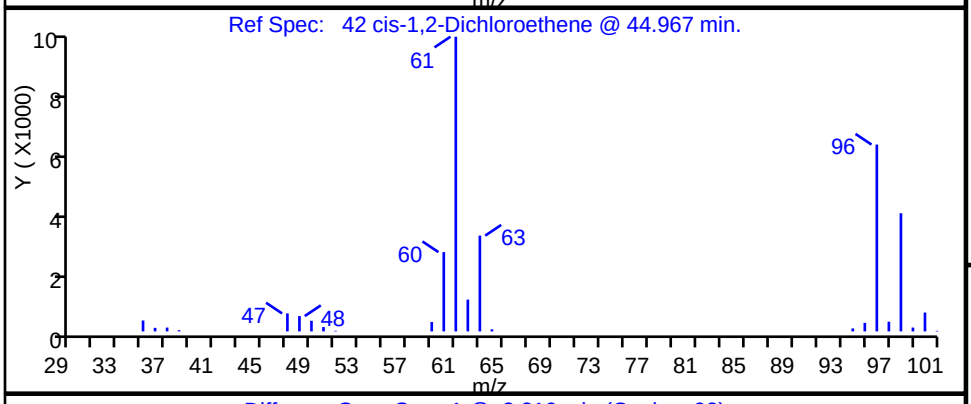
42 cis-1,2-Dichloroethene, CAS: 156-59-2

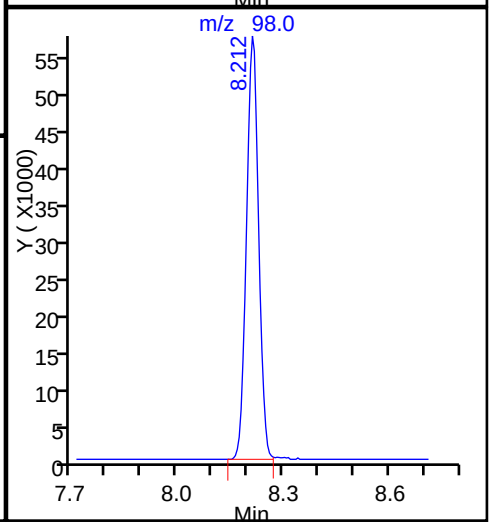


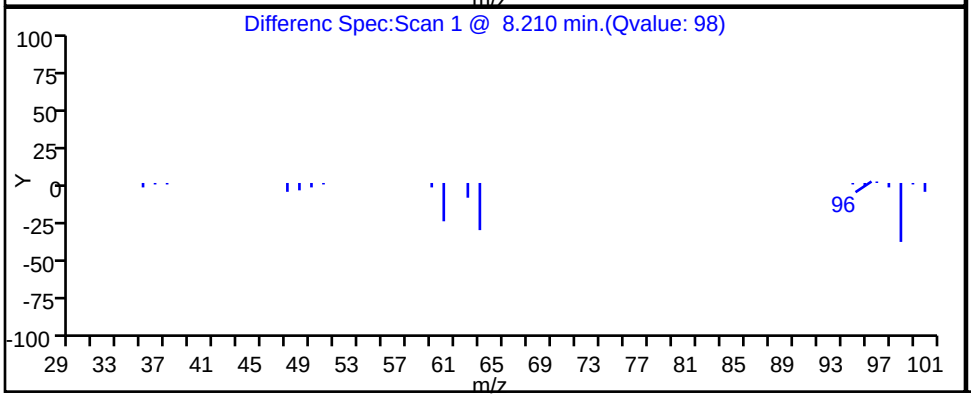








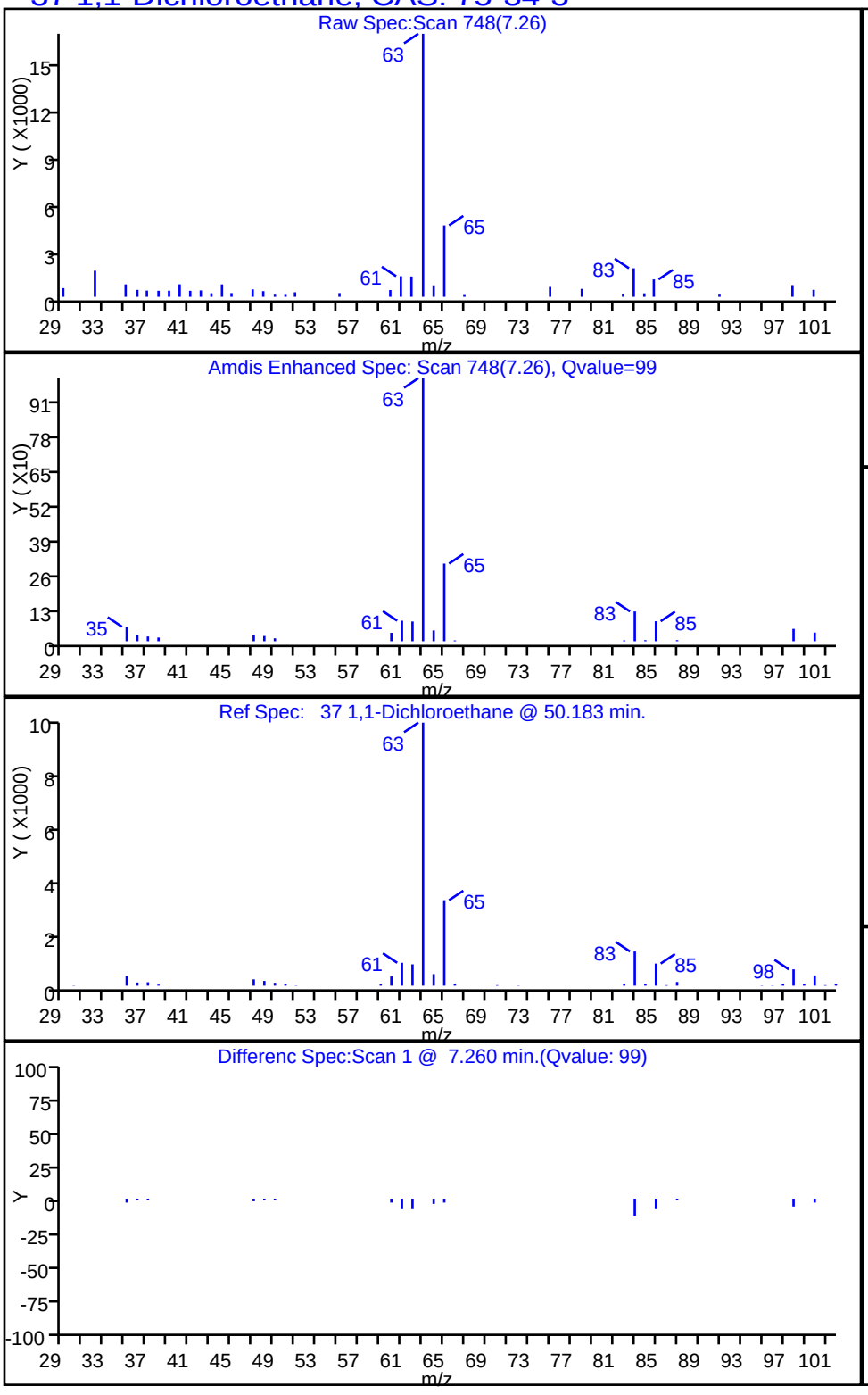


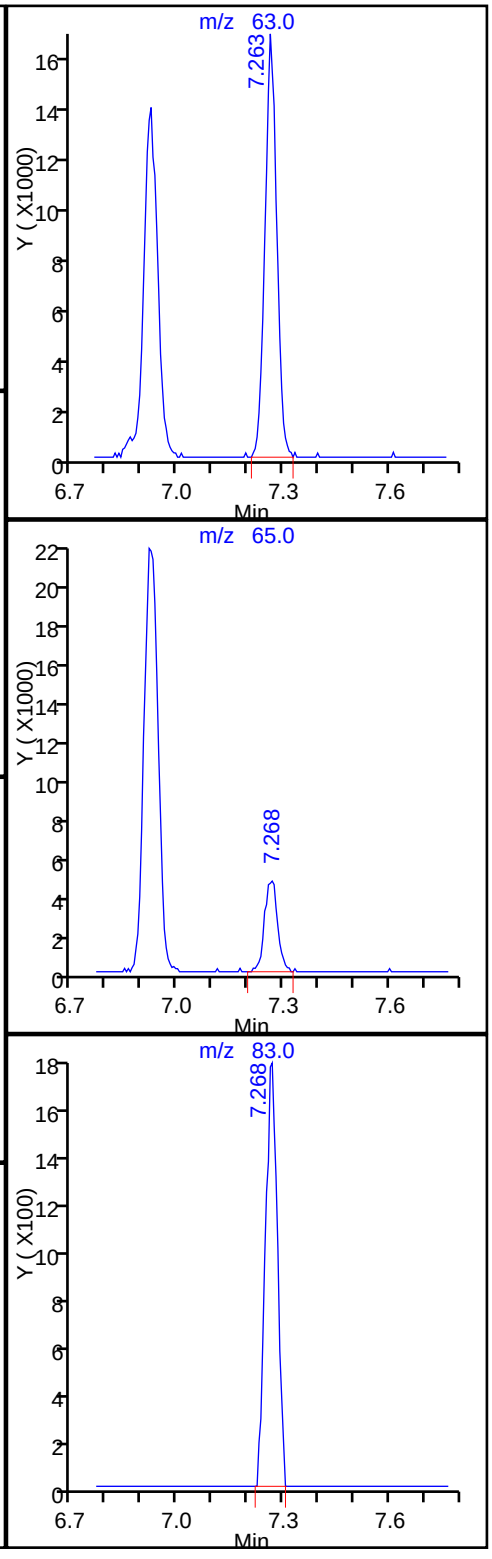


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 1,1-Dichloroethane, CAS: 75-34-3





TestAmerica Knoxville

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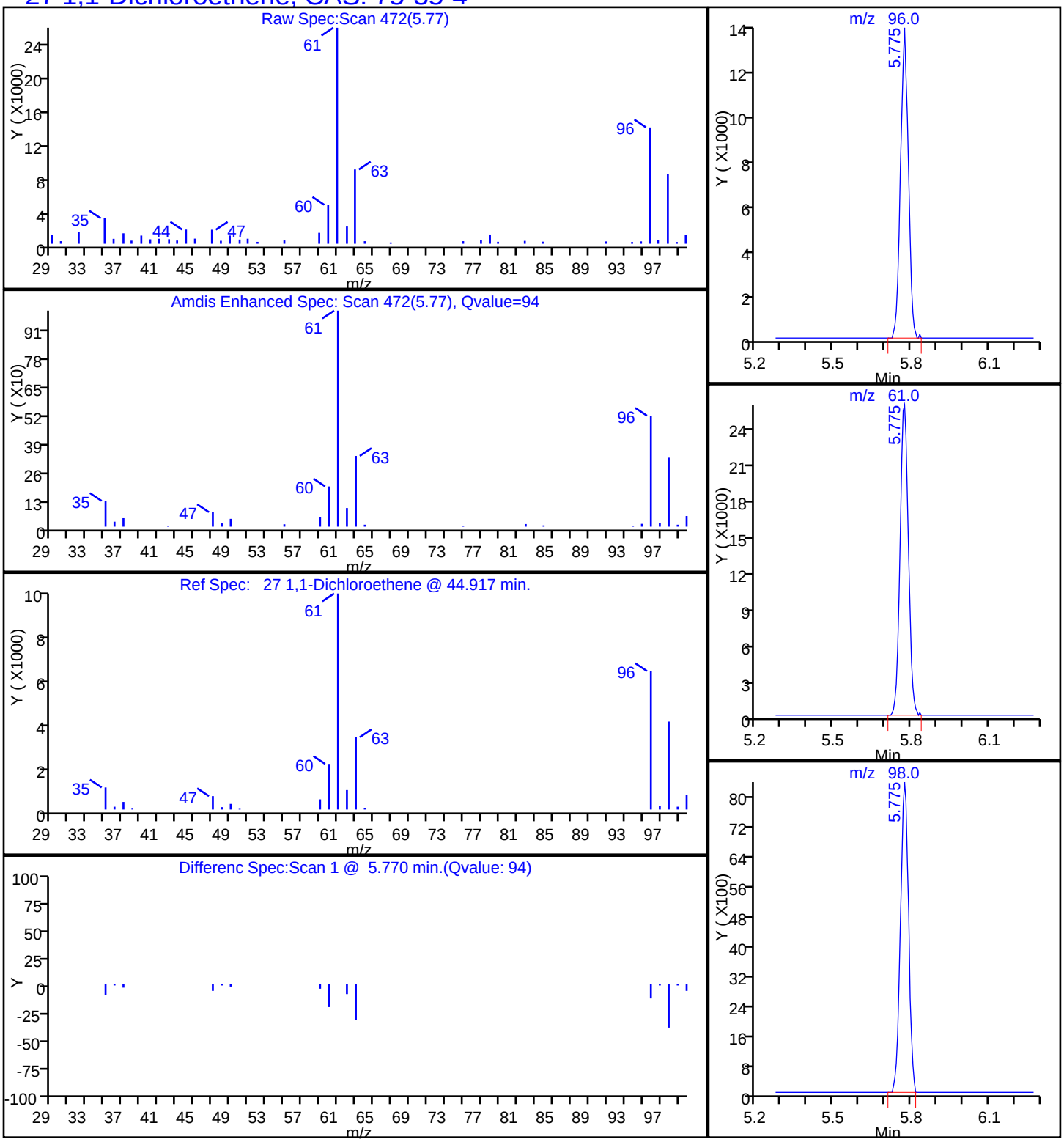
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4



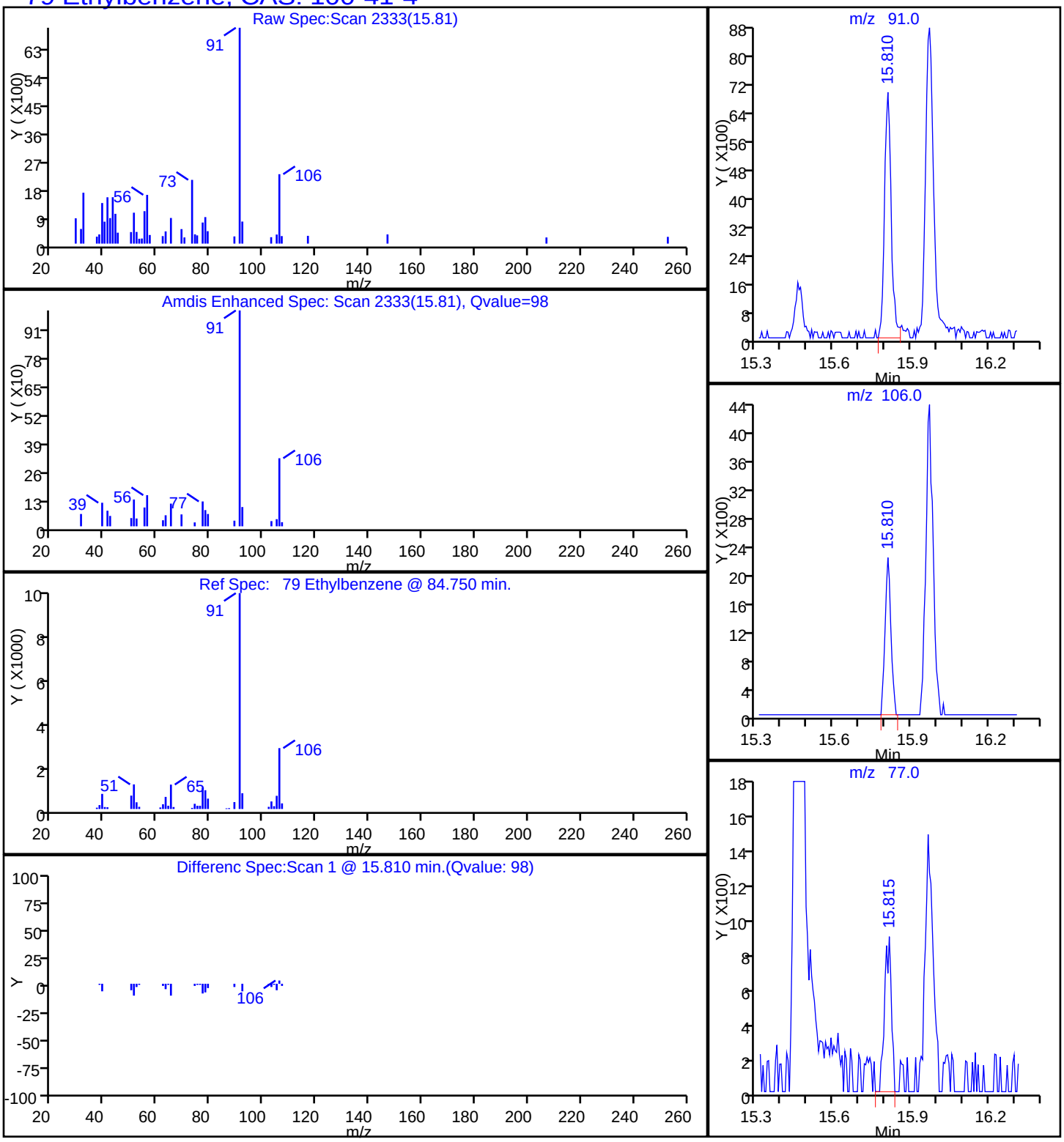
Report Date: 09-Jun-2016 08:10:50 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D

Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

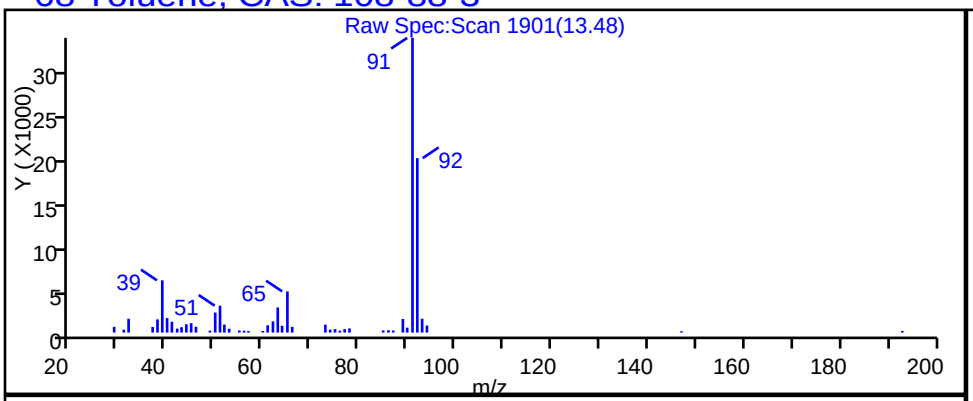
79 Ethylbenzene, CAS: 100-41-4

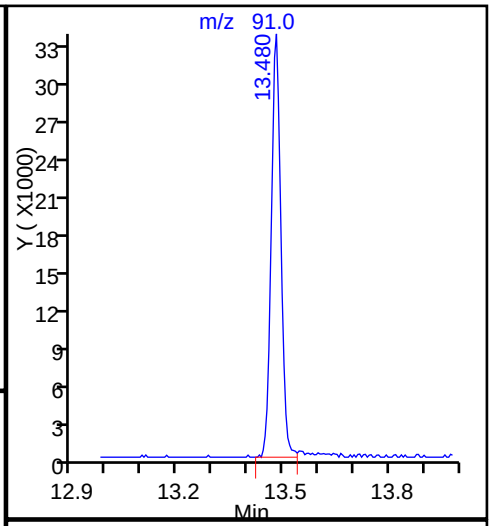


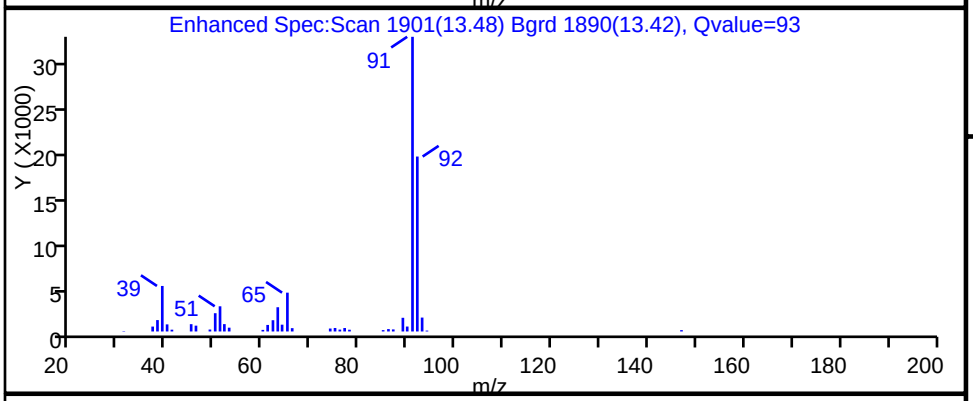
TestAmerica Knoxville

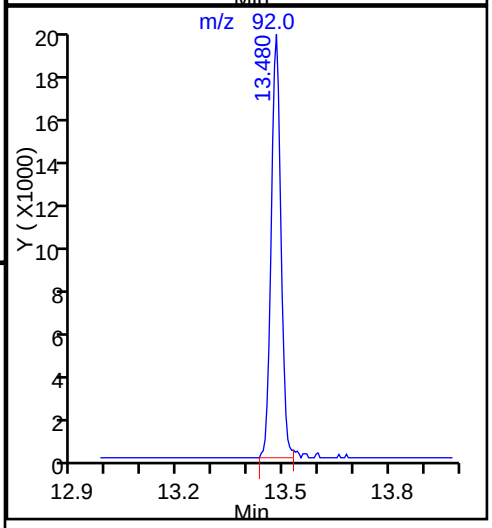
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

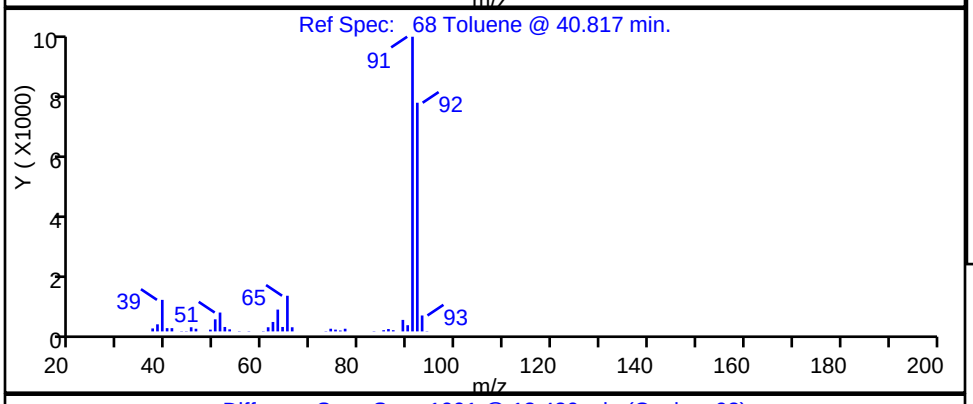
68 Toluene, CAS: 108-88-3

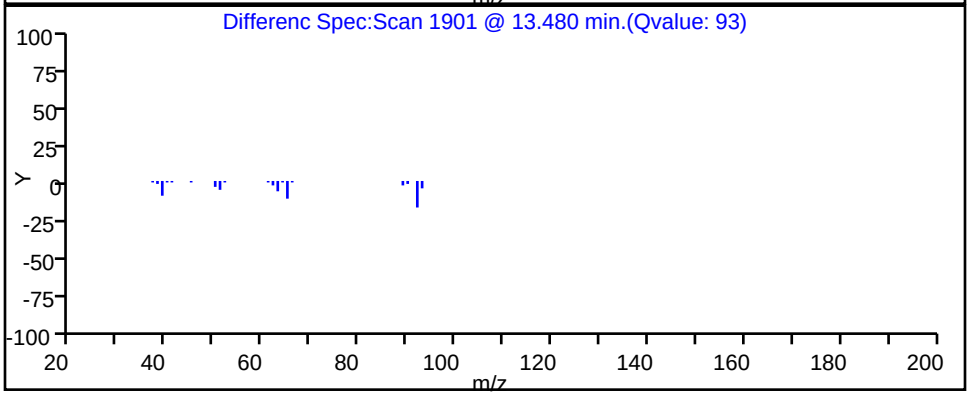








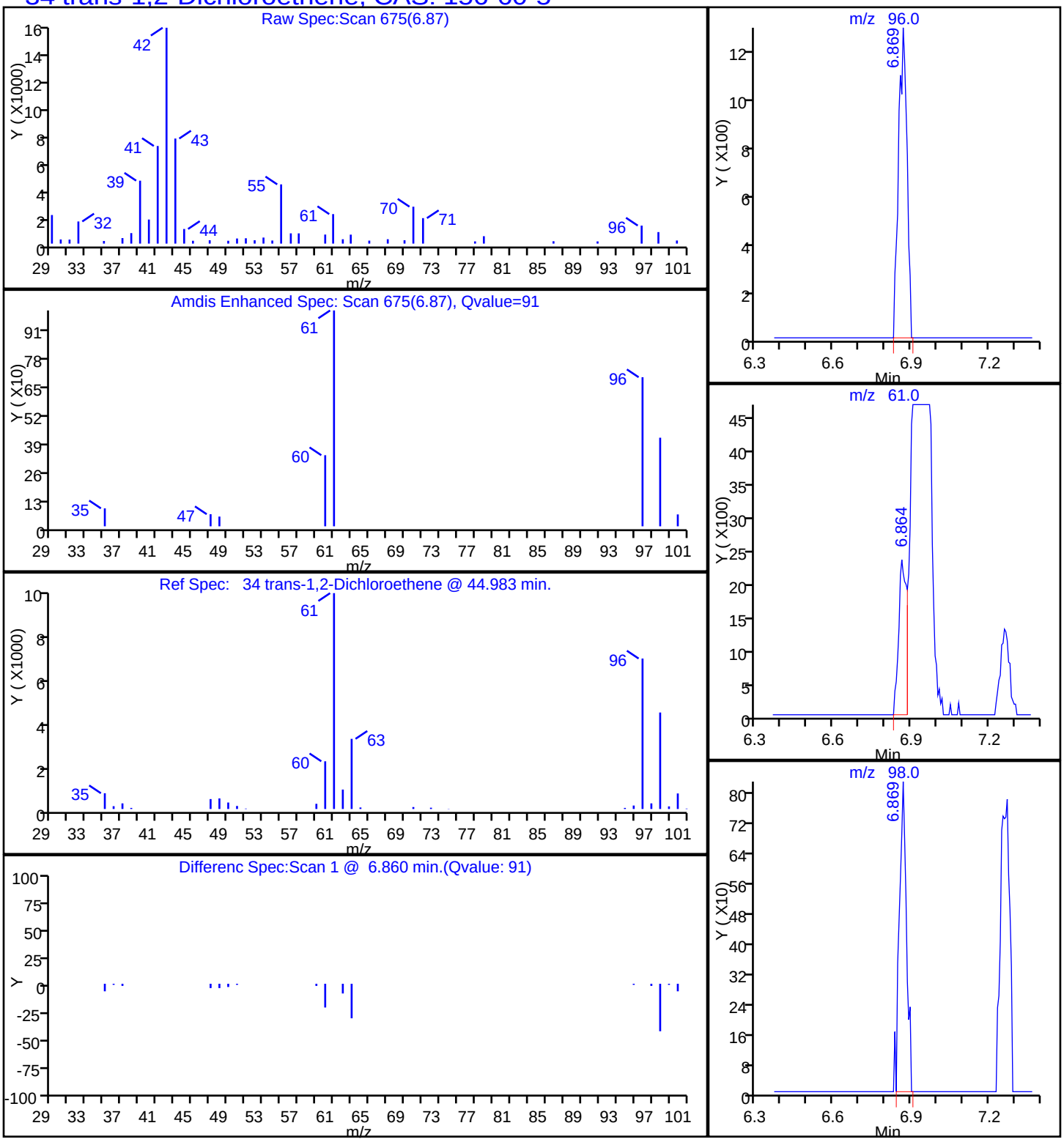




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

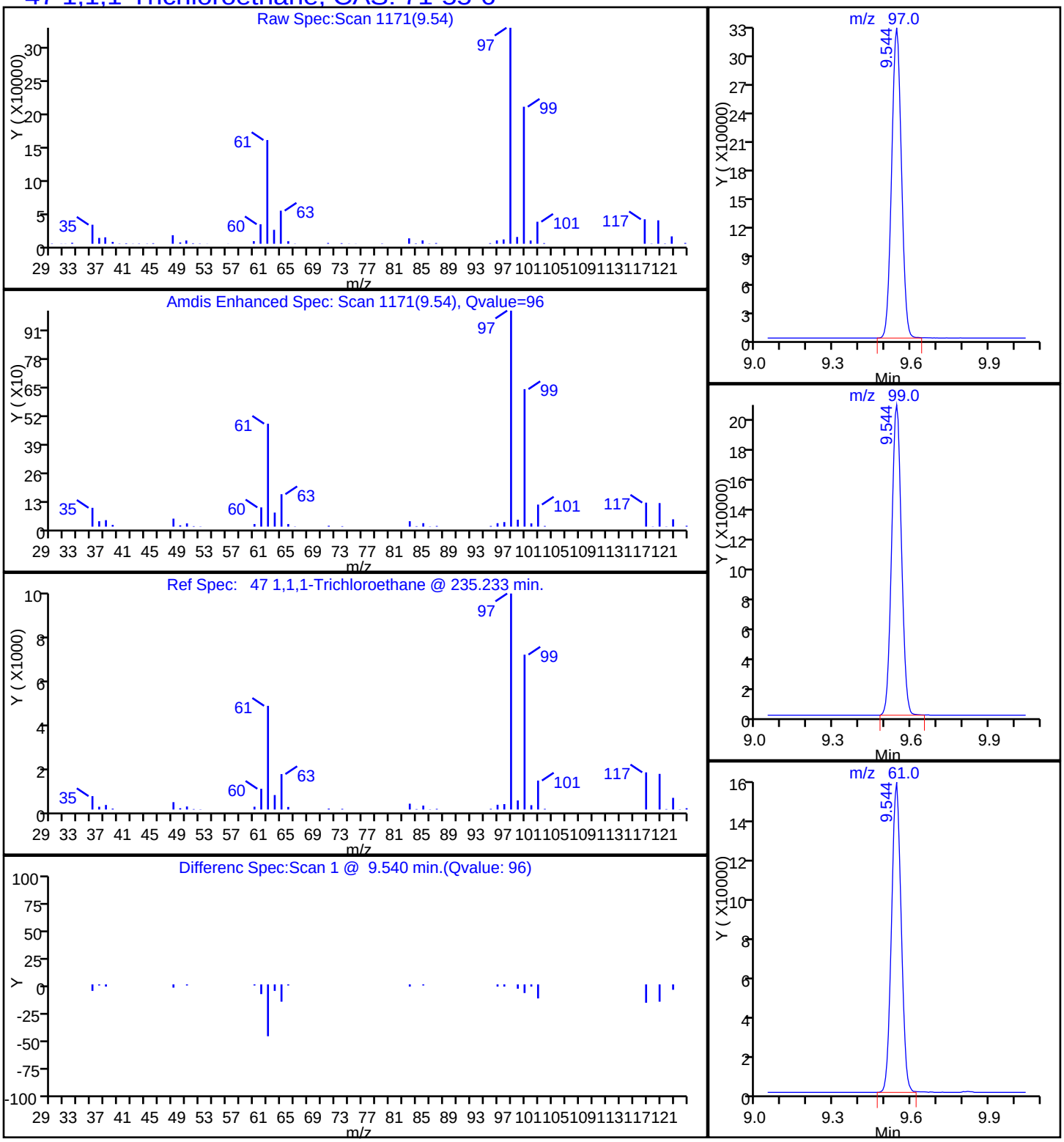
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

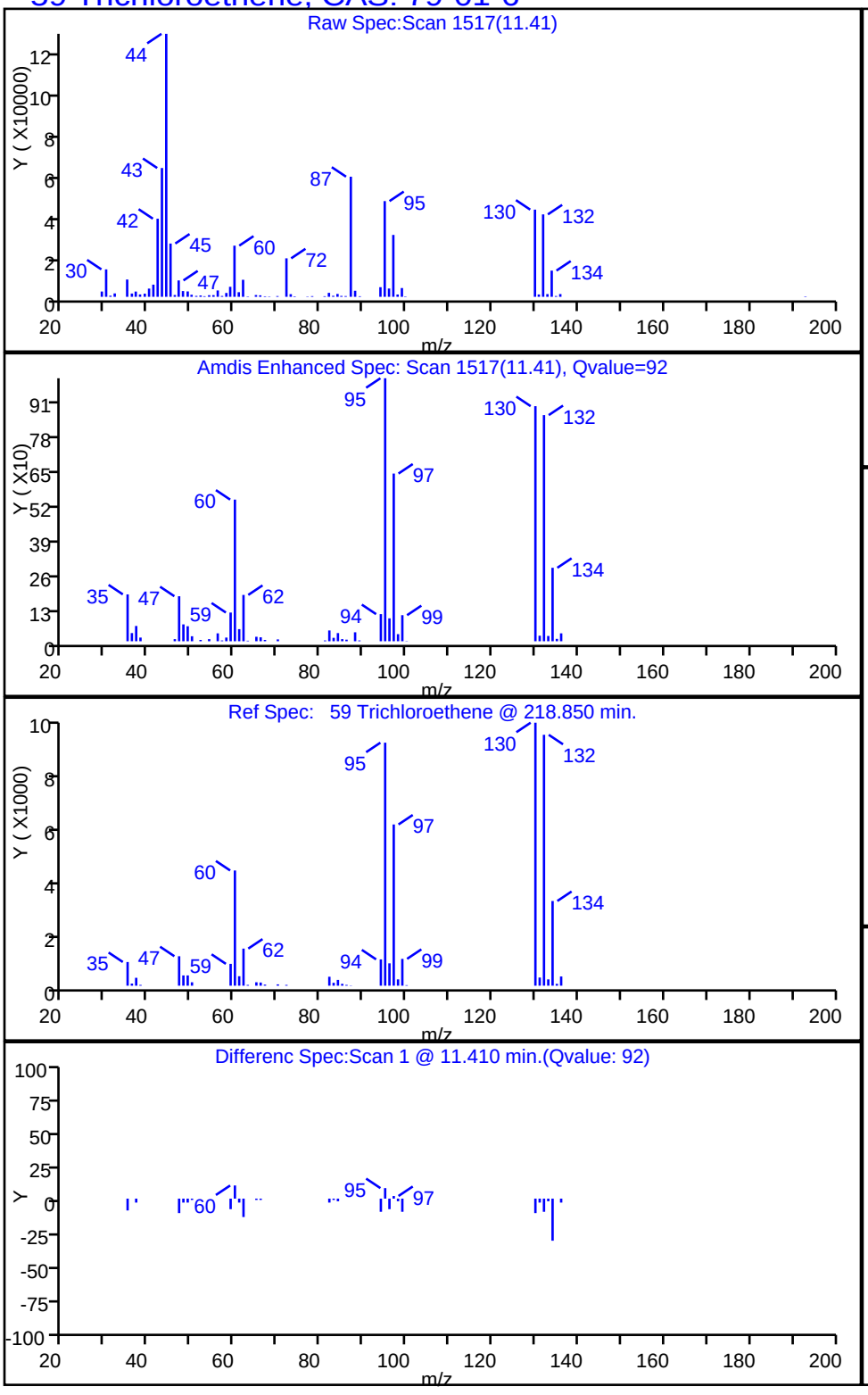
47 1,1,1-Trichloroethane, CAS: 71-55-6

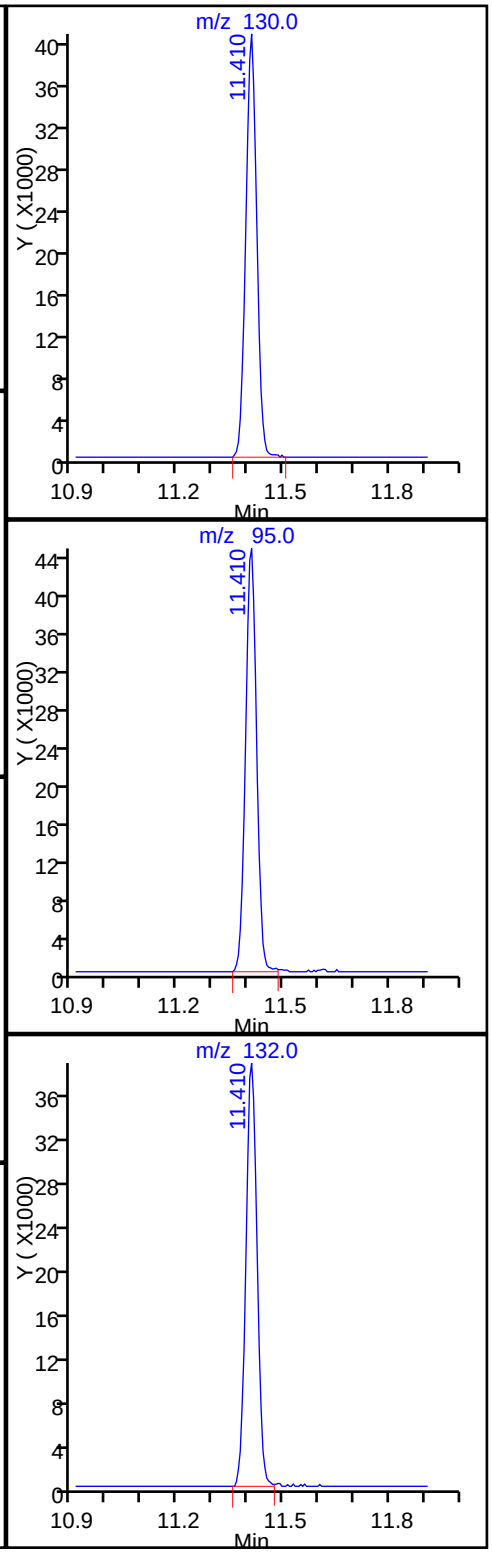


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6

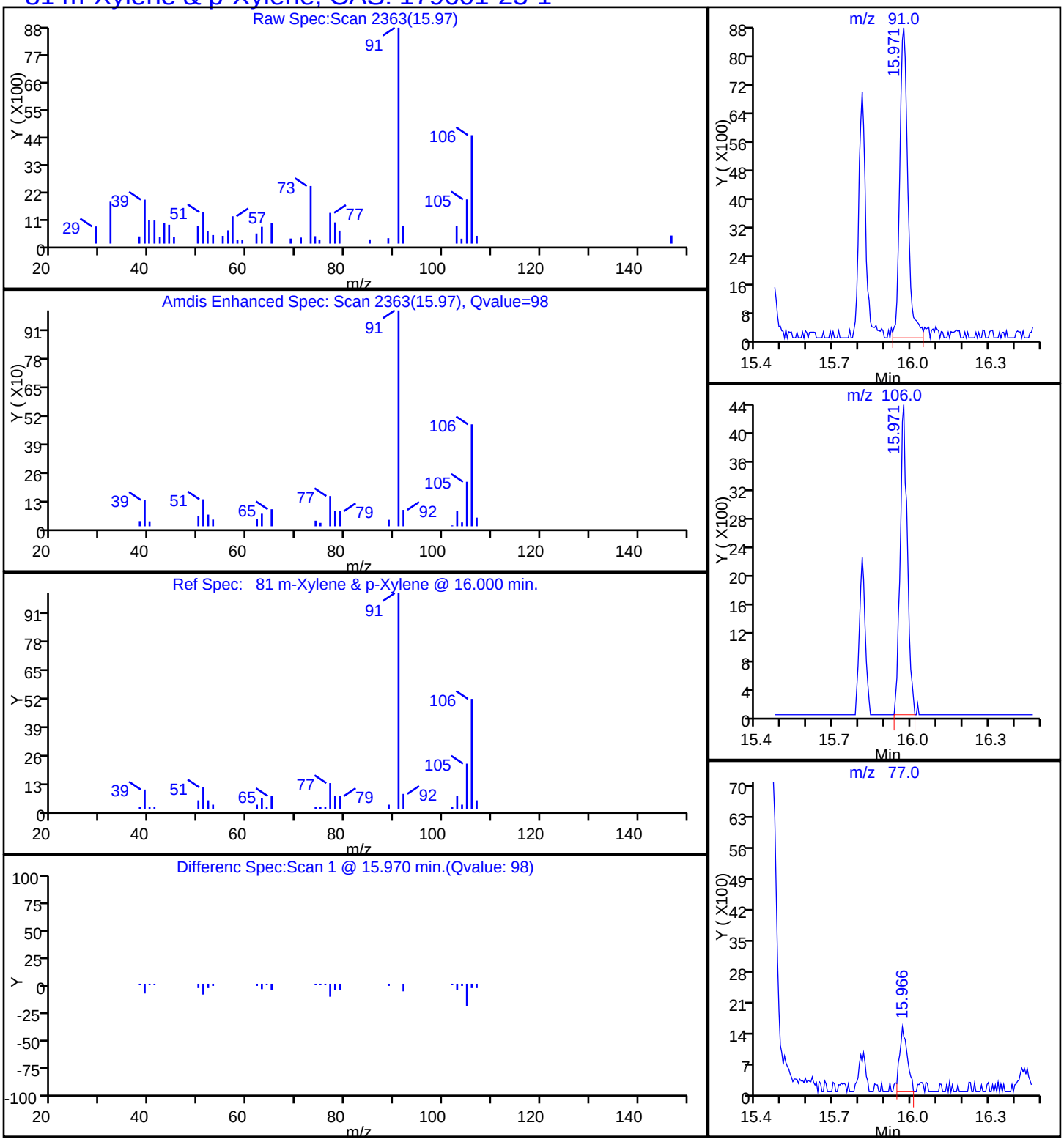




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

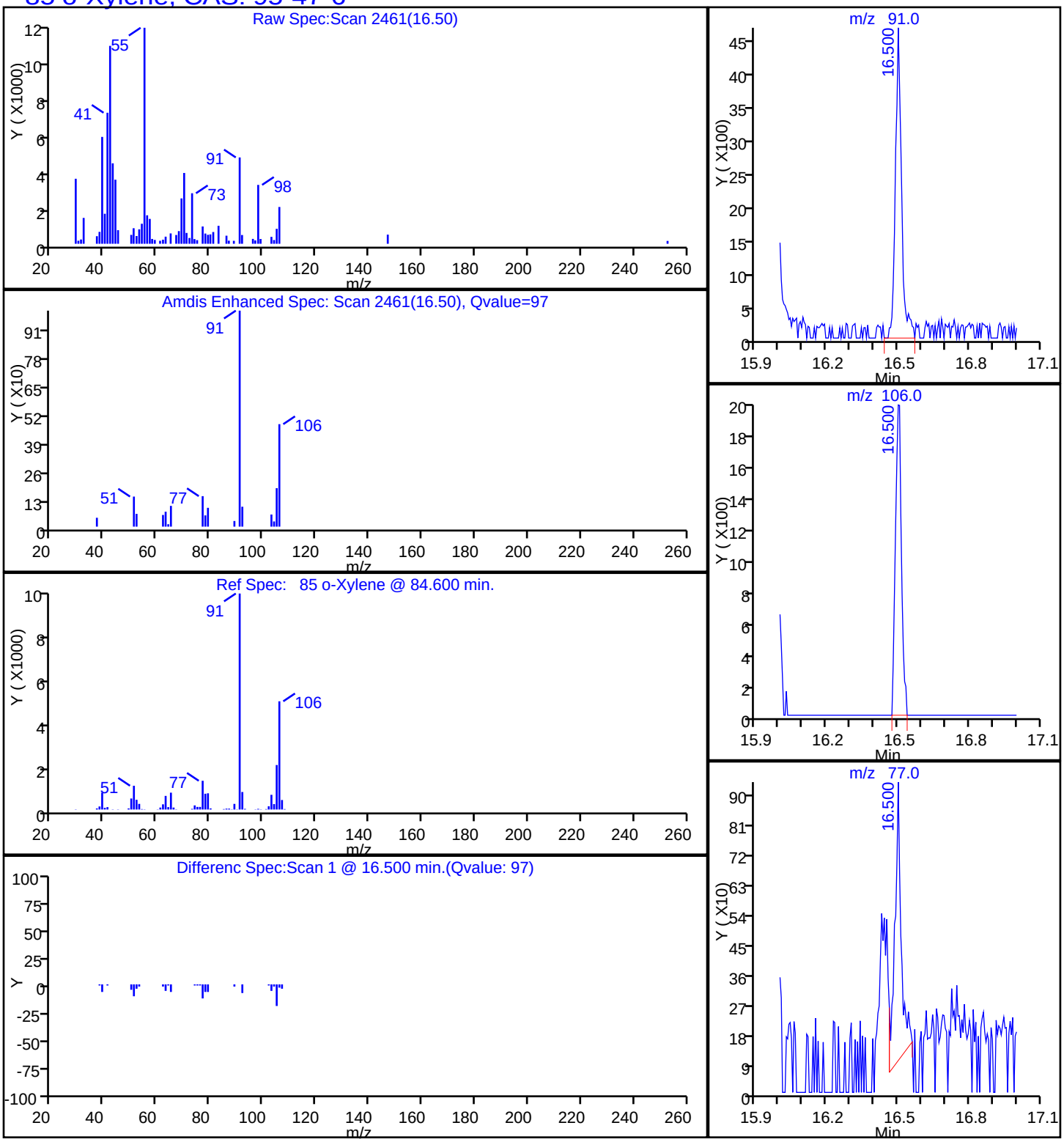
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GF08P111.D				
Injection Date:	08-Jun-2016 21:48:30	Instrument ID:	MG		
Lims ID:	140-5091-A-3	Lab Sample ID:	140-5091-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	17
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5077/2	GE23ICL1.D
Level 2	IC 140-5077/3	GE23ICL2.D
Level 3	IC 140-5077/4	GE23ICL3.D
Level 4	IC 140-5077/5	GE23ICL4.D
Level 5	IC 140-5077/6	GE23ICL5.D
Level 6	ICIS 140-5077/7	GE23ICL6.D
Level 7	IC 140-5077/8	GE23ICL7.D
Level 8	IC 140-5077/9	GE23ICL8.D
Level 9	IC 140-5077/10	GE23ICL9.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.3638 0.3360	0.4061 0.3400	0.3431 0.3401	0.3631 0.3015	0.3536	Ave		0.3497				8.0		30.0			
Propene	+++++ 1.3999	+++++ 1.3693	1.5994 1.3411	1.5891 1.1165	1.4853	Ave		1.4144				11.8		30.0			
Dichlorodifluoromethane	3.7828 3.3592	3.7613 3.3427	3.3087 3.3298	3.6307 2.8523	3.4994	Ave		3.4297				8.3		30.0			
Chloromethane	+++++ 0.4167	+++++ 0.4085	0.4516 0.3926	0.4817 0.3173	0.4424	Ave		0.4158				12.7		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.2718 2.0890	2.3890 2.0726	2.0667 2.0144	2.3743 1.7451	2.2099	Ave		2.1370				9.4		30.0			
Acetaldehyde	+++++ 0.6550	+++++ 0.5441	+++++ 0.4497	0.7466 0.3815	0.7355	Ave		0.5854				25.9		30.0			
Vinyl chloride	1.4275 1.2770	1.5724 1.2335	1.3205 1.1505	1.4848 0.8807	1.3825	Ave		1.3033				15.7		30.0			
1,3-Butadiene	1.1952 1.0963	1.2960 1.1122	1.0777 1.0678	1.2461 0.8783	1.1959	Ave		1.1295				10.9		30.0			
Butane	+++++ 2.4537	+++++ 2.4127	2.6062 2.3129	2.8058 1.8935	2.6930	Ave		2.4540				12.2		30.0			
Bromomethane	1.1765 1.0840	1.2931 1.1106	1.1141 1.1320	1.2534 0.9724	1.1977	Ave		1.1482				8.3		30.0			
Chloroethane	0.7662 0.6152	0.8337 0.6368	0.6704 0.6564	0.7616 0.5751	0.6838	Ave		0.6888				12.0		30.0			
Ethanol	0.6804 0.5874	0.8086 0.5881	0.7455 0.5538	0.6522 0.5420	0.6634	Ave		0.6468				13.8		30.0			
Vinyl bromide	1.0610 0.9739	1.2358 1.0110	1.0021 1.0201	1.2043 0.8983	1.0880	Ave		1.0549				10.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.6390	+++++ 1.6924	1.7995 1.6739	2.0761 1.4619	1.8596	Ave		1.7432				11.1		30.0			
Trichlorofluoromethane	3.4373 3.0303	3.8537 3.0975	3.0811 3.0940	3.6182 2.7796	3.3037	Ave		3.2550				10.2		30.0			
Acrolein	+++++ 0.2905	+++++ 0.3451	0.5197 0.3118	0.4097 +++++	0.4048	Ave		0.3803				22.0		30.0			
Acetonitrile	+++++ 0.5378	0.5752 0.5438	0.7074 0.5081	0.6331 0.5151	0.6373	Ave		0.5822				12.1		30.0			
Acetone	+++++ 0.5681	+++++ 0.5279	+++++ 0.4392	0.7239 0.4297	0.6937	Ave		0.5637				22.1		30.0			
Pentane	+++++ 0.1812	+++++ 0.1880	0.1915 0.1847	0.2512 0.1675	0.2136	Ave		0.1968				14.1		30.0			
Isopropyl alcohol	+++++ 1.5831	+++++ 1.6095	1.7900 1.4876	1.6519 1.4597	1.8104	Ave		1.6274				8.3		30.0			
Ethyl ether	1.5194 1.4105	1.7436 1.5137	1.5332 1.4098	1.8172 1.4313	1.7107	Ave		1.5655				9.8		30.0			
1,1-Dichloroethene	+++++ 0.8391	1.2035 0.9005	0.9707 0.8930	1.1972 0.8074	1.0068	Ave		0.9773				15.5		30.0			
Acrylonitrile	+++++ 0.6161	+++++ 0.6619	+++++ 0.6308	0.8307 0.6612	0.7614	Ave		0.6937				12.1		30.0			
tert-Butyl alcohol	+++++ 1.6519	1.7750 1.7145	1.7296 1.6123	1.9442 1.5581	1.9377	Ave		1.7404				8.1		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	1.8462 1.7374	2.4210 1.8281	1.9143 1.7926	2.4153 1.6256	2.0601	Ave		1.9601				14.6		30.0			
Methylene Chloride	+++++ 1.0469	+++++ 1.0654	1.4280 1.0283	1.3176 0.9060	1.1913	Ave		1.1405				16.0		30.0			
3-Chloropropene	+++++ 1.6196	2.2319 1.6110	1.8820 1.6060	1.7655 1.4578	1.6881	Ave		1.7327				13.7		30.0			
Carbon disulfide	3.7549 3.6781	4.0081 3.7265	3.5316 3.7139	4.0436 3.2620	3.8386	Ave		3.7286				6.4		30.0			
trans-1,2-Dichloroethene	1.3680 1.2379	1.3630 1.2375	1.2324 1.1936	1.3731 1.0366	1.3238	Ave		1.2629				8.6		30.0			
2-Methylpentane	+++++ 3.4938	4.0762 3.5060	3.4424 3.3685	3.9567 2.8858	3.7610	Ave		3.5613				10.5		30.0			
Methyl tert-butyl ether	+++++ 3.3921	+++++ 3.4104	3.1102 3.1622	3.4104 3.2262	3.6167	Ave		3.3326				5.3		30.0			
1,1-Dichloroethane	2.7805 2.5563	2.7970 2.6179	2.4868 2.5665	2.7454 2.3506	2.7354	Ave		2.6263				5.8		30.0			
Vinyl acetate	+++++ 4.2808	+++++ 4.4288	3.5300 4.1589	4.0761 4.0247	4.4787	Ave		4.1397				7.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.6357	+++++ 0.6065	0.8759 0.5353	0.5979 0.5184	0.6615	Ave		0.6330				18.7		30.0			
Hexane	+++++ 1.1956	+++++ 1.1930	1.1983 1.1377	1.3189 0.9719	1.2697	Ave		1.1836				9.3		30.0			
Isopropyl ether	4.6962 5.4653	4.8230 5.4521	4.9608 4.9887	5.4004 4.9447	5.7697	Ave		5.1668				7.0		30.0			
cis-1,2-Dichloroethene	1.2497 1.3095	1.3587 1.3151	1.2279 1.2876	1.3724 1.1957	1.3871	Ave		1.3004				5.1		30.0			
Ethyl acetate	+++++ 3.5438	+++++ 3.5983	+++++ 3.3460	3.2821 3.4756	3.6498	Ave		3.4826				4.1		30.0			
Chloroform	3.0551 2.7520	2.8889 2.7694	2.6717 2.7195	2.9519 2.5069	2.9204	Ave		2.8040				5.9		30.0			
Tert-butyl ethyl ether	+++++ 4.2171	3.5624 4.2396	3.7076 3.9057	4.1513 3.9465	4.4451	Ave		4.0219				7.3		30.0			
Tetrahydrofuran	+++++ 1.8351	+++++ 1.8552	1.7254 1.7226	1.7748 1.7855	1.9148	Ave		1.8019				3.9		30.0			
1,1,1-Trichloroethane	3.0593 2.9017	3.0670 2.9510	2.7157 2.8979	3.0937 2.6875	3.0764	Ave		2.9389				5.2		30.0			
1,2-Dichloroethane	0.4608 0.4132	0.4830 0.4431	0.3913 0.4501	0.4495 0.4059	0.4335	Ave		0.4367				6.6		30.0			
Cyclohexane	+++++ 0.1293	+++++ 0.1300	0.1277 0.1237	0.1514 0.0936	0.1373	Ave		0.1276				13.7		30.0			
Benzene	+++++ 0.7470	0.8680 0.7563	0.7298 0.7036	0.8392 0.5436	0.8152	Ave		0.7503				13.5		30.0			
1-Butanol	+++++ 0.1342	+++++ 0.1373	0.1103 0.1322	0.1097 0.1165	0.1355	Ave		0.1251				9.9		30.0			
Carbon tetrachloride	0.5812 0.5884	0.6480 0.6332	0.5229 0.5664	0.6118 0.5467	0.5815	Ave		0.5867				6.8		30.0			
2,3-Dimethylpentane	0.2076 0.1853	0.2241 0.1948	0.1794 0.1944	0.2054 0.1579	0.1977	Ave		0.1941				9.7		30.0			
Thiophene	0.4529 0.4379	0.4782 0.4628	0.4075 0.4672	0.4818 0.3994	0.4617	Ave		0.4499				6.5		30.0			
Tert-amyl methyl ether	+++++ 0.7151	0.6601 0.7528	0.5929 0.7140	0.7562 0.6627	0.7548	Ave		0.7011				8.3		30.0			
2,2,4-Trimethylpentane	+++++ 1.4773	+++++ 1.5342	1.4442 1.5103	1.6842 1.2227	1.5810	Ave		1.4934				9.5		30.0			
Heptane	+++++ 0.2874	+++++ 0.3004	0.2751 0.2961	0.3217 0.2387	0.3050	Ave		0.2892				9.2		30.0			
1,2-Dichloropropane	0.3265 0.3111	0.3319 0.3267	0.2990 0.3169	0.3322 0.2701	0.3241	Ave		0.3154				6.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3825 0.3611	0.4707 0.3720	0.3510 0.4032	0.4168 0.3111	0.3751	Ave		0.3826				11.7		30.0			
Dibromomethane	0.3219 0.3016	0.3422 0.3209	0.2801 0.3261	0.3241 0.2743	0.3129	Ave		0.3116				7.2		30.0			
Bromodichloromethane	+++++ 0.5843	0.5205 0.6244	0.4473 0.6332	0.5922 0.5394	0.5906	Ave		0.5665				10.8		30.0			
1,4-Dioxane	+++++ 0.1097	0.1036 0.1136	0.0981 0.1071	0.1080 0.0951	0.1173	Ave		0.1066				7.0		30.0			
Methyl methacrylate	+++++ 0.4526	0.3870 0.4908	0.3123 0.4739	0.4017 0.4637	0.4571	Ave		0.4299				13.8		30.0			
Methylcyclohexane	0.6121 0.5922	0.7287 0.6133	0.5668 0.5982	0.6775 0.4787	0.6430	Ave		0.6123				11.4		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.7350	0.7233 0.7867	0.7540 0.7492	0.6808 0.7017	0.7941	Ave		0.7406				5.3		30.0			
cis-1,3-Dichloropropene	+++++ 0.4578	0.4488 0.4896	0.3879 0.4850	0.4775 0.4174	0.4800	Ave		0.4555				8.0		30.0			
trans-1,3-Dichloropropene	+++++ 0.4579	0.4158 0.4786	0.3982 0.4882	0.4751 0.4528	0.4771	Ave		0.4555				7.1		30.0			
Toluene Range	+++++ 2.2547	+++++ 2.3165	2.1506 2.2520	2.4212 1.9949	2.3377	Ave		2.2468				6.2		30.0			
Toluene	0.8923 0.9453	0.9767 0.9495	0.8996 0.9310	1.0466 0.8329	1.0302	Ave		0.9449				7.1		30.0			
1,1,2-Trichloroethane	0.2630 0.2819	0.2883 0.2867	0.2572 0.2845	0.3052 0.2524	0.3024	Ave		0.2802				6.7		30.0			
2-Methylthiophene	0.7081 0.7781	0.7715 0.7942	0.7129 0.7869	0.8286 0.7108	0.8373	Ave		0.7698				6.4		30.0			
3-Methylthiophene	+++++ 0.7595	0.7527 0.7694	0.6939 0.7785	0.8161 0.6916	0.8147	Ave		0.7596				6.2		30.0			
2-Hexanone	+++++ 0.3352	+++++ 0.3442	0.2603 0.3357	0.2880 0.3223	0.3466	Ave		0.3189				10.2		30.0			
C8 Range	+++++ 3.4305	+++++ 3.5068	3.6463 3.3640	3.8971 2.7110	3.7024	Ave		3.4654				10.9		30.0			
Octane	+++++ 0.3417	+++++ 0.3376	0.3371 0.3298	0.3861 0.2691	0.3642	Ave		0.3379				10.7		30.0			
Dibromochloromethane	+++++ 0.5805	0.3951 0.6174	0.3598 0.6330	0.5358 0.5783	0.5668	Ave		0.5333				19.0		30.0			
1,2-Dibromoethane (EDB)	+++++ 0.5193	0.4337 0.5364	0.4121 0.5497	0.5295 0.4905	0.5381	Ave		0.5012				10.3		30.0			
Tetrachloroethene	0.3782 0.3460	0.4160 0.3487	0.3443 0.3570	0.4064 0.3135	0.3725	Ave		0.3647				8.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	+++++ 0.7419	0.7666 0.7442	0.7014 0.7424	0.8173 0.6543	0.7928	Ave		0.7451				6.8		30.0			
2,3-Dimethylheptane	1.2787 1.1891	1.4272 1.1693	1.2055 1.1378	1.3772 0.9208	1.2852	Ave		1.2212				12.1		30.0			
Ethylbenzene	+++++ 1.2603	1.2198 1.2650	1.1738 1.2092	1.3820 1.0986	1.3665	Ave		1.2469				7.6		30.0			
2-Ethylthiophene	+++++ 0.9549	0.8825 0.9565	0.8314 0.9371	1.0228 0.8641	1.0188	Ave		0.9335				7.5		30.0			
m-Xylene & p-Xylene	0.8587 0.9577	0.9801 0.9319	0.9198 0.8719	1.0585 0.7937	1.0466	Ave		0.9354				9.3		30.0			
Bromoform	+++++ 0.5613	0.2186 0.6244	0.2234 0.7094	0.4702 +++++	0.5273	Ave		0.4764				39.9	*	30.0			
Nonane	+++++ 0.7215	+++++ 0.6627	0.7304 0.6051	0.8561 0.4925	0.7913	Ave		0.6942				17.4		30.0			
Styrene	+++++ 0.6944	0.4480 0.6927	0.4573 0.6743	0.6610 0.6145	0.7175	Ave		0.6200				17.4		30.0			
o-Xylene	+++++ 1.0301	1.0120 1.0223	0.9544 0.9782	1.1367 0.8975	1.1319	Ave		1.0204				8.1		30.0			
1,1,2,2-Tetrachloroethane	+++++ 0.7170	0.6430 0.7413	0.6143 0.6775	0.7810 0.6219	0.7948	Ave		0.6989				10.1		30.0			
1,2,3-Trichloropropane	+++++ 0.2208	+++++ 0.2249	0.1936 0.2169	0.2330 0.2072	0.2391	Ave		0.2193				7.0		30.0			
Isopropylbenzene	+++++ 1.3403	1.3736 1.3232	1.2841 1.2596	1.4840 1.1675	1.4707	Ave		1.3379				7.9		30.0			
Propylbenzene	+++++ 0.3885	+++++ 0.3846	0.3528 0.3633	0.4165 0.3348	0.4235	Ave		0.3806				8.6		30.0			
2-Chlorotoluene	+++++ 0.3507	0.3555 0.3517	0.3295 0.3361	0.3825 0.3054	0.3814	Ave		0.3491				7.4		30.0			
4-Ethyltoluene	+++++ 1.3824	+++++ 1.3483	1.2483 1.2865	1.4808 1.1982	1.5003	Ave		1.3492				8.5		30.0			
1,3,5-Trimethylbenzene	+++++ 0.6498	0.6198 0.6315	0.6195 0.5953	0.7185 0.5602	0.7240	Ave		0.6398				8.9		30.0			
Alpha Methyl Styrene	+++++ 0.5404	+++++ 0.5438	0.3245 0.5465	0.4600 0.5138	0.5434	Ave		0.4960				16.5		30.0			
Decane	+++++ 0.9315	0.9804 0.8780	0.9149 0.8165	1.0676 0.6784	1.0352	Ave		0.9128				13.7		30.0			
tert-Butylbenzene	+++++ 1.2309	1.2690 1.1835	1.1997 1.1078	1.4088 1.0983	1.3874	Ave		1.2357				9.3		30.0			
1,2,4-Trimethylbenzene	+++++ 1.1504	1.1539 1.1116	1.1148 1.0264	1.2957 0.9687	1.2847	Ave		1.1383				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.6549	1.7052 1.5668	1.6270 1.4291	1.8927 1.4191	1.8789	Ave		1.6467				10.9		30.0			
1,3-Dichlorobenzene	+++++ 0.7453	0.7437 0.7480	0.6951 0.7547	0.8218 0.8536	0.8178	Ave		0.7725				6.8		30.0			
Benzyl chloride	+++++ 1.0594	+++++ 1.0579	0.7889 1.0195	0.9638 0.9444	1.0865	Ave		0.9886				10.4		30.0			
1,4-Dichlorobenzene	+++++ 0.7479	0.7353 0.7604	0.6803 0.7565	0.7906 0.7674	0.8104	Ave		0.7561				5.1		30.0			
4-Isopropyltoluene	+++++ 1.4306	1.4102 1.4015	1.3380 1.3191	1.6029 1.2648	1.6030	Ave		1.4213				8.8		30.0			
1,2,3-Trimethylbenzene	+++++ 0.9186	0.9178 0.9028	0.8668 0.8516	1.0090 0.7940	1.0296	Ave		0.9113				8.6		30.0			
Butylcyclohexane	+++++ 0.9455	1.0799 0.8952	0.9791 0.8402	1.1391 0.6963	1.0673	Ave		0.9553				15.1		30.0			
1,2-Dichlorobenzene	+++++ 0.7267	0.7403 0.7246	0.6831 0.7233	0.8075 0.8163	0.8056	Ave		0.7534				6.6		30.0			
Indane	+++++ 1.0440	1.0493 0.9923	0.9762 0.9248	1.1749 0.9453	1.1753	Ave		1.0353				9.3		30.0			
Indene	+++++ 0.7767	+++++ 0.7354	0.6354 0.7404	0.7732 0.7119	0.8496	Ave		0.7461				8.8		30.0			
Butylbenzene	+++++ 1.3678	1.3463 1.2994	1.2925 1.1815	1.5370 1.0748	1.5416	Ave		1.3301				12.0		30.0			
Undecane	+++++ 1.0504	1.0795 0.9778	0.9836 0.8809	1.1652 0.7354	1.1896	Ave		1.0078				14.8		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0934	1.0465 1.0604	1.0100 1.0115	1.1983 0.9404	1.2160	Ave		1.0721				8.8		30.0			
1,2-Dibromo-3-Chloropropane	+++++ 0.3170	0.1699 0.3536	0.1598 0.3533	0.2686 0.3634	0.3235	Ave		0.2887				28.4		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.3120	1.2416 1.2543	1.2338 1.1926	1.4518 1.1333	1.4878	Ave		1.2884				9.6		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.8074	0.7568 0.7843	0.7670 0.7615	0.9011 0.6972	0.9200	Ave		0.7994				9.4		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 1.0969	1.0107 1.0475	1.0269 1.0025	1.2006 0.9215	1.2314	Ave		1.0672				9.8		30.0			
Dodecane	+++++ 0.9311	0.9408 0.8575	0.8863 0.7918	0.9915 0.6368	1.0344	Ave		0.8838				14.2		30.0			
1,2,4-Trichlorobenzene	+++++ 0.5117	0.3595 0.5642	0.3868 0.6405	0.4367 0.7574	0.5240	Ave		0.5226				25.4		30.0			
Naphthalene	0.6937 1.2503	0.9304 1.2290	1.0444 1.2378	1.1612 1.1415	1.3644	Ave		1.1170				18.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.6614	+++++ 0.6817	0.4890 0.7287	0.5361 0.6993	0.6835	Ave		0.6399				14.1		30.0			
Hexachlorobutadiene	+++++ 0.6609	0.6095 0.7418	0.5410 0.9308	0.6599 +++++	0.6881	Ave		0.6903				17.9		30.0			
1,2,3-Trichlorobenzene	+++++ 0.4941	0.3901 0.5304	0.3977 0.5896	0.4521 0.6537	0.5279	Ave		0.5045				18.1		30.0			
2-Methylnaphthalene	+++++ 0.1362	+++++ 0.1437	0.1061 0.1723	0.0984 0.1141	0.1386	Ave		0.1299				19.7		50.0			
1-Methylnaphthalene	+++++ 0.1445	+++++ 0.1467	0.1384 0.1691	0.1238 0.0961	0.1577	Ave		0.1395				17.1		50.0			
4-Bromofluorobenzene (Surr)	0.7456 0.7341	0.7223 0.7223	0.7405 0.7165	0.7257 0.6966	0.7322	Ave		0.7262				2.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5077/2	GE23ICL1.D
Level 2	IC 140-5077/3	GE23ICL2.D
Level 3	IC 140-5077/4	GE23ICL3.D
Level 4	IC 140-5077/5	GE23ICL4.D
Level 5	IC 140-5077/6	GE23ICL5.D
Level 6	ICIS 140-5077/7	GE23ICL6.D
Level 7	IC 140-5077/8	GE23ICL7.D
Level 8	IC 140-5077/9	GE23ICL8.D
Level 9	IC 140-5077/10	GE23ICL9.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	954 58810	2540 115477	4743 223282	16205 445250	31113	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Propene	CBM	Ave	+++++ 244998	+++++ 465136	22108 880541	70911 1648921	130679	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	9919 587900	23528 1135464	45735 2186292	162018 4212555	307890	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Chloromethane	CBM	Ave	+++++ 72923	+++++ 138749	6242 257788	21495 468626	38922	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	5957 365602	14944 704028	28567 1322625	105953 2577316	194435	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 573197	+++++ 924095	+++++ 1476299	166580 2817377	323557	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.50 80.0	5.01
Vinyl chloride	CBM	Ave	3743 223498	9836 418991	18252 755367	66259 1300669	121638	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,3-Butadiene	CBM	Ave	3134 191868	8107 377796	14897 701117	55607 1297159	105224	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Butane	CBM	Ave	+++++ 429432	+++++ 819556	36024 1518589	125207 2796444	236942	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Bromomethane	CBM	Ave	3085 189721	8089 377271	15400 743247	55933 1436179	105380	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Chloroethane	CBM	Ave	2009 107665	5215 216318	9267 430955	33987 849280	60165	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Ethanol	CBM	Ave	8920 514022	25290 998919	51520 1818052	145528 4002207	291862	0.196 9.99	0.397 20.0	0.794 40.0	2.50 80.0	5.01
Vinyl bromide	CBM	Ave	2782 170443	7730 343434	13852 669749	53743 1326664	95729	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 286852	+++++ 574893	24874 1099045	92643 2159081	163612	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	9013 530333	24106 1052176	42589 2031424	161459 4105132	290676	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Acrolein	CBM	Ave	+++++ 50835	+++++ 117212	7184 204749	18283 +++++	35613	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 +++++	1.00
Acetonitrile	CBM	Ave	+++++ 94122	3598 184719	9778 333579	28254 760678	56068	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Acetone	CBM	Ave	+++++ 298270	+++++ 537985	+++++ 865195	96915 1903811	183116	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.50 48.0	3.01
Pentane	CBM	Ave	+++++ 31720	+++++ 63856	2647 121239	11208 247338	18790	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Isopropyl alcohol	CBM	Ave	+++++ 831261	+++++ 1640262	74234 2930296	221156 6467753	477889	+++++ 5.99	+++++ 12.0	0.476 24.0	1.50 48.0	3.01
Ethyl ether	CBM	Ave	3984 246848	10907 514181	21193 925648	81093 2113865	150518	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 146847	7528 305871	13417 586291	53426 1192440	88584	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 107817	+++++ 224854	+++++ 414138	37070 976472	66994	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.501 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 289108	11103 582378	23907 1058611	86757 2301176	170486	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	4841 304058	15144 620973	26461 1176991	107780 2400839	181259	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 183222	+++++ 361913	19738 675146	58799 1337988	104813	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 283456	13961 547242	26014 1054480	78783 2152975	148527	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Carbon disulfide	CBM	Ave	9846 643704	25072 1265839	48816 2438445	180446 4817505	337735	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	3587 216639	8526 420363	17035 783703	61274 1530923	116475	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 611465	25498 1190926	47583 2211696	176564 4261999	330908	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 593659	+++++ 1158474	42990 2076231	152186 4764724	318217	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,1-Dichloroethane	CBM	Ave	7291 447381	17496 889252	34374 1685088	122511 3471525	240669	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 749199	+++++ 1504415	48794 2730633	181894 5944033	394053	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 111249	+++++ 206010	12107 351450	26682 765682	58201	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Hexane	CBM	Ave	+++++ 209250	+++++ 405247	16564 746973	58855 1435371	111715	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	12314 956491	30169 1852021	68571 3275437	240990 7302704	507640	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	3277 229174	8499 446715	16972 845413	61241 1765889	122047	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 620209	+++++ 1222288	+++++ 2196882	146464 5133057	321129	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.501 16.0	1.00
Chloroform	CBM	Ave	8011 481628	18071 940727	36929 1785532	131726 3702435	256946	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 738036	22284 1440138	51248 2564373	185251 5828407	391101	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 321159	+++++ 630181	23849 1131002	79200 2636931	168468	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	8022 507828	19185 1002430	37538 1902685	138056 3969023	270676	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichloroethane	DFB	Ave	5687 350360	12874 691693	26392 1316454	93305 2865740	184946	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Cyclohexane	DFB	Ave	+++++ 109588	+++++ 202917	8611 361874	31417 660938	58584	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Benzene	DFB	Ave	+++++ 633318	23135 1180451	49222 2058003	174189 3837863	347772	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1-Butanol	DFB	Ave	+++++ 113779	+++++ 214303	7437 386588	22770 822404	57786	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Carbon tetrachloride	DFB	Ave	7173 498890	17271 988338	35265 1656677	126983 3860223	248072	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2,3-Dimethylpentane	DFB	Ave	2562 157118	5974 304115	12097 568515	42630 1114942	84345	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Thiophene	DFB	Ave	5589 371302	12745 722397	27483 1366556	100002 2819901	196946	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Tert-amyl methyl ether	DFB	Ave	+++++ 606271	17594 1174999	39986 2088317	156954 4678972	321993	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2,2,4-Trimethylpentane	DFB	Ave	+++++ 1252549	+++++ 2394793	97404 4417623	349587 8632872	674471	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Heptane	DFB	Ave	+++++ 243662	+++++ 468902	18553 866093	66775 1685515	130124	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichloropropane	DFB	Ave	4029 263748	8845 509968	20164 926950	68952 1907236	138256	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Trichloroethene	DFB	Ave	4721 306174	12546 580642	23674 1179475	86507 2196358	160008	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Dibromomethane	DFB	Ave	3972 255683	9121 500885	18890 953880	67281 1936637	133482	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Bromodichloromethane	DFB	Ave	+++++ 495432	13872 974669	30169 1852089	122919 3808685	251968	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFB	Ave	+++++ 93051	2761 177359	6616 313140	22410 671575	50028	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Methyl methacrylate	DFB	Ave	+++++ 383714	10314 766165	21065 1386017	83371 3274111	194991	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Methylcyclohexane	DFB	Ave	7554 502085	19423 957324	38230 1749693	140618 3380052	274309	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFB	Ave	+++++ 623139	19277 1228001	50856 2191476	141309 4954098	338785	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
cis-1,3-Dichloropropene	DFB	Ave	+++++ 388193	11961 764297	26161 1418459	99111 2946899	204774	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
trans-1,3-Dichloropropene	CBZ	Ave	+++++ 359472	10243 714900	24293 1342570	89536 2942738	188129	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Toluene Range	DFB	Ave	+++++ 1911712	+++++ 3615865	145045 6586960	502569 14085138	997295	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Toluene	CBZ	Ave	10299 742025	24060 1418298	54887 2560352	197217 5413181	406249	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,1,2-Trichloroethane	CBZ	Ave	3036 221314	7101 428293	15693 782354	57512 1640367	119256	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylthiophene	CBZ	Ave	8173 610794	19005 1186325	43498 2164069	156142 4619558	330165	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
3-Methylthiophene	CBZ	Ave	+++++ 596168	18543 1149222	42334 2141086	153798 4494718	321258	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2-Hexanone	CBZ	Ave	+++++ 263138	+++++ 514077	15879 923298	54275 2094484	136674	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
C8 Range	DFB	Ave	+++++ 2908638	+++++ 5473779	245925 9839548	808914 19140553	1579487	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Octane	CBZ	Ave	+++++ 268241	+++++ 504219	20566 906946	72749 1748943	143620	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Dibromochloromethane	CBZ	Ave	+++++ 455663	9733 922201	21951 1740962	100966 3758894	223494	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dibromoethane (EDB)	CBZ	Ave	+++++ 407653	10684 801285	25143 1511638	99775 3187713	212205	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Tetrachloroethene	CBZ	Ave	4365 271625	10248 520813	21008 981786	76591 2037558	146899	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Chlorobenzene	CBZ	Ave	+++++ 582391	18885 1111638	42794 2041799	154017 4252834	312622	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2,3-Dimethylheptane	CBZ	Ave	14758 933407	35157 1746511	73551 3129121	259531 5984740	506793	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Ethylbenzene	CBZ	Ave	+++++ 989298	30048 1889523	71619 3325391	260431 7140072	538836	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2-Ethylthiophene	CBZ	Ave	+++++ 749579	21740 1428633	50725 2577133	192735 5616108	401734	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZ	Ave	19821 1503498	48286 2783803	112233 4795898	398949 10317665	825448	0.0784 3.99	0.159 8.00	0.317 16.0	1.00 32.0	2.00
Bromoform	CBZ	Ave	+++++ 440603	5384 932729	13628 1950923	88615 +++++	207947	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 +++++	1.00
Nonane	CBZ	Ave	+++++ 566380	+++++ 989878	44562 1664115	161332 3201156	312041	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Styrene	CBZ	Ave	+++++ 545097	11037 1034682	27898 1854324	124560 3994143	282916	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
o-Xylene	CBZ	Ave	+++++ 808596	24930 1527056	58230 2690121	214201 5833465	446363	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZ	Ave	+++++ 562843	15839 1107231	37482 1863153	147181 4042260	313402	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3-Trichloropropane	CBZ	Ave	+++++ 173282	+++++ 335935	11810 596540	43898 1346622	94294	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Isopropylbenzene	CBZ	Ave	+++++ 1052061	33837 1976483	78344 3464122	279653 7588243	579924	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Propylbenzene	CBZ	Ave	+++++ 304922	+++++ 574412	21526 999265	78494 2176203	167001	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
2-Chlorotoluene	CBZ	Ave	+++++ 275317	8757 525282	20101 924206	72083 1984828	150400	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
4-Ethyltoluene	CBZ	Ave	+++++ 1085101	+++++ 2013870	76160 3538018	279048 7787572	591610	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,3,5-Trimethylbenzene	CBZ	Ave	+++++ 510058	15268 943293	37796 1637073	135402 3641230	285491	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Alpha Methyl Styrene	CBZ	Ave	+++++ 424170	+++++ 812310	19798 1502876	86692 3339194	214264	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Decane	CBZ	Ave	+++++ 731186	24150 1311512	55819 2245607	201178 4408930	408210	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
tert-Butylbenzene	CBZ	Ave	+++++ 966224	31261 1767714	73197 3046749	265481 7138340	547089	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2,4-Trimethylbenzene	CBZ	Ave	+++++ 903027	28426 1660335	68019 2822914	244164 6295796	506585	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
sec-Butylbenzene	CBZ	Ave	+++++ 1299063	42006 2340334	99270 3930155	356663 9223066	740908	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,3-Dichlorobenzene	CBZ	Ave	+++++ 585006	18319 1117308	42408 2075568	154866 5547778	322475	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Benzyl chloride	CBZ	Ave	+++++ 831632	+++++ 1580204	48130 2803898	181615 6137893	428446	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
1,4-Dichlorobenzene	CBZ	Ave	+++++ 587055	18114 1135802	41508 2080461	148980 4987498	319554	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
4-Isopropyltoluene	CBZ	Ave	+++++ 1122985	34738 2093444	81637 3627700	302059 8220408	632109	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZ	Ave	+++++ 721034	22608 1348498	52885 2342067	190134 5160515	406003	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Butylcyclohexane	CBZ	Ave	+++++ 742195	26602 1337137	59740 2310744	214653 4525792	420867	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dichlorobenzene	CBZ	Ave	+++++ 570407	18237 1082328	41675 1989164	152169 5305731	317656	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Indane	CBZ	Ave	+++++ 819538	25849 1482146	59563 2543378	221410 6143579	463443	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Indene	CBZ	Ave	+++++ 609681	+++++ 1098467	38770 2036130	145711 4626656	335005	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Butylbenzene	CBZ	Ave	+++++ 1073688	33164 1940890	78860 3249235	289631 6985294	607900	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Undecane	CBZ	Ave	+++++ 824556	26591 1460549	60011 2422695	219578 4779398	469100	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZ	Ave	+++++ 858299	25780 1583874	61622 2781683	225806 6112247	479493	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZ	Ave	+++++ 248870	4186 528233	9747 971737	50615 2362102	127564	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZ	Ave	+++++ 1029847	30586 1873479	75278 3279942	273589 7365655	586705	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZ	Ave	+++++ 633810	18644 1171438	46794 2094172	169808 4531057	362793	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZ	Ave	+++++ 861011	24897 1564586	62656 2756996	226242 5988864	485588	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Dodecane	CBZ	Ave	+++++ 730849	23175 1280901	54073 2177460	186851 4138526	407897	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
1,2,4-Trichlorobenzene	CBZ	Ave	+++++ 401668	8857 842747	23599 1761526	82294 4922445	206625	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Naphthalene	CBZ	Ave	8007 981405	22918 1835786	63722 3404142	218819 7419033	538019	0.0392 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
Benzo(b)thiophene	CBZ	Ave	+++++ 519181	+++++ 1018250	29832 2003971	101021 4544716	269530	+++++ 2.00	+++++ 4.00	0.159 8.00	0.501 16.0	1.00
Hexachlorobutadiene	CBZ	Ave	+++++ 518766	15015 1108026	33007 2559984	124355 +++++	271349	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 +++++	1.00
1,2,3-Trichlorobenzene	CBZ	Ave	+++++ 387869	9610 792268	24263 1621390	85202 4248910	208161	+++++ 2.00	0.0794 4.00	0.159 8.00	0.501 16.0	1.00
2-Methylnaphthalene	CBZ	Ave	+++++ 334073	+++++ 670718	20222 1481044	57956 2317014	170766	+++++ 6.24	+++++ 12.5	0.496 25.0	1.56 50.0	3.13
1-Methylnaphthalene	CBZ	Ave	+++++ 354478	+++++ 684531	26378 1453050	72921 1951554	194359	+++++ 6.24	+++++ 12.5	0.496 25.0	1.56 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZ	Ave	878177 1153961	896865 1078635	1138607 985261	1092240 1131818	1153076	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1 Analy Batch No.: 5077

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/23/2016 13:43 Calibration End Date: 05/23/2016 19:26 Calibration ID: 555

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL1.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-May-2016 13:43:30 ALS Bottle#: 7 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041182
Misc. Info.: 140-0002910-002
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:55:43 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 15:18:03

	Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
*	1 Chlorobromomethane (IS)	128	8.530	8.550	-0.020	96	267566	4.00	4.00	
*	2 1,4-Difluorobenzene	114	10.703	10.719	-0.016	97	1259284	4.00	4.00	
*	3 Chlorobenzene-d5 (IS)	117	15.475	15.482	-0.007	92	1177739	4.00	4.00	
$	4 4-Bromofluorobenzene (Surr	95	17.131	17.135	-0.004	86	878177	4.00	4.11	
	6 Chlorodifluoromethane	67	3.698	3.704	-0.006	98	954	0.0392	0.0408	
	7 Propene	41	3.709	3.714	-0.005	91	6052	0.0392	0.0640	
	8 Dichlorodifluoromethane	85	3.758	3.763	-0.005	99	9919	0.0392	0.0432	
	9 Chloromethane	52	3.919	3.928	-0.009	83	1922	0.0392	0.0691	
	10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.940	-0.010	90	5957	0.0392	0.0417	
	11 Acetaldehyde	44	4.065	4.073	-0.008	75	19031	0.1960	0.4860	
	12 Vinyl chloride	62	4.081	4.088	-0.007	96	3743	0.0392	0.0429	
	13 Butadiene	54	4.162	4.169	-0.007	59	3134	0.0392	0.0415	
	14 Butane	43	4.162	4.171	-0.009	89	8184	0.0392	0.0499	
	15 Bromomethane	94	4.459	4.464	-0.005	96	3085	0.0392	0.0402	
	16 Chloroethane	64	4.588	4.595	-0.007	82	2009	0.0392	0.0436	
	17 Ethanol	31	4.690	4.716	-0.026	98	8920	0.1960	0.2062	
	18 Vinyl bromide	106	4.868	4.877	-0.009	95	2782	0.0392	0.0394	
	19 2-Methylbutane	43	4.922	4.927	-0.005	93	5091	0.0392	0.0437	
	20 Trichlorofluoromethane	101	5.122	5.131	-0.009	99	9013	0.0392	0.0414	
	21 Acrolein	56	5.122	5.134	-0.012	36	1454	0.0392	0.0572	
	23 Acetone	58	5.240	5.243	-0.003	98	5380	0.1176	0.1427	
	24 Pentane	72	5.327	5.339	-0.012	90	498	0.0392	0.0378	
	25 Isopropyl alcohol	45	5.338	5.360	-0.022	72	11409	0.1176	0.1048	
	26 Ethyl ether	31	5.489	5.493	-0.005	85	3984	0.0392	0.0380	
	27 1,1-Dichloroethene	96	5.774	5.791	-0.017	93	2348	0.0392	0.0359	
	28 Acrylonitrile	53	5.877	5.888	-0.011	77	2139	0.0392	0.0461	
	29 2-Methyl-2-propanol	59	5.909	5.928	-0.019	87	3315	0.0392	0.0285	
	30 1,1,2-Trichloro-1,2,2-trif	101	5.958	5.967	-0.009	94	4841	0.0392	0.0369	
	31 Methylene Chloride	84	6.098	6.115	-0.017	95	6268	0.0392	0.0822	
	32 3-Chloro-1-propene	39	6.114	6.131	-0.017	95	7766	0.0392	0.0670	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.254	6.264	-0.010	100	9846	0.0392	0.0395	
34 trans-1,2-Dichloroethene	96	6.869	6.885	-0.016	94	3587	0.0392	0.0425	
35 2-Methylpentane	43	6.896	6.912	-0.016	96	11155	0.0392	0.0468	
36 Methyl tert-butyl ether	73	7.015	7.014	0.001	93	7932	0.0392	0.0356	
37 1,1-Dichloroethane	63	7.268	7.284	-0.016	98	7291	0.0392	0.0415	
38 Vinyl acetate	43	7.387	7.395	-0.008	99	9283	0.0392	0.0335	
39 2-Butanone (MEK)	72	7.823	7.818	0.005	95	1217	0.0392	0.0287	
40 Hexane	56	7.840	7.853	-0.013	88	3491	0.0392	0.0441	
41 Isopropyl ether	45	8.007	8.011	-0.004	94	12314	0.0392	0.0356	
42 cis-1,2-Dichloroethene	96	8.222	8.236	-0.014	96	3277	0.0392	0.0377	
43 Ethyl acetate	43	8.422	8.424	-0.002	96	7847	0.0392	0.0337	
44 Chloroform	83	8.551	8.571	-0.020	88	8011	0.0392	0.0427	
45 Tert-butyl ethyl ether	59	8.659	8.666	-0.007	98	9270	0.0392	0.0345	
46 Tetrahydrofuran	42	8.967	8.955	0.012	90	4821	0.0392	0.0400	
47 1,1,1-Trichloroethane	97	9.549	9.566	-0.017	98	8022	0.0392	0.0408	
48 1,2-Dichloroethane	62	9.651	9.666	-0.015	95	5687	0.0392	0.0414	
49 Benzene	78	10.153	10.163	-0.010	95	11105	0.0392	0.0470	
50 Cyclohexane	69	10.153	10.163	-0.010	79	1758	0.0392	0.0438	
52 Carbon tetrachloride	117	10.174	10.189	-0.015	95	7173	0.0392	0.0388	
51 n-Butanol	31	10.207	10.196	0.011	20	1413	0.0392	0.0359	
53 2,3-Dimethylpentane	71	10.288	10.299	-0.011	90	2562	0.0392	0.0419	
54 Thiophene	84	10.423	10.436	-0.013	93	5589	0.0392	0.0395	
55 Tert-amyl methyl ether	73	10.660	10.654	0.006	91	6081	0.0392	0.0276	
56 Isooctane	57	10.940	10.947	-0.007	94	20581	0.0392	0.0438	
57 n-Heptane	71	11.323	11.330	-0.007	94	3799	0.0392	0.0417	
58 1,2-Dichloropropane	63	11.372	11.386	-0.014	86	4029	0.0392	0.0406	
59 Trichloroethene	130	11.420	11.432	-0.012	93	4721	0.0392	0.0392	
60 Dibromomethane	93	11.490	11.503	-0.013	90	3972	0.0392	0.0405	
61 Dichlorobromomethane	83	11.641	11.657	-0.016	96	5606	0.0392	0.0314	
62 1,4-Dioxane	88	11.695	11.683	0.012	55	918	0.0392	0.0274	
63 Methyl methacrylate	41	11.765	11.772	-0.007	90	4477	0.0392	0.0331	
64 Methylcyclohexane	83	12.202	12.210	-0.008	87	7554	0.0392	0.0392	
65 4-Methyl-2-pentanone (MIBK	43	12.623	12.624	-0.001	97	6363	0.0392	0.0273	
66 cis-1,3-Dichloropropene	75	12.660	12.671	-0.011	95	4486	0.0392	0.0313	
67 trans-1,3-Dichloropropene	75	13.361	13.373	-0.012	91	3705	0.0392	0.0276	
68 Toluene	91	13.491	13.500	-0.009	92	10299	0.0392	0.0370	
69 1,1,2-Trichloroethane	83	13.555	13.569	-0.014	90	3036	0.0392	0.0368	
70 2-Methylthiophene	97	13.642	13.650	-0.008	99	8173	0.0392	0.0361	
71 3-Methylthiophene	97	13.847	13.853	-0.006	97	7756	0.0392	0.0347	
72 2-Hexanone	58	13.981	13.977	0.004	88	1918	0.0392	0.0204	
73 n-Octane	85	14.208	14.216	-0.008	96	3567	0.0392	0.0358	
74 Chlorodibromomethane	129	14.267	14.275	-0.008	95	2922	0.0392	0.0186	
75 Ethylene Dibromide	107	14.553	14.560	-0.007	98	4601	0.0392	0.0312	
76 Tetrachloroethene	129	14.645	14.650	-0.005	90	4365	0.0392	0.0406	
77 Chlorobenzene	112	15.524	15.531	-0.007	92	7980	0.0392	0.0364	
78 2,3-Dimethylheptane	43	15.567	15.572	-0.005	93	14758	0.0392	0.0410	
79 Ethylbenzene	91	15.820	15.828	-0.008	98	12640	0.0392	0.0344	
80 2-Ethylthiophene	97	15.923	15.928	-0.005	98	8591	0.0392	0.0313	
81 m-Xylene & p-Xylene	91	15.987	15.991	-0.004	98	19821	0.0784	0.0720	
82 n-Nonane	57	16.430	16.433	-0.003	93	7892	0.0392	0.0386	
84 Styrene	104	16.457	16.458	-0.001	94	4023	0.0392	0.0220	
85 o-Xylene	91	16.511	16.517	-0.006	98	9991	0.0392	0.0333	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	16.834	16.840	-0.006	95	6318	0.0392	0.0307	
87 1,2,3-Trichloropropane	110	16.996	16.997	-0.001	93	2079	0.0392	0.0322	
88 Isopropylbenzene	105	17.109	17.112	-0.003	94	14015	0.0392	0.0356	
89 N-Propylbenzene	120	17.659	17.662	-0.003	98	3478	0.0392	0.0310	
90 2-Chlorotoluene	126	17.697	17.702	-0.005	97	3253	0.0392	0.0316	
91 4-Ethyltoluene	105	17.810	17.817	-0.007	98	12100	0.0392	0.0305	
92 1,3,5-Trimethylbenzene	120	17.886	17.895	-0.009	91	5716	0.0392	0.0303	
93 Alpha Methyl Styrene	118	18.123	18.129	-0.006	85	2850	0.0392	0.0195	
94 n-Decane	57	18.198	18.204	-0.006	84	8745	0.0392	0.0325	
95 tert-Butylbenzene	119	18.322	18.327	-0.005	88	12033	0.0392	0.0331	
96 1,2,4-Trimethylbenzene	105	18.333	18.340	-0.007	96	10660	0.0392	0.0318	
97 sec-Butylbenzene	105	18.597	18.602	-0.005	97	15823	0.0392	0.0326	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	60	7183	0.0392	0.0316	
99 Benzyl chloride	91	18.684	18.685	-0.001	83	5493	0.0392	0.0189	
100 1,4-Dichlorobenzene	146	18.694	18.698	-0.004	88	6876	0.0392	0.0309	
101 4-Isopropyltoluene	119	18.765	18.768	-0.003	96	12899	0.0392	0.0308	
102 1,2,3-Trimethylbenzene	105	18.813	18.817	-0.004	97	8630	0.0392	0.0322	
103 Butylcyclohexane	83	18.878	18.879	-0.001	86	10327	0.0392	0.0367	
104 1,2-Dichlorobenzene	146	19.061	19.062	-0.001	84	7064	0.0392	0.0318	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	92	9652	0.0392	0.0317	
106 Indene	116	19.191	19.193	-0.002	92	5260	0.0392	0.0239	
107 n-Butylbenzene	91	19.207	19.209	-0.002	98	12457	0.0392	0.0318	
108 Undecane	57	19.536	19.537	-0.001	92	9433	0.0392	0.0318	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.584	19.584	0.000	97	9118	0.0392	0.0289	
111 1,2,4,5-Tetramethylbenzene	119	19.972	19.972	0.000	95	11138	0.0392	0.0294	
112 1,2,3,5-Tetramethylbenzene	119	20.021	20.026	-0.005	94	7137	0.0392	0.0303	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	9921	0.0392	0.0316	
114 Dodecane	57	20.598	20.599	-0.001	88	7509	0.0392	0.0289	
115 1,2,4-Trichlorobenzene	180	20.765	20.768	-0.003	90	3046	0.0392	0.0198	
116 Naphthalene	128	20.905	20.903	0.002	99	8007	0.0392	0.0243	
117 Benzo(b)thiophene	134	21.002	21.004	-0.002	97	3689	0.0392	0.0196	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	91	6240	0.0392	0.0307	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	93	3514	0.0392	0.0237	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	97	2203	0.1225	0.0576	
121 1-Methylnaphthalene	142	22.135	22.139	-0.004	98	2980	0.1225	0.0726	
A 124 Toluene Range	1	13.486	(13.451-13.521)		0	23696	0.0392	0.0335	
A 125 C8 Range	1	14.207	(14.178-14.248)		0	46462	0.0392	0.0426	
S 126 Xylenes, Total	100				0		0.1176	0.1052	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0801	

Reagents:

40L12DNP_00004	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

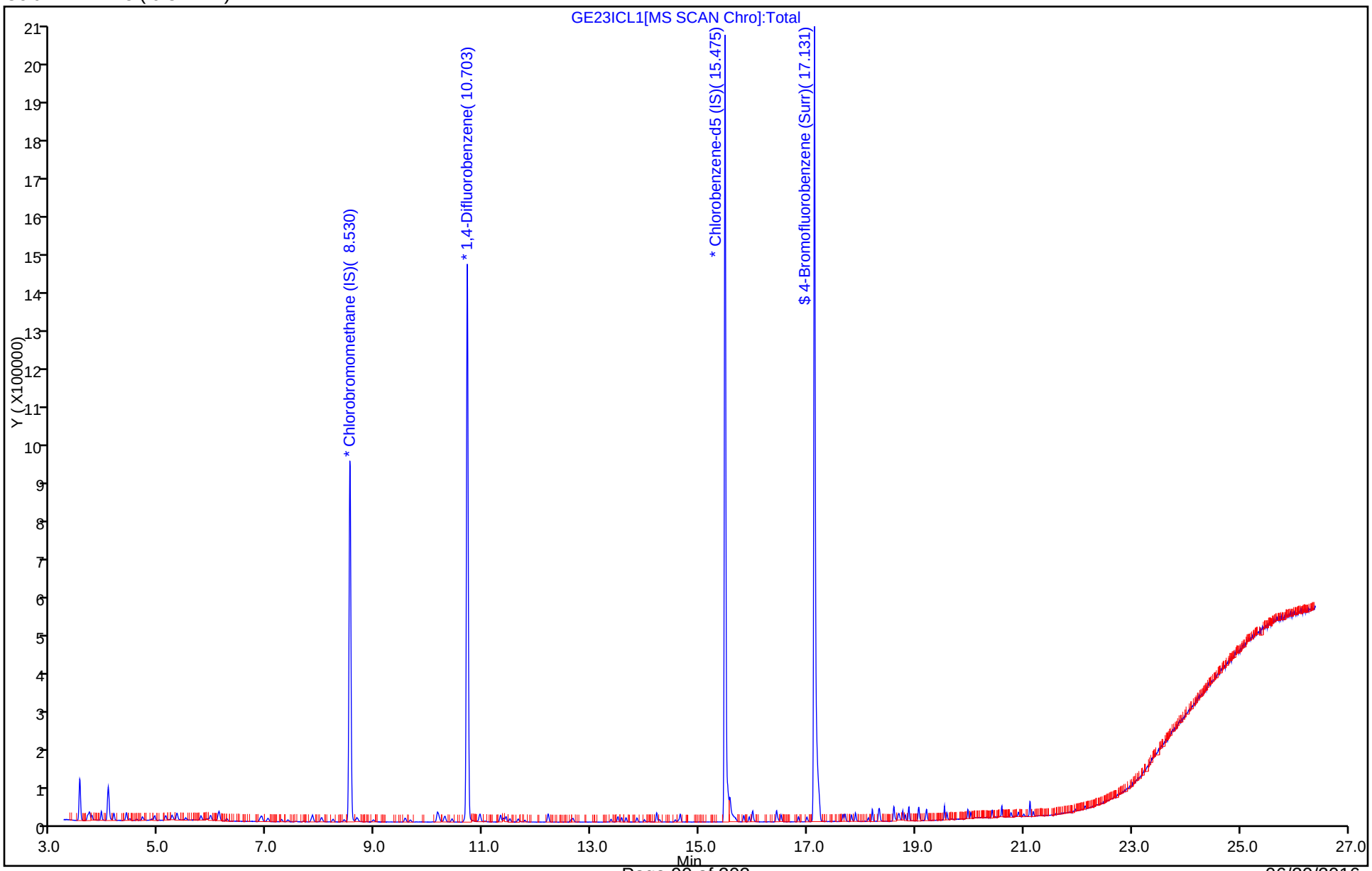
Report Date: 26-May-2016 14:55:43 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL1.D

Injection Date:	23-May-2016 13:43:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

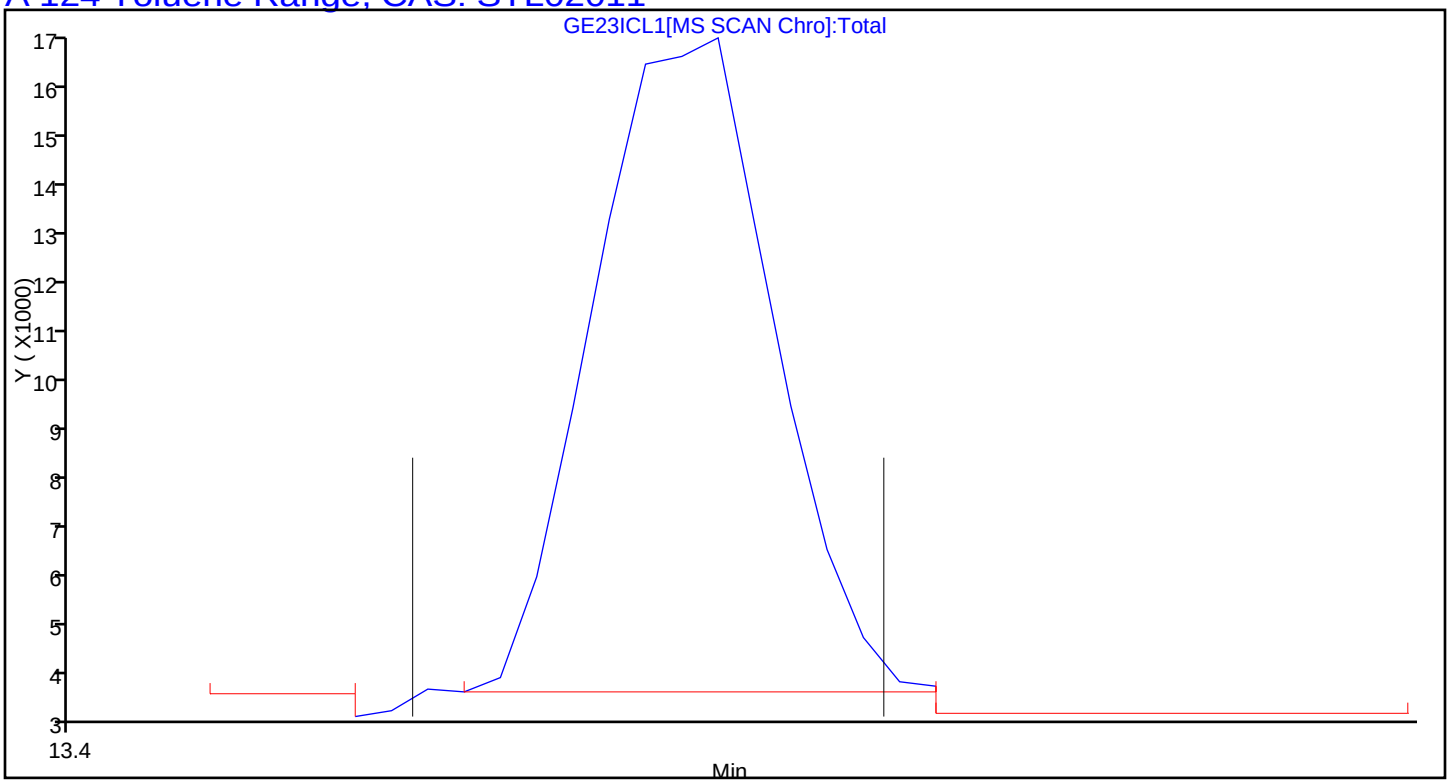


Report Date: 26-May-2016 14:55:44 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL1.D				
Injection Date:	23-May-2016 13:43:30	Instrument ID:	MG		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

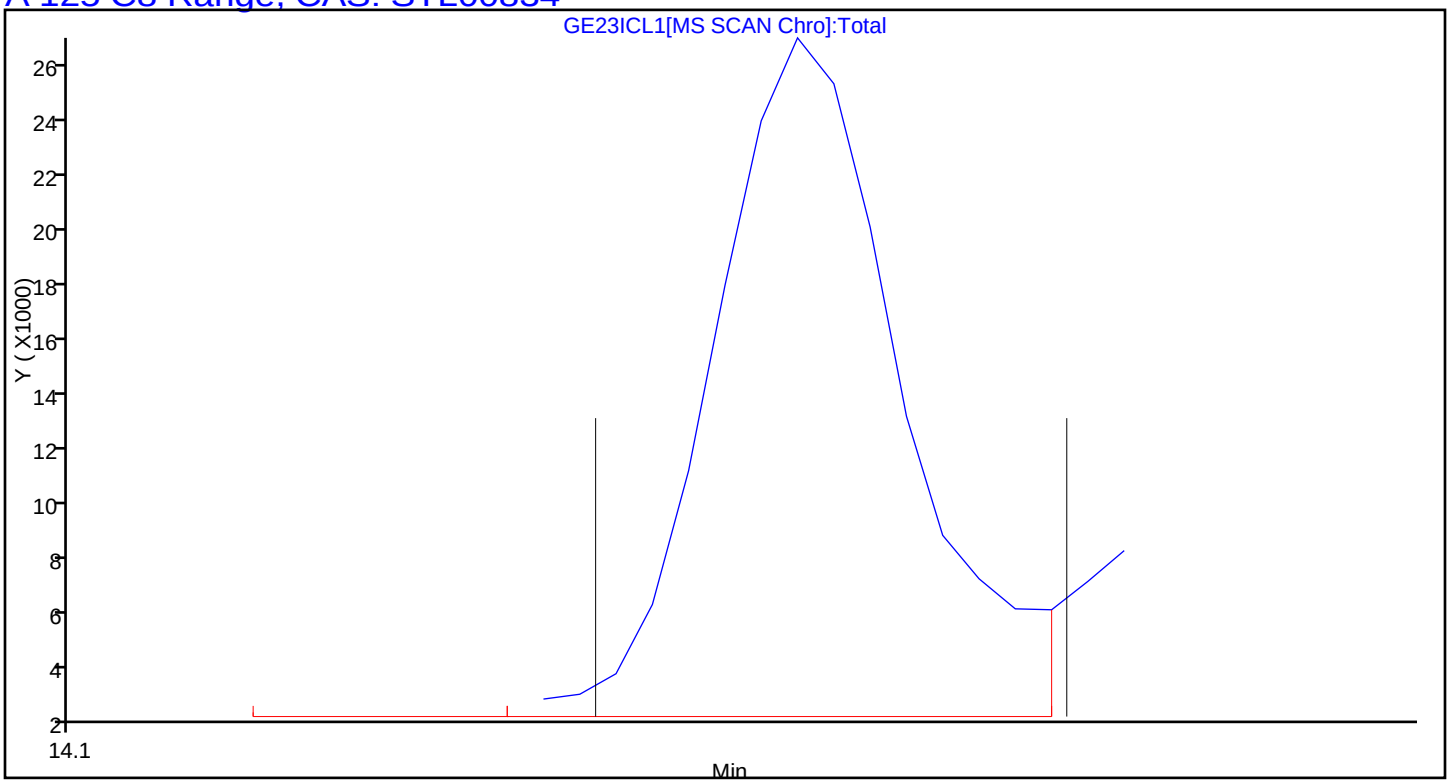


Report Date: 26-May-2016 14:55:44 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL1.D				
Injection Date:	23-May-2016 13:43:30	Instrument ID:	MG		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL2.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-May-2016 14:25:30 ALS Bottle#: 8 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041183
Misc. Info.: 140-0002910-003
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:55:47 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 15:18:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.557	8.550	0.007	96	315308	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.725	10.719	0.006	96	1343486	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.481	15.482	-0.001	91	1241704	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.136	17.135	0.001	89	896865	4.00	3.98	
6 Chlorodifluoromethane	67	3.720	3.704	0.016	97	2540	0.0794	0.0921	
7 Propene	41	3.725	3.714	0.011	94	12716	0.0794	0.1141	
8 Dichlorodifluoromethane	85	3.774	3.763	0.011	99	23528	0.0794	0.0870	
9 Chloromethane	52	3.941	3.928	0.013	85	3402	0.0794	0.1038	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.952	3.940	0.012	92	14944	0.0794	0.0887	
11 Acetaldehyde	44	4.092	4.073	0.019	85	45956	0.3968	1.00	
12 Vinyl chloride	62	4.103	4.088	0.015	45	9836	0.0794	0.0957	
13 Butadiene	54	4.184	4.169	0.015	63	8107	0.0794	0.0911	
14 Butane	43	4.184	4.171	0.013	86	19225	0.0794	0.0994	
15 Bromomethane	94	4.475	4.464	0.011	97	8089	0.0794	0.0894	
16 Chloroethane	64	4.610	4.595	0.015	86	5215	0.0794	0.0960	
17 Ethanol	31	4.739	4.716	0.023	97	25290	0.3968	0.4960	
18 Vinyl bromide	106	4.890	4.877	0.013	97	7730	0.0794	0.0930	
19 2-Methylbutane	43	4.944	4.927	0.017	93	14406	0.0794	0.1048	
20 Trichlorofluoromethane	101	5.143	5.131	0.012	100	24106	0.0794	0.0939	
21 Acrolein	56	5.160	5.134	0.026	26	3582	0.0794	0.1195	
22 Acetonitrile	40	5.224	5.199	0.025	91	3598	0.0794	0.0784	
23 Acetone	58	5.273	5.243	0.030	99	29781	0.2381	0.6702	
24 Pentane	72	5.359	5.339	0.020	96	1633	0.0794	0.1053	
25 Isopropyl alcohol	45	5.402	5.360	0.042	94	36515	0.2381	0.2846	
26 Ethyl ether	31	5.532	5.493	0.039	86	10907	0.0794	0.0884	
27 1,1-Dichloroethene	96	5.807	5.791	0.016	95	7528	0.0794	0.0977	
28 Acrylonitrile	53	5.898	5.888	0.010	89	4618	0.0794	0.0845	
29 2-Methyl-2-propanol	59	5.990	5.928	0.062	63	11103	0.0794	0.0809	
30 1,1,2-Trichloro-1,2,2-trif	101	5.985	5.967	0.018	94	15144	0.0794	0.0980	
31 Methylene Chloride	84	6.130	6.115	0.015	97	12722	0.0794	0.1415	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.146	6.131	0.015	96	13961	0.0794	0.1022	
33 Carbon disulfide	76	6.276	6.264	0.012	100	25072	0.0794	0.0853	
34 trans-1,2-Dichloroethene	96	6.896	6.885	0.011	95	8526	0.0794	0.0856	
35 2-Methylpentane	43	6.928	6.912	0.016	96	25498	0.0794	0.0908	
36 Methyl tert-butyl ether	73	7.058	7.014	0.044	94	19169	0.0794	0.0730	
37 1,1-Dichloroethane	63	7.295	7.284	0.011	99	17496	0.0794	0.0845	
38 Vinyl acetate	43	7.414	7.395	0.019	100	20965	0.0794	0.0642	
39 2-Butanone (MEK)	72	7.840	7.818	0.022	96	4912	0.0794	0.0984	
40 Hexane	56	7.867	7.853	0.014	83	8783	0.0794	0.0941	
41 Isopropyl ether	45	8.045	8.011	0.034	96	30169	0.0794	0.0741	
42 cis-1,2-Dichloroethene	96	8.239	8.236	0.003	98	8499	0.0794	0.0829	
43 Ethyl acetate	43	8.460	8.424	0.036	98	17580	0.0794	0.0640	
44 Chloroform	83	8.573	8.571	0.002	95	18071	0.0794	0.0818	
45 Tert-butyl ethyl ether	59	8.702	8.666	0.036	99	22284	0.0794	0.0703	
46 Tetrahydrofuran	42	8.994	8.955	0.039	92	10525	0.0794	0.0741	
47 1,1,1-Trichloroethane	97	9.576	9.566	0.010	95	19185	0.0794	0.0828	
48 1,2-Dichloroethane	62	9.673	9.666	0.007	97	12874	0.0794	0.0878	
49 Benzene	78	10.169	10.163	0.006	95	23135	0.0794	0.0918	
50 Cyclohexane	69	10.175	10.163	0.012	83	4415	0.0794	0.1030	
52 Carbon tetrachloride	117	10.191	10.189	0.002	94	17271	0.0794	0.0876	
51 n-Butanol	31	10.272	10.196	0.076	74	3540	0.0794	0.0843	
53 2,3-Dimethylpentane	71	10.309	10.299	0.010	90	5974	0.0794	0.0917	
54 Thiophene	84	10.439	10.436	0.003	97	12745	0.0794	0.0843	
55 Tert-amyl methyl ether	73	10.708	10.684	0.024	91	17594	0.0794	0.0747	M
56 Isooctane	57	10.956	10.947	0.009	96	49143	0.0794	0.0980	
57 n-Heptane	71	11.339	11.330	0.009	95	9250	0.0794	0.0952	
58 1,2-Dichloropropane	63	11.388	11.386	0.002	85	8845	0.0794	0.0835	
59 Trichloroethene	130	11.436	11.432	0.004	93	12546	0.0794	0.0976	
60 Dibromomethane	93	11.501	11.503	-0.002	95	9121	0.0794	0.0872	
61 Dichlorobromomethane	83	11.663	11.657	0.006	97	13872	0.0794	0.0729	
62 1,4-Dioxane	88	11.711	11.683	0.028	90	2761	0.0794	0.0771	
63 Methyl methacrylate	41	11.792	11.772	0.020	91	10314	0.0794	0.0714	
64 Methylcyclohexane	83	12.218	12.210	0.008	89	19423	0.0794	0.0944	
65 4-Methyl-2-pentanone (MIBK	43	12.650	12.624	0.026	97	19277	0.0794	0.0775	
66 cis-1,3-Dichloropropene	75	12.677	12.671	0.006	94	11961	0.0794	0.0782	
67 trans-1,3-Dichloropropene	75	13.372	13.373	-0.001	92	10243	0.0794	0.0724	
68 Toluene	91	13.502	13.500	0.002	92	24060	0.0794	0.0820	
69 1,1,2-Trichloroethane	83	13.572	13.569	0.003	95	7101	0.0794	0.0816	
70 2-Methylthiophene	97	13.653	13.650	0.003	98	19005	0.0794	0.0795	
71 3-Methylthiophene	97	13.852	13.853	-0.001	98	18543	0.0794	0.0786	
72 2-Hexanone	58	13.998	13.977	0.021	89	6003	0.0794	0.0606	
73 n-Octane	85	14.219	14.216	0.003	97	9971	0.0794	0.0951	
74 Chlorodibromomethane	129	14.278	14.275	0.003	95	9733	0.0794	0.0588	
75 Ethylene Dibromide	107	14.559	14.560	-0.001	95	10684	0.0794	0.0687	
76 Tetrachloroethene	129	14.650	14.650	0.000	94	10248	0.0794	0.0905	
77 Chlorobenzene	112	15.529	15.531	-0.002	92	18885	0.0794	0.0816	
78 2,3-Dimethylheptane	43	15.578	15.572	0.006	93	35157	0.0794	0.0927	
79 Ethylbenzene	91	15.826	15.828	-0.002	99	30048	0.0794	0.0776	
80 2-Ethylthiophene	97	15.928	15.928	0.000	98	21740	0.0794	0.0750	
81 m-Xylene & p-Xylene	91	15.988	15.991	-0.003	98	48286	0.1587	0.1663	
83 Bromoform	173	16.424	16.426	-0.002	39	5384	0.0794	0.0364	
82 n-Nonane	57	16.435	16.433	0.002	94	19960	0.0794	0.0926	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.457	16.458	-0.001	97	11037	0.0794	0.0573	
85 o-Xylene	91	16.516	16.517	-0.001	98	24930	0.0794	0.0787	
86 1,1,2,2-Tetrachloroethane	83	16.840	16.840	0.000	97	15839	0.0794	0.0730	
87 1,2,3-Trichloropropane	110	16.996	16.997	-0.001	94	5013	0.0794	0.0736	
88 Isopropylbenzene	105	17.115	17.112	0.003	97	33837	0.0794	0.0815	
89 N-Propylbenzene	120	17.665	17.662	0.003	98	8646	0.0794	0.0732	
90 2-Chlorotoluene	126	17.702	17.702	0.000	98	8757	0.0794	0.0808	
91 4-Ethyltoluene	105	17.816	17.817	-0.001	98	30504	0.0794	0.0728	
92 1,3,5-Trimethylbenzene	120	17.896	17.895	0.001	92	15268	0.0794	0.0769	
93 Alpha Methyl Styrene	118	18.134	18.129	0.005	85	7757	0.0794	0.0504	
94 n-Decane	57	18.204	18.204	0.000	87	24150	0.0794	0.0852	
95 tert-Butylbenzene	119	18.328	18.327	0.001	90	31261	0.0794	0.0815	
96 1,2,4-Trimethylbenzene	105	18.339	18.340	-0.001	96	28426	0.0794	0.0804	
97 sec-Butylbenzene	105	18.603	18.602	0.001	97	42006	0.0794	0.0822	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	97	18319	0.0794	0.0764	
99 Benzyl chloride	91	18.684	18.685	-0.001	96	17741	0.0794	0.0578	
100 1,4-Dichlorobenzene	146	18.694	18.698	-0.004	94	18114	0.0794	0.0772	
101 4-Isopropyltoluene	119	18.765	18.768	-0.003	96	34738	0.0794	0.0787	
102 1,2,3-Trimethylbenzene	105	18.813	18.817	-0.004	98	22608	0.0794	0.0799	
103 Butylcyclohexane	83	18.878	18.879	-0.001	88	26602	0.0794	0.0897	
104 1,2-Dichlorobenzene	146	19.061	19.062	-0.001	79	18237	0.0794	0.0780	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	92	25849	0.0794	0.0804	
106 Indene	116	19.196	19.193	0.003	89	15525	0.0794	0.0670	
107 n-Butylbenzene	91	19.207	19.209	-0.002	98	33164	0.0794	0.0803	
108 Undecane	57	19.536	19.537	-0.001	92	26591	0.0794	0.0850	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.584	19.584	0.000	98	25780	0.0794	0.0775	
110 1,2-Dibromo-3-Chloropropan	157	19.671	19.668	0.002	82	4186	0.0794	0.0467	
111 1,2,4,5-Tetramethylbenzene	119	19.972	19.972	0.000	98	30586	0.0794	0.0765	
112 1,2,3,5-Tetramethylbenzene	119	20.026	20.026	0.000	95	18644	0.0794	0.0751	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	24897	0.0794	0.0751	
114 Dodecane	57	20.598	20.599	-0.001	90	23175	0.0794	0.0845	
115 1,2,4-Trichlorobenzene	180	20.771	20.768	0.003	93	8857	0.0794	0.0546	
116 Naphthalene	128	20.905	20.903	0.002	99	22918	0.0794	0.0661	
117 Benzo(b)thiophene	134	21.008	21.004	0.004	99	10953	0.0794	0.0551	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	92	15015	0.0794	0.0701	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	94	9610	0.0794	0.0614	
120 2-Methylnaphthalene	142	21.968	21.963	0.005	98	6212	0.2480	0.1540	
121 1-Methylnaphthalene	142	22.135	22.139	-0.004	99	8451	0.2480	0.1952	
A 124 Toluene Range	1	13.497	(13.462-13.532)		0	68392	0.0794	0.0906	
A 125 C8 Range	1	14.212	(14.189-14.259)		0	112661	0.0794	0.0968	
S 126 Xylenes, Total	100				0		0.2381	0.2450	
S 127 1,2-Dichloroethene, Total	1				0		0.1587	0.1686	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00005	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

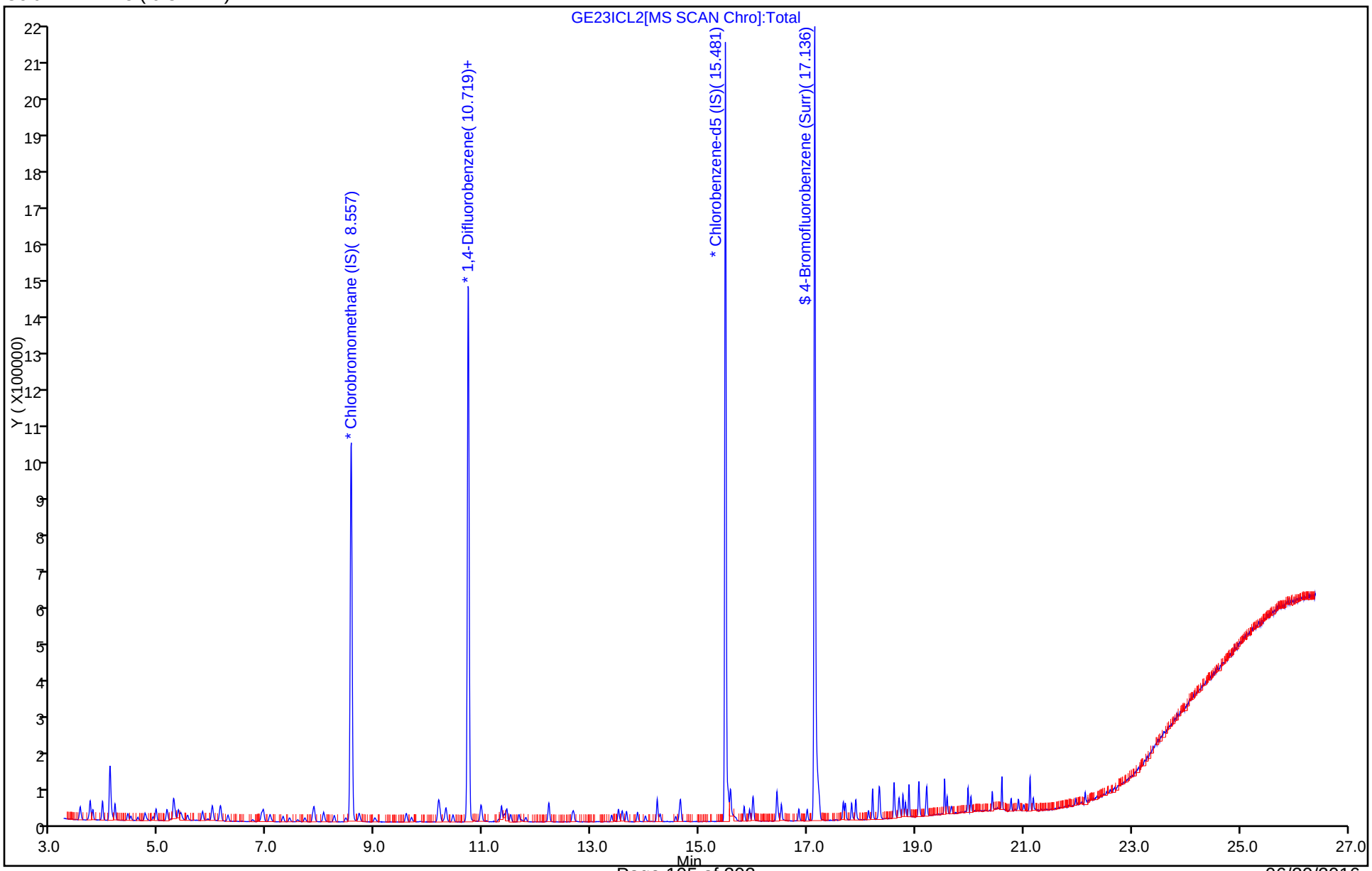
Report Date: 26-May-2016 14:55:48 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL2.D

Injection Date:	23-May-2016 14:25:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

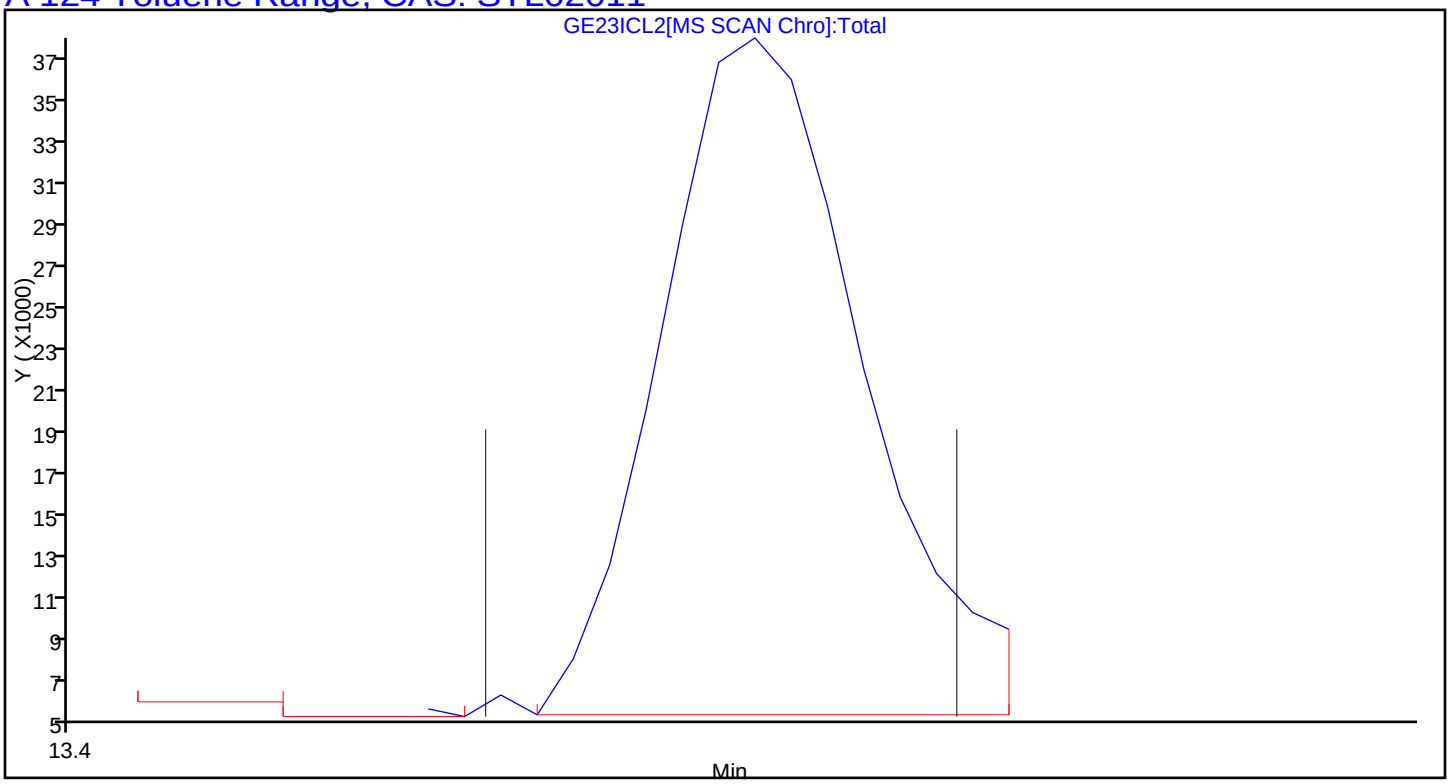


Report Date: 26-May-2016 14:55:48 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL2.D				
Injection Date:	23-May-2016 14:25:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

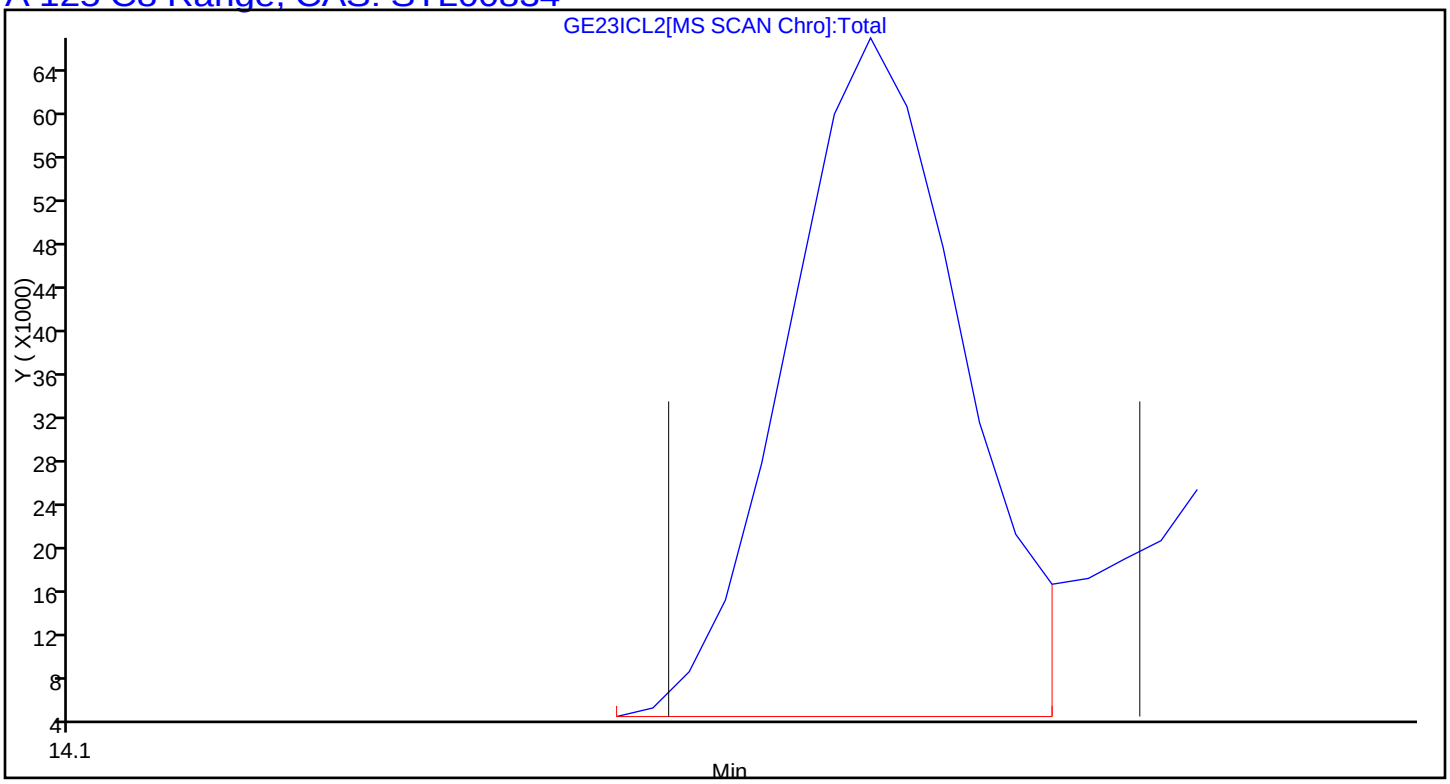


Report Date: 26-May-2016 14:55:48 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL2.D				
Injection Date:	23-May-2016 14:25:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

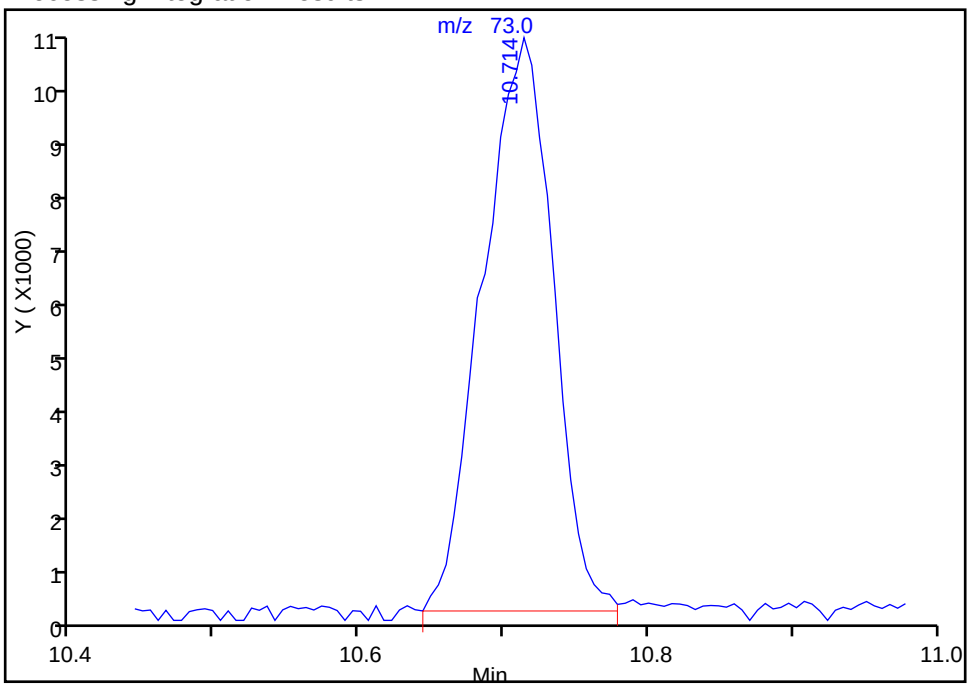
Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL2.D				
Injection Date:	23-May-2016 14:25:30	Instrument ID:	MG		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

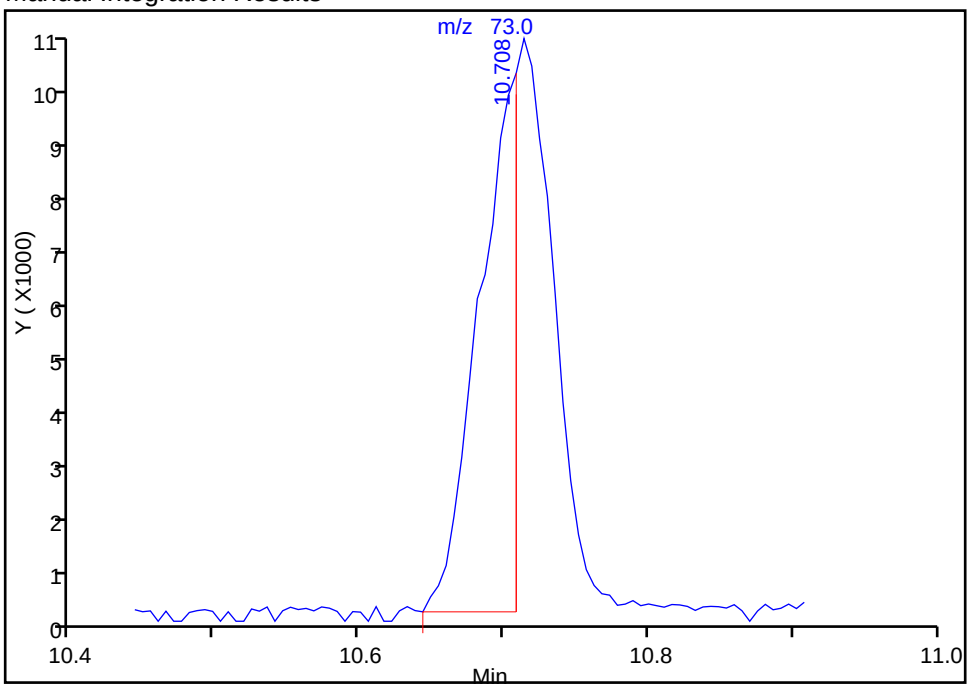
Processing Integration Results

RT: 10.71
Area: 33610
Amount: 0.128596
Amount Units: ppb v/v



Manual Integration Results

RT: 10.71
Area: 17594
Amount: 0.074721
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 26-May-2016 14:17:40

Audit Action: Split an Integrated Peak Audit Reason: Poor chromatography

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL3.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-May-2016 15:07:30 ALS Bottle#: 8 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041183
Misc. Info.: 140-0002910-004
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:55:51 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 15:55:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.541	8.550	-0.009	96	348373	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.714	10.719	-0.005	96	1699824	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.475	15.482	-0.007	91	1537717	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.131	17.135	-0.004	90	1138607	4.00	4.08	
6 Chlorodifluoromethane	67	3.704	3.704	0.000	99	4743	0.1587	0.1557	
7 Propene	41	3.715	3.714	0.001	96	22108	0.1587	0.1795	
8 Dichlorodifluoromethane	85	3.763	3.763	0.000	99	45735	0.1587	0.1531	
9 Chloromethane	52	3.925	3.928	-0.003	84	6242	0.1587	0.1724	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.941	3.940	0.001	92	28567	0.1587	0.1535	
11 Acetaldehyde	44	4.071	4.073	-0.003	81	100985	0.7935	1.98	
12 Vinyl chloride	62	4.087	4.088	-0.001	99	18252	0.1587	0.1608	
13 Butadiene	54	4.168	4.169	-0.001	65	14897	0.1587	0.1514	
14 Butane	43	4.173	4.171	0.002	88	36024	0.1587	0.1686	
15 Bromomethane	94	4.459	4.464	-0.005	98	15400	0.1587	0.1540	
16 Chloroethane	64	4.588	4.595	-0.007	84	9267	0.1587	0.1545	
17 Ethanol	31	4.701	4.716	-0.015	98	51520	0.7935	0.9145	
18 Vinyl bromide	106	4.874	4.877	-0.003	97	13852	0.1587	0.1508	
19 2-Methylbutane	43	4.928	4.927	0.001	92	24874	0.1587	0.1638	
20 Trichlorofluoromethane	101	5.127	5.131	-0.004	99	42589	0.1587	0.1502	
21 Acrolein	56	5.133	5.134	-0.001	37	7184	0.1587	0.2169	
22 Acetonitrile	40	5.192	5.199	-0.007	98	9778	0.1587	0.1928	
23 Acetone	58	5.246	5.243	0.003	99	61593	0.4762	1.25	
24 Pentane	72	5.343	5.339	0.004	96	2647	0.1587	0.1544	
25 Isopropyl alcohol	45	5.343	5.360	-0.017	72	74234	0.4762	0.5237	
26 Ethyl ether	31	5.494	5.493	0.001	87	21193	0.1587	0.1554	
27 1,1-Dichloroethene	96	5.791	5.791	0.000	95	13417	0.1587	0.1576	
28 Acrylonitrile	53	5.882	5.888	-0.006	98	9592	0.1587	0.1588	
29 2-Methyl-2-propanol	59	5.936	5.928	0.008	95	23907	0.1587	0.1577	
30 1,1,2-Trichloro-1,2,2-trif	101	5.963	5.967	-0.004	96	26461	0.1587	0.1550	
31 Methylene Chloride	84	6.114	6.115	-0.001	96	19738	0.1587	0.1987	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.125	6.131	-0.006	94	26014	0.1587	0.1724	
33 Carbon disulfide	76	6.260	6.264	-0.004	100	48816	0.1587	0.1503	
34 trans-1,2-Dichloroethene	96	6.885	6.885	0.000	95	17035	0.1587	0.1549	
35 2-Methylpentane	43	6.907	6.912	-0.005	96	47583	0.1587	0.1534	
36 Methyl tert-butyl ether	73	7.020	7.014	0.006	93	42990	0.1587	0.1481	
37 1,1-Dichloroethane	63	7.279	7.284	-0.005	99	34374	0.1587	0.1503	
38 Vinyl acetate	43	7.392	7.395	-0.003	100	48794	0.1587	0.1353	
39 2-Butanone (MEK)	72	7.818	7.818	0.000	97	12107	0.1587	0.2196	
40 Hexane	56	7.851	7.853	-0.002	89	16564	0.1587	0.1607	
41 Isopropyl ether	45	8.012	8.011	0.001	97	68571	0.1587	0.1524	
42 cis-1,2-Dichloroethene	96	8.228	8.236	-0.008	98	16972	0.1587	0.1499	
43 Ethyl acetate	43	8.422	8.424	-0.002	97	40313	0.1587	0.1329	
44 Chloroform	83	8.562	8.571	-0.009	95	36929	0.1587	0.1512	
45 Tert-butyl ethyl ether	59	8.665	8.666	-0.001	99	51248	0.1587	0.1463	
46 Tetrahydrofuran	42	8.961	8.955	0.006	92	23849	0.1587	0.1520	
47 1,1,1-Trichloroethane	97	9.560	9.566	-0.006	98	37538	0.1587	0.1467	
48 1,2-Dichloroethane	62	9.657	9.666	-0.009	97	26392	0.1587	0.1422	
49 Benzene	78	10.158	10.163	-0.005	96	49222	0.1587	0.1544	
50 Cyclohexane	69	10.158	10.163	-0.005	76	8611	0.1587	0.1588	
52 Carbon tetrachloride	117	10.185	10.189	-0.004	96	35265	0.1587	0.1414	
51 n-Butanol	31	10.218	10.196	0.022	78	7437	0.1587	0.1399	
53 2,3-Dimethylpentane	71	10.299	10.299	0.000	91	12097	0.1587	0.1467	
54 Thiophene	84	10.428	10.436	-0.008	96	27483	0.1587	0.1437	
55 Tert-amyl methyl ether	73	10.655	10.674	-0.019	90	39986	0.1587	0.1342	
56 Isooctane	57	10.946	10.947	-0.001	96	97404	0.1587	0.1535	
57 n-Heptane	71	11.329	11.330	-0.001	94	18553	0.1587	0.1510	
58 1,2-Dichloropropane	63	11.383	11.386	-0.003	89	20164	0.1587	0.1505	
59 Trichloroethene	130	11.426	11.432	-0.006	94	23674	0.1587	0.1456	
60 Dibromomethane	93	11.501	11.503	-0.002	92	18890	0.1587	0.1427	
61 Dichlorobromomethane	83	11.647	11.657	-0.010	97	30169	0.1587	0.1253	
62 1,4-Dioxane	88	11.679	11.683	-0.004	96	6616	0.1587	0.1461	
63 Methyl methacrylate	41	11.771	11.772	-0.001	93	21065	0.1587	0.1153	
64 Methylcyclohexane	83	12.208	12.210	-0.002	89	38230	0.1587	0.1469	
65 4-Methyl-2-pentanone (MIBK	43	12.623	12.624	-0.001	98	50856	0.1587	0.1616	
66 cis-1,3-Dichloropropene	75	12.666	12.671	-0.005	97	26161	0.1587	0.1352	
67 trans-1,3-Dichloropropene	75	13.367	13.373	-0.006	94	24293	0.1587	0.1387	
68 Toluene	91	13.496	13.500	-0.004	93	54887	0.1587	0.1511	
69 1,1,2-Trichloroethane	83	13.566	13.569	-0.003	98	15693	0.1587	0.1457	
70 2-Methylthiophene	97	13.647	13.650	-0.003	98	43498	0.1587	0.1470	
71 3-Methylthiophene	97	13.847	13.853	-0.006	98	42334	0.1587	0.1450	
72 2-Hexanone	58	13.976	13.977	-0.001	89	15879	0.1587	0.1295	
73 n-Octane	85	14.214	14.216	-0.002	98	20566	0.1587	0.1583	
74 Chlorodibromomethane	129	14.267	14.275	-0.008	96	21951	0.1587	0.1071	
75 Ethylene Dibromide	107	14.553	14.560	-0.007	99	25143	0.1587	0.1305	
76 Tetrachloroethene	129	14.645	14.650	-0.005	94	21008	0.1587	0.1498	
77 Chlorobenzene	112	15.529	15.531	-0.002	93	42794	0.1587	0.1494	
78 2,3-Dimethylheptane	43	15.567	15.572	-0.005	94	73551	0.1587	0.1567	
79 Ethylbenzene	91	15.826	15.828	-0.002	99	71619	0.1587	0.1494	
80 2-Ethylthiophene	97	15.923	15.928	-0.005	99	50725	0.1587	0.1413	
81 m-Xylene & p-Xylene	91	15.988	15.991	-0.003	99	112233	0.3174	0.3121	
83 Bromoform	173	16.419	16.426	-0.007	93	13628	0.1587	0.0744	
82 n-Nonane	57	16.430	16.433	-0.003	95	44562	0.1587	0.1670	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.451	16.458	-0.007	98	27898	0.1587	0.1171	
85 o-Xylene	91	16.511	16.517	-0.006	98	58230	0.1587	0.1484	
86 1,1,2,2-Tetrachloroethane	83	16.834	16.840	-0.006	98	37482	0.1587	0.1395	
87 1,2,3-Trichloropropane	110	16.996	16.997	-0.001	94	11810	0.1587	0.1401	
88 Isopropylbenzene	105	17.109	17.112	-0.003	97	78344	0.1587	0.1523	
89 N-Propylbenzene	120	17.659	17.662	-0.003	99	21526	0.1587	0.1471	
90 2-Chlorotoluene	126	17.697	17.702	-0.005	98	20101	0.1587	0.1498	
91 4-Ethyltoluene	105	17.816	17.817	-0.001	98	76160	0.1587	0.1468	
92 1,3,5-Trimethylbenzene	120	17.891	17.895	-0.004	92	37796	0.1587	0.1537	
93 Alpha Methyl Styrene	118	18.128	18.129	-0.001	85	19798	0.1587	0.1038	
94 n-Decane	57	18.199	18.204	-0.006	87	55819	0.1587	0.1591	
95 tert-Butylbenzene	119	18.323	18.327	-0.004	90	73197	0.1587	0.1541	
96 1,2,4-Trimethylbenzene	105	18.339	18.340	-0.001	95	68019	0.1587	0.1554	
97 sec-Butylbenzene	105	18.598	18.602	-0.004	98	99270	0.1587	0.1568	
98 1,3-Dichlorobenzene	146	18.603	18.609	-0.006	98	42408	0.1587	0.1428	
99 Benzyl chloride	91	18.678	18.685	-0.007	97	48130	0.1587	0.1266	
100 1,4-Dichlorobenzene	146	18.695	18.698	-0.003	92	41508	0.1587	0.1428	
101 4-Isopropyltoluene	119	18.765	18.768	-0.003	96	81637	0.1587	0.1494	
102 1,2,3-Trimethylbenzene	105	18.813	18.817	-0.004	98	52885	0.1587	0.1510	
103 Butylcyclohexane	83	18.873	18.879	-0.006	89	59740	0.1587	0.1627	
104 1,2-Dichlorobenzene	146	19.056	19.062	-0.006	90	41675	0.1587	0.1439	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	93	59563	0.1587	0.1497	
106 Indene	116	19.191	19.193	-0.002	91	38770	0.1587	0.1352	
107 n-Butylbenzene	91	19.207	19.209	-0.002	98	78860	0.1587	0.1542	
108 Undecane	57	19.536	19.537	-0.001	93	60011	0.1587	0.1549	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.579	19.584	-0.005	98	61622	0.1587	0.1495	
110 1,2-Dibromo-3-Chloropropan	157	19.665	19.668	-0.003	79	9747	0.1587	0.0878	
111 1,2,4,5-Tetramethylbenzene	119	19.967	19.972	-0.005	96	75278	0.1587	0.1520	
112 1,2,3,5-Tetramethylbenzene	119	20.021	20.026	-0.005	94	46794	0.1587	0.1523	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	62656	0.1587	0.1527	
114 Dodecane	57	20.598	20.599	-0.001	91	54073	0.1587	0.1592	
115 1,2,4-Trichlorobenzene	180	20.765	20.768	-0.003	93	23599	0.1587	0.1175	
116 Naphthalene	128	20.900	20.903	-0.003	99	63722	0.1587	0.1484	
117 Benzo(b)thiophene	134	21.003	21.004	-0.001	99	29832	0.1587	0.1213	
118 Hexachlorobutadiene	225	21.116	21.121	-0.005	93	33007	0.1587	0.1244	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	95	24263	0.1587	0.1251	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	20222	0.4959	0.4049	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	99	26378	0.4959	0.4920	
A 124 Toluene Range	1	13.491	(13.456-13.526)		0	145045	0.1587	0.1519	
A 125 C8 Range	1	14.210	(14.184-14.254)		0	245925	0.1587	0.1670	
S 126 Xylenes, Total	100				0		0.4761	0.4605	
S 127 1,2-Dichloroethene, Total	1				0		0.3174	0.3047	

Reagents:

40L3DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

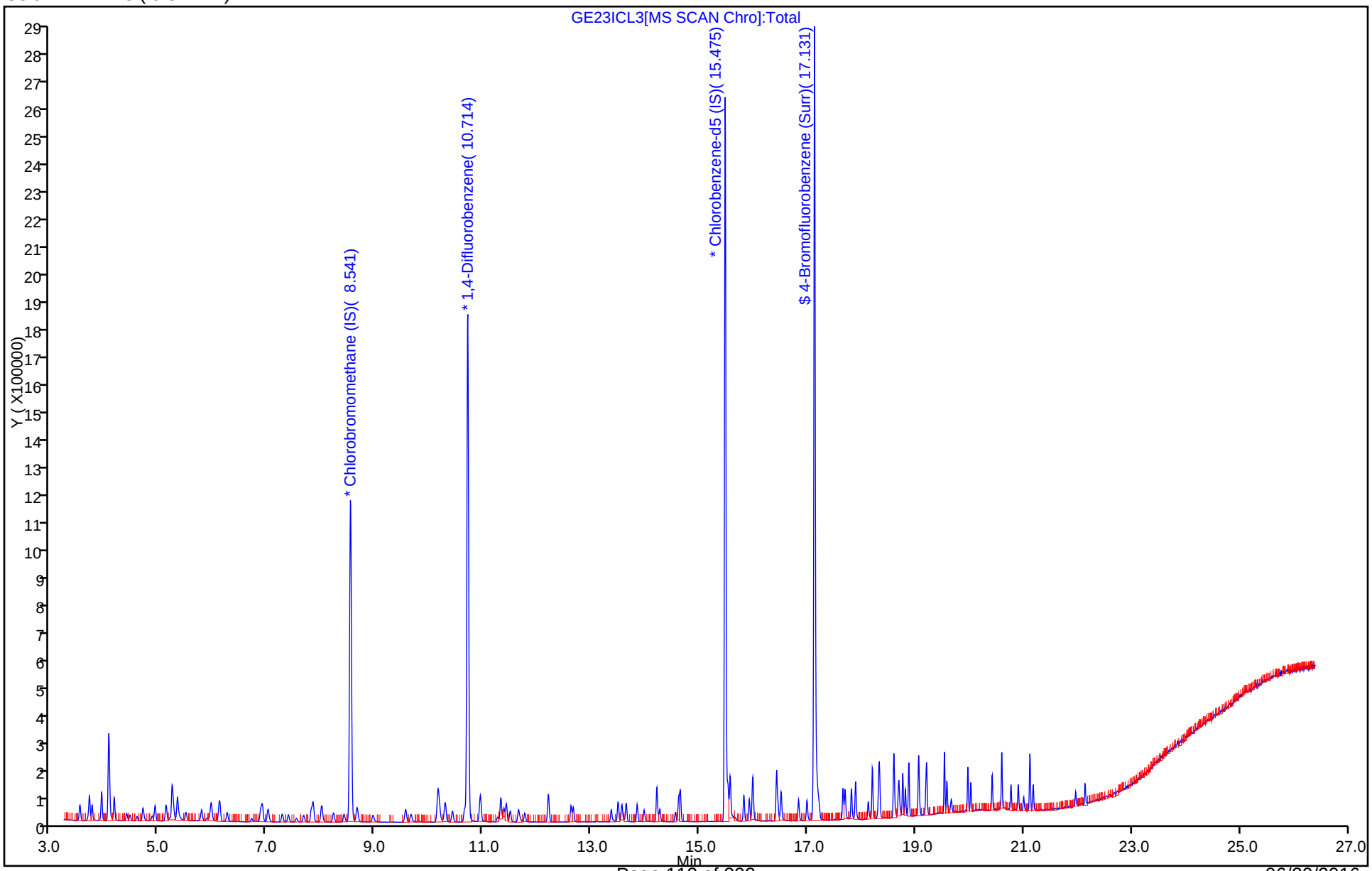
Report Date: 26-May-2016 14:55:52 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL3.D

Injection Date:	23-May-2016 15:07:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

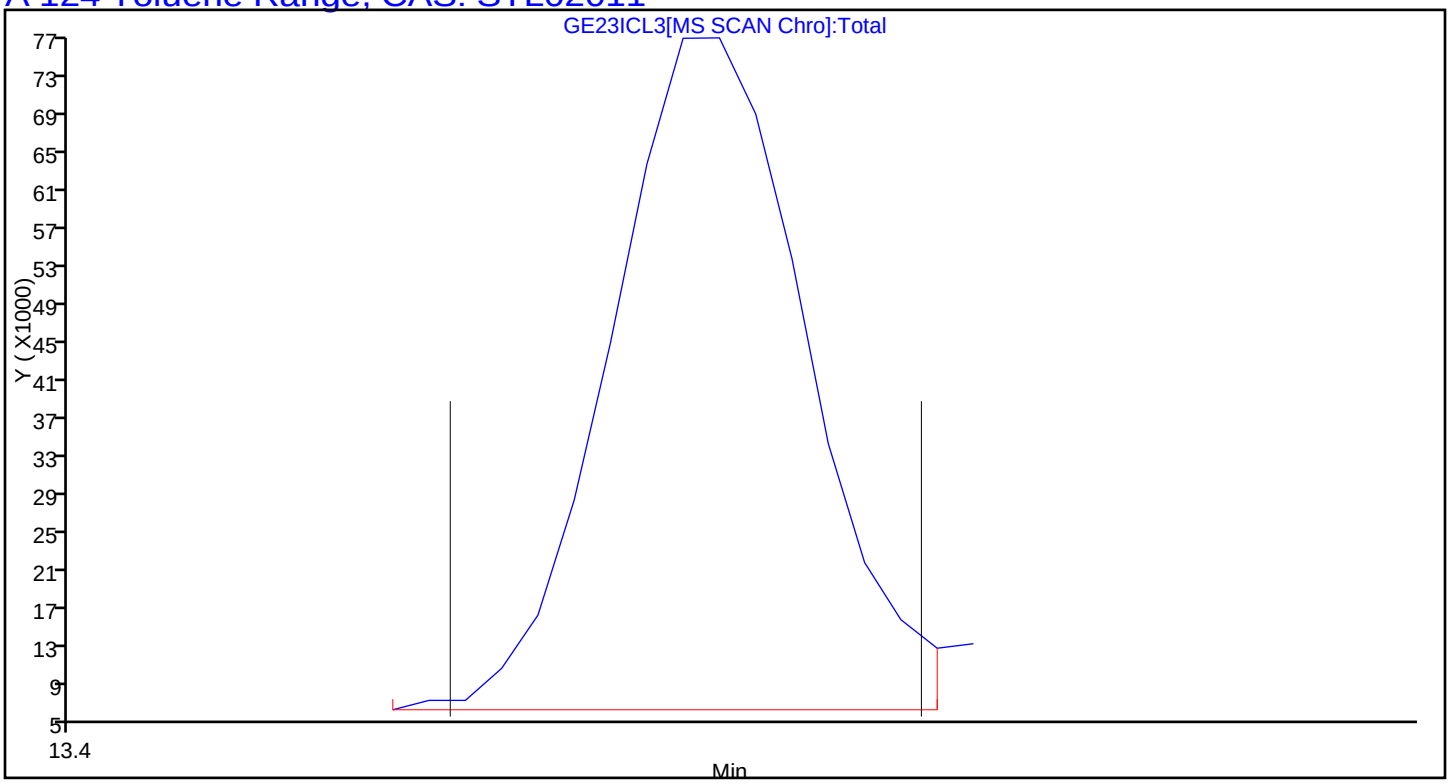


Report Date: 26-May-2016 14:55:52 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL3.D				
Injection Date:	23-May-2016 15:07:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

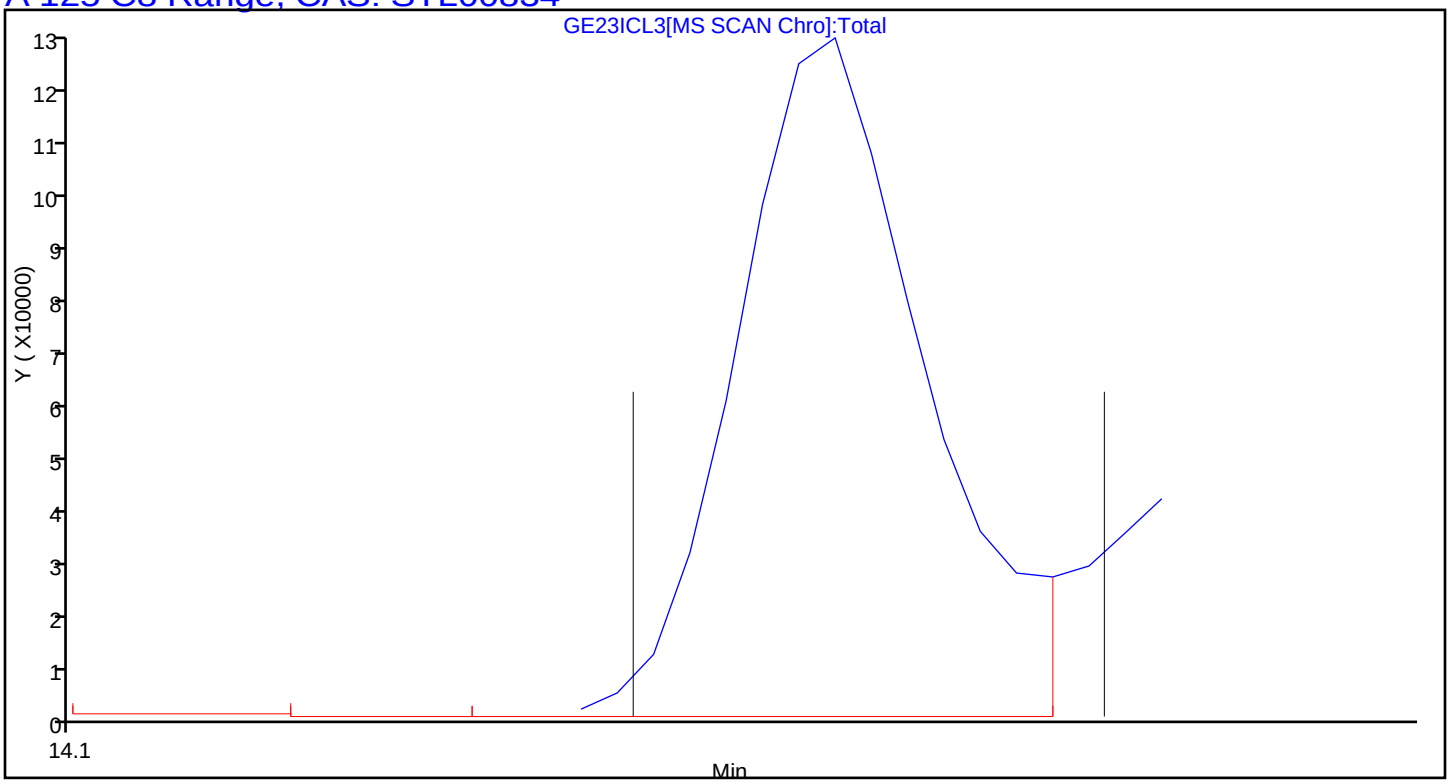


Report Date: 26-May-2016 14:55:52 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL3.D				
Injection Date:	23-May-2016 15:07:30	Instrument ID:	MG		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL4.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-May-2016 15:49:30 ALS Bottle#: 10 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041180
Misc. Info.: 140-0002910-005
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:55:56 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 16:34:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.562	8.550	0.012	97	356426	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.724	10.719	0.005	96	1657884	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.486	15.482	0.004	90	1505139	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.136	17.135	0.001	90	1092240	4.00	4.00	
6 Chlorodifluoromethane	67	3.720	3.704	0.016	98	16205	0.5008	0.5200	
7 Propene	41	3.731	3.714	0.017	98	70911	0.5008	0.5627	
8 Dichlorodifluoromethane	85	3.779	3.763	0.016	99	162018	0.5008	0.5302	
9 Chloromethane	52	3.941	3.928	0.013	99	21495	0.5008	0.5801	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.957	3.940	0.017	97	105953	0.5008	0.5564	
11 Acetaldehyde	44	4.086	4.073	0.013	82	166580	2.50	3.19	
12 Vinyl chloride	62	4.103	4.088	0.015	99	66259	0.5008	0.5706	
13 Butadiene	54	4.184	4.169	0.015	65	55607	0.5008	0.5525	
14 Butane	43	4.189	4.171	0.018	87	125207	0.5008	0.5726	
15 Bromomethane	94	4.480	4.464	0.016	99	55933	0.5008	0.5467	
16 Chloroethane	64	4.610	4.595	0.015	87	33987	0.5008	0.5537	
17 Ethanol	31	4.734	4.716	0.018	96	145528	2.50	2.52	
18 Vinyl bromide	106	4.890	4.877	0.013	98	53743	0.5008	0.5717	
19 2-Methylbutane	43	4.944	4.927	0.017	94	92643	0.5008	0.5964	
20 Trichlorofluoromethane	101	5.149	5.131	0.018	99	161459	0.5008	0.5567	
21 Acrolein	56	5.154	5.134	0.020	96	18283	0.5008	0.5396	
22 Acetonitrile	40	5.213	5.199	0.014	99	28254	0.5008	0.5446	
23 Acetone	58	5.262	5.243	0.019	99	96915	1.50	1.93	
24 Pentane	72	5.354	5.339	0.015	97	11208	0.5008	0.6391	
25 Isopropyl alcohol	45	5.375	5.360	0.015	93	221156	1.50	1.53	
26 Ethyl ether	31	5.510	5.493	0.017	87	81093	0.5008	0.5813	
27 1,1-Dichloroethene	96	5.807	5.791	0.016	96	53426	0.5008	0.6135	
28 Acrylonitrile	53	5.904	5.888	0.016	95	37070	0.5008	0.5997	
29 2-Methyl-2-propanol	59	5.952	5.928	0.024	96	86757	0.5008	0.5594	
30 1,1,2-Trichloro-1,2,2-trif	101	5.985	5.967	0.018	95	107780	0.5008	0.6171	
31 Methylene Chloride	84	6.130	6.115	0.015	96	58799	0.5008	0.5786	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.146	6.131	0.015	94	78783	0.5008	0.5103	
33 Carbon disulfide	76	6.276	6.264	0.012	100	180446	0.5008	0.5431	
34 trans-1,2-Dichloroethene	96	6.901	6.885	0.016	96	61274	0.5008	0.5445	
35 2-Methylpentane	43	6.928	6.912	0.016	97	176564	0.5008	0.5564	
36 Methyl tert-butyl ether	73	7.031	7.014	0.017	96	152186	0.5008	0.5125	
37 1,1-Dichloroethane	63	7.295	7.284	0.011	99	122511	0.5008	0.5235	
38 Vinyl acetate	43	7.408	7.395	0.013	100	181894	0.5008	0.4931	
39 2-Butanone (MEK)	72	7.829	7.818	0.011	97	26682	0.5008	0.4730	
40 Hexane	56	7.872	7.853	0.019	93	58855	0.5008	0.5580	
41 Isopropyl ether	45	8.023	8.011	0.012	96	240990	0.5008	0.5234	
42 cis-1,2-Dichloroethene	96	8.244	8.236	0.008	97	61241	0.5008	0.5285	
43 Ethyl acetate	43	8.438	8.424	0.014	97	146464	0.5008	0.4720	
44 Chloroform	83	8.578	8.571	0.007	96	131726	0.5008	0.5272	
45 Tert-butyl ethyl ether	59	8.681	8.666	0.015	98	185251	0.5008	0.5169	
46 Tetrahydrofuran	42	8.967	8.955	0.012	92	79200	0.5008	0.4933	
47 1,1,1-Trichloroethane	97	9.576	9.566	0.010	97	138056	0.5008	0.5272	
48 1,2-Dichloroethane	62	9.678	9.666	0.012	97	93305	0.5008	0.5155	
49 Benzene	78	10.169	10.163	0.006	96	174189	0.5008	0.5601	
50 Cyclohexane	69	10.174	10.163	0.011	78	31417	0.5008	0.5942	
52 Carbon tetrachloride	117	10.201	10.189	0.012	96	126983	0.5008	0.5222	
51 n-Butanol	31	10.266	10.196	0.070	69	22770	0.5008	0.4392	
53 2,3-Dimethylpentane	71	10.309	10.299	0.010	91	42630	0.5008	0.5300	
54 Thiophene	84	10.444	10.436	0.008	97	100002	0.5008	0.5363	
55 Tert-amyl methyl ether	73	10.665	10.672	-0.007	93	156954	0.5008	0.5402	
56 Isooctane	57	10.962	10.947	0.015	97	349587	0.5008	0.5648	
57 n-Heptane	71	11.339	11.330	0.009	95	66775	0.5008	0.5571	
58 1,2-Dichloropropane	63	11.393	11.386	0.007	89	68952	0.5008	0.5275	
59 Trichloroethene	130	11.436	11.432	0.004	95	86507	0.5008	0.5455	
60 Dibromomethane	93	11.506	11.503	0.003	96	67281	0.5008	0.5210	
61 Dichlorobromomethane	83	11.663	11.657	0.006	97	122919	0.5008	0.5235	
62 1,4-Dioxane	88	11.690	11.683	0.007	92	22410	0.5008	0.5074	
63 Methyl methacrylate	41	11.776	11.772	0.004	93	83371	0.5008	0.4679	
64 Methylcyclohexane	83	12.213	12.210	0.003	89	140618	0.5008	0.5541	
65 4-Methyl-2-pentanone (MIBK	43	12.639	12.624	0.015	99	141309	0.5008	0.4604	
66 cis-1,3-Dichloropropene	75	12.676	12.671	0.005	98	99111	0.5008	0.5250	
67 trans-1,3-Dichloropropene	75	13.378	13.373	0.005	94	89536	0.5008	0.5224	
68 Toluene	91	13.502	13.500	0.002	93	197217	0.5008	0.5547	
69 1,1,2-Trichloroethane	83	13.572	13.569	0.003	99	57512	0.5008	0.5455	
70 2-Methylthiophene	97	13.653	13.650	0.003	99	156142	0.5008	0.5390	
71 3-Methylthiophene	97	13.857	13.853	0.004	99	153798	0.5008	0.5381	
72 2-Hexanone	58	13.987	13.977	0.010	90	54275	0.5008	0.4523	
73 n-Octane	85	14.219	14.216	0.003	98	72749	0.5008	0.5721	
74 Chlorodibromomethane	129	14.278	14.275	0.003	97	100966	0.5008	0.5031	
75 Ethylene Dibromide	107	14.564	14.560	0.004	97	99775	0.5008	0.5291	
76 Tetrachloroethene	129	14.655	14.650	0.005	95	76591	0.5008	0.5580	
77 Chlorobenzene	112	15.534	15.531	0.003	91	154017	0.5008	0.5493	
78 2,3-Dimethylheptane	43	15.572	15.572	0.000	94	259531	0.5008	0.5648	
79 Ethylbenzene	91	15.831	15.828	0.003	99	260431	0.5008	0.5551	
80 2-Ethylthiophene	97	15.928	15.928	0.000	99	192735	0.5008	0.5487	
81 m-Xylene & p-Xylene	91	15.993	15.991	0.002	99	398949	1.00	1.13	
83 Bromoform	173	16.430	16.426	0.004	95	88615	0.5008	0.4944	
82 n-Nonane	57	16.435	16.433	0.002	95	161332	0.5008	0.6176	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.462	16.458	0.004	99	124560	0.5008	0.5339	
85 o-Xylene	91	16.516	16.517	-0.001	98	214201	0.5008	0.5579	
86 1,1,2,2-Tetrachloroethane	83	16.839	16.840	-0.001	99	147181	0.5008	0.5597	
87 1,2,3-Trichloropropane	110	16.996	16.997	-0.001	96	43898	0.5008	0.5319	
88 Isopropylbenzene	105	17.114	17.112	0.002	97	279653	0.5008	0.5555	
89 N-Propylbenzene	120	17.659	17.662	-0.003	99	78494	0.5008	0.5481	
90 2-Chlorotoluene	126	17.702	17.702	0.000	98	72083	0.5008	0.5488	
91 4-Ethyltoluene	105	17.815	17.817	-0.002	98	279048	0.5008	0.5496	
92 1,3,5-Trimethylbenzene	120	17.896	17.895	0.001	92	135402	0.5008	0.5624	
93 Alpha Methyl Styrene	118	18.128	18.129	-0.001	88	86692	0.5008	0.4645	
94 n-Decane	57	18.204	18.204	0.000	86	201178	0.5008	0.5857	
95 tert-Butylbenzene	119	18.328	18.327	0.001	92	265481	0.5008	0.5710	
96 1,2,4-Trimethylbenzene	105	18.338	18.340	-0.002	96	244164	0.5008	0.5701	
97 sec-Butylbenzene	105	18.603	18.602	0.001	98	356663	0.5008	0.5756	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	98	154866	0.5008	0.5328	
99 Benzyl chloride	91	18.684	18.685	-0.001	96	181615	0.5008	0.4882	
100 1,4-Dichlorobenzene	146	18.700	18.698	0.002	95	148980	0.5008	0.5236	
101 4-Isopropyltoluene	119	18.764	18.768	-0.004	96	302059	0.5008	0.5648	
102 1,2,3-Trimethylbenzene	105	18.818	18.817	0.001	99	190134	0.5008	0.5545	
103 Butylcyclohexane	83	18.878	18.879	-0.001	89	214653	0.5008	0.5971	
104 1,2-Dichlorobenzene	146	19.061	19.062	-0.001	79	152169	0.5008	0.5368	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	93	221410	0.5008	0.5684	
106 Indene	116	19.190	19.193	-0.003	90	145711	0.5008	0.5190	
107 n-Butylbenzene	91	19.207	19.209	-0.002	99	289631	0.5008	0.5787	
108 Undecane	57	19.536	19.537	-0.001	92	219578	0.5008	0.5790	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.584	19.584	0.000	98	225806	0.5008	0.5598	
110 1,2-Dibromo-3-Chloropropan	157	19.665	19.668	-0.003	88	50615	0.5008	0.4660	
111 1,2,4,5-Tetramethylbenzene	119	19.972	19.972	0.000	97	273589	0.5008	0.5643	
112 1,2,3,5-Tetramethylbenzene	119	20.026	20.026	0.000	95	169808	0.5008	0.5645	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	226242	0.5008	0.5634	
114 Dodecane	57	20.598	20.599	-0.001	91	186851	0.5008	0.5619	
115 1,2,4-Trichlorobenzene	180	20.770	20.768	0.002	94	82294	0.5008	0.4185	
116 Naphthalene	128	20.905	20.903	0.002	99	218819	0.5008	0.5206	
117 Benzo(b)thiophene	134	21.002	21.004	-0.002	99	101021	0.5008	0.4195	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	95	124355	0.5008	0.4788	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	95	85202	0.5008	0.4489	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	57956	1.56	1.19	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	100	72921	1.56	1.39	
A 124 Toluene Range	1	13.497	(13.462-13.532)		0	502569	0.5008	0.5397	
A 125 C8 Range	1	14.215	(14.189-14.259)		0	808914	0.5008	0.5632	
S 126 Xylenes, Total	100				0		1.50	1.69	
S 127 1,2-Dichloroethene, Total	1				0		1.00	1.07	

Reagents:

40L5DNP_00004	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

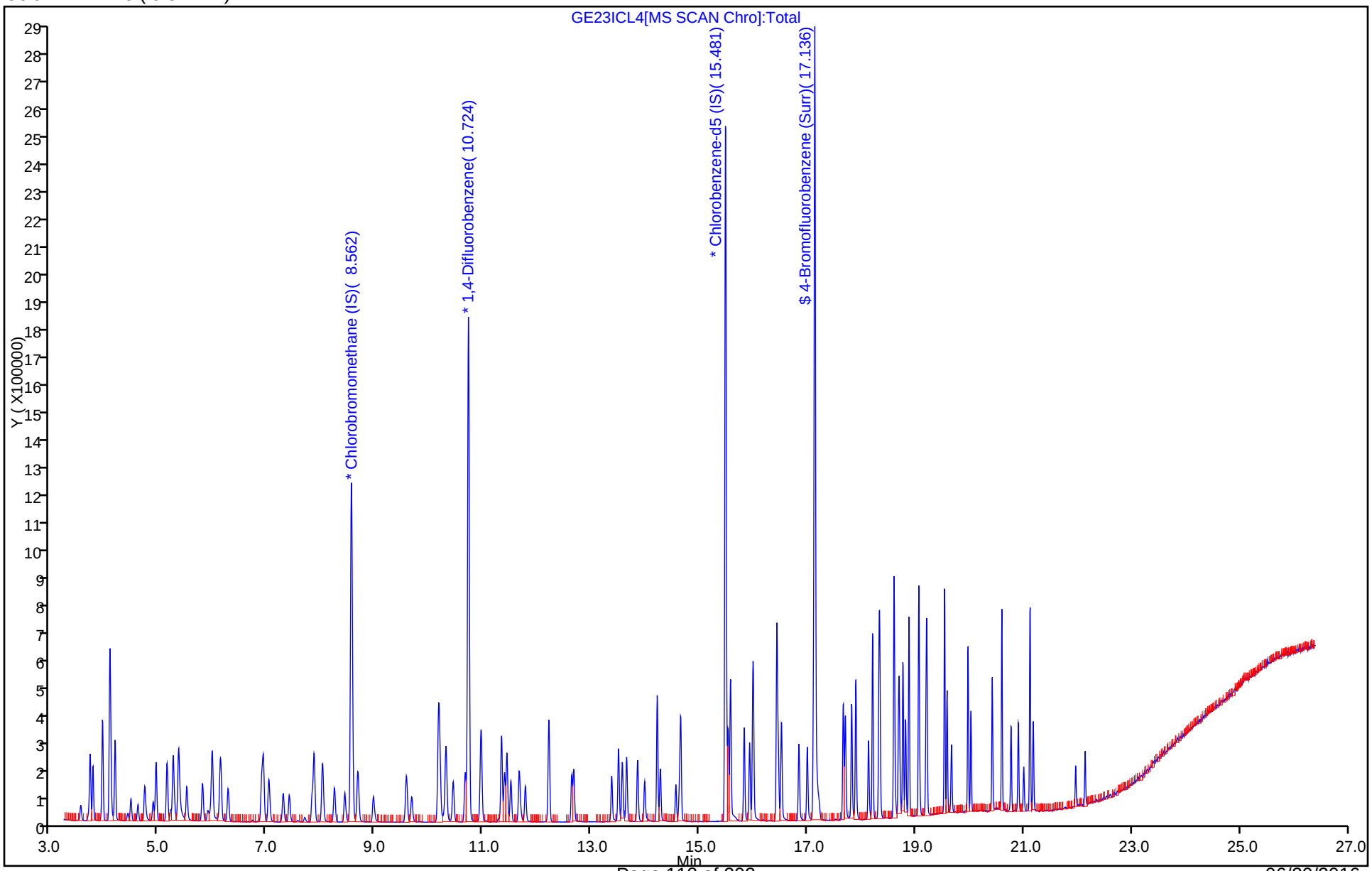
Report Date: 26-May-2016 14:55:57 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL4.D

Injection Date:	23-May-2016 15:49:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

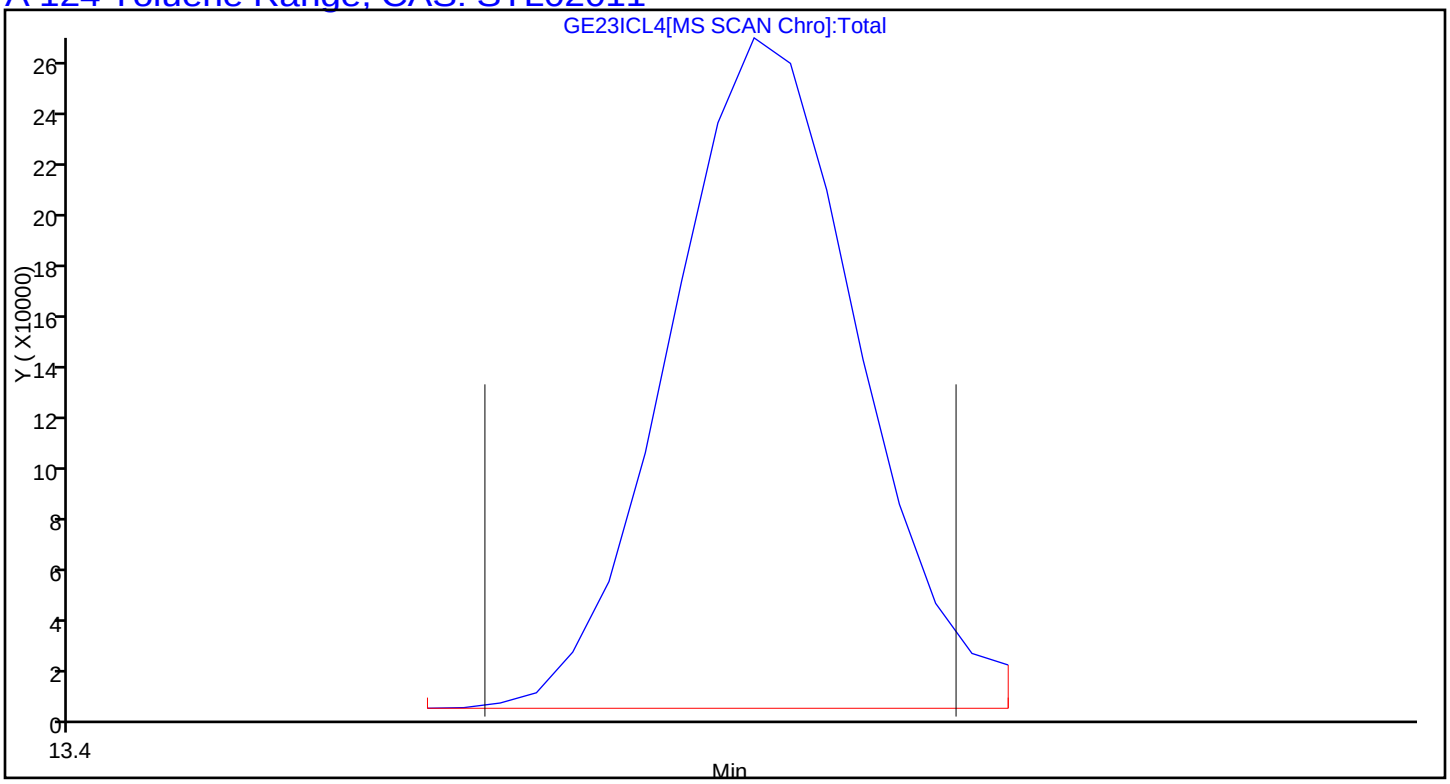


Report Date: 26-May-2016 14:55:57 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL4.D				
Injection Date:	23-May-2016 15:49:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

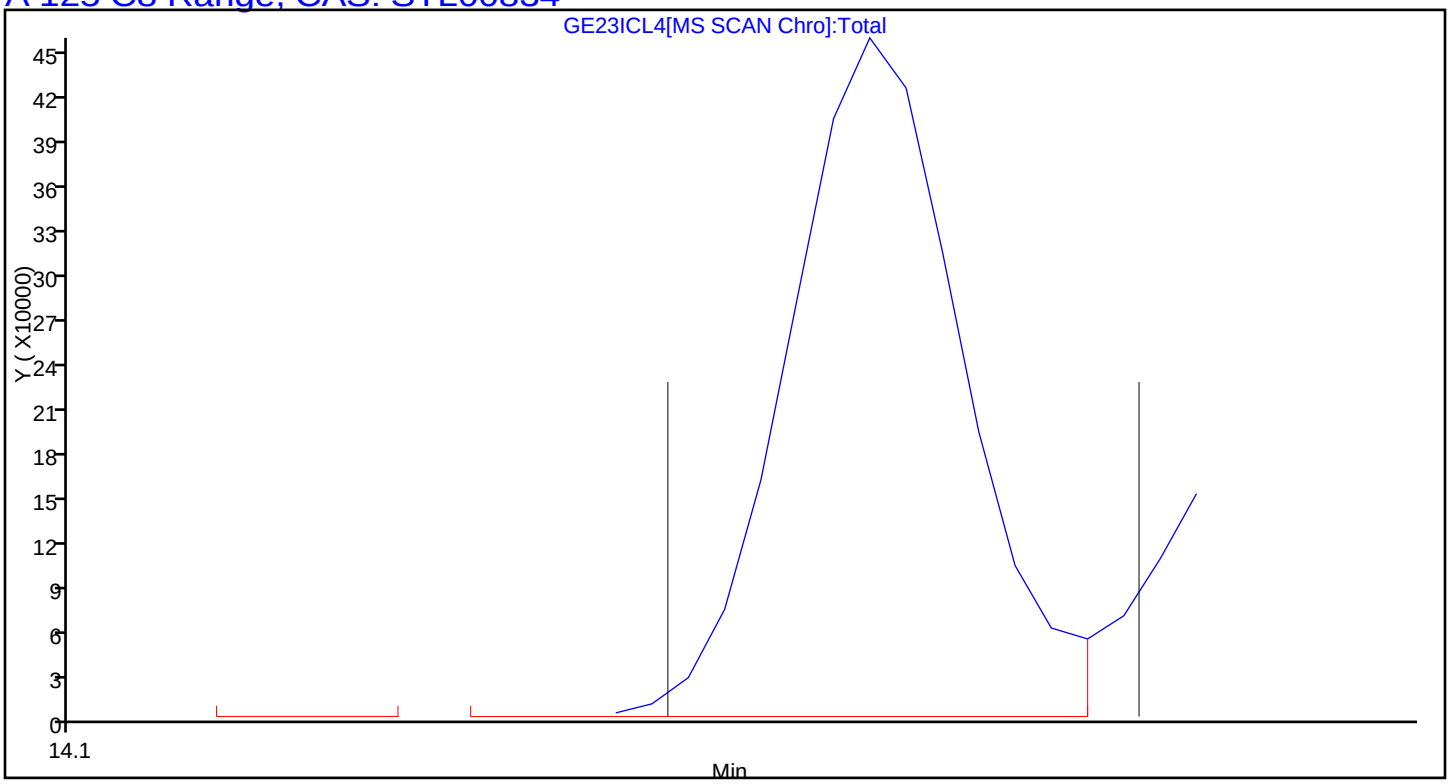


Report Date: 26-May-2016 14:55:57 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL4.D				
Injection Date:	23-May-2016 15:49:30	Instrument ID:	MG		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL5.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-May-2016 16:34:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041180
Misc. Info.: 140-0002910-006
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:56:01 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 17:51:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.552	8.550	0.002	96	351375	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.719	10.719	0.000	96	1703718	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.481	15.482	-0.001	90	1574807	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.131	17.135	-0.004	90	1153076	4.00	4.03	
6 Chlorodifluoromethane	67	3.704	3.704	0.000	98	31113	1.00	1.01	
7 Propene	41	3.715	3.714	0.001	98	130679	1.00	1.05	
8 Dichlorodifluoromethane	85	3.763	3.763	0.000	100	307890	1.00	1.02	
9 Chloromethane	52	3.930	3.928	0.002	98	38922	1.00	1.07	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.941	3.940	0.001	91	194435	1.00	1.04	
11 Acetaldehyde	44	4.070	4.073	-0.003	87	323557	5.01	6.29	
12 Vinyl chloride	62	4.087	4.088	-0.001	99	121638	1.00	1.06	
13 Butadiene	54	4.168	4.169	-0.001	67	105224	1.00	1.06	
14 Butane	43	4.173	4.171	0.002	87	236942	1.00	1.10	
15 Bromomethane	94	4.464	4.464	0.000	98	105380	1.00	1.04	
16 Chloroethane	64	4.594	4.595	-0.001	84	60165	1.00	0.99	
17 Ethanol	31	4.712	4.716	-0.004	97	291862	5.01	5.14	
18 Vinyl bromide	106	4.879	4.877	0.002	99	95729	1.00	1.03	
19 2-Methylbutane	43	4.928	4.927	0.001	93	163612	1.00	1.07	
20 Trichlorofluoromethane	101	5.133	5.131	0.002	100	290676	1.00	1.02	
21 Acrolein	56	5.133	5.134	-0.001	35	35613	1.00	1.07	
22 Acetonitrile	40	5.197	5.199	-0.002	95	56068	1.00	1.10	
23 Acetone	58	5.241	5.243	-0.002	99	183116	3.01	3.70	
24 Pentane	72	5.338	5.339	-0.001	97	18790	1.00	1.09	
25 Isopropyl alcohol	45	5.348	5.360	-0.012	93	477889	3.01	3.34	
26 Ethyl ether	31	5.489	5.493	-0.004	87	150518	1.00	1.09	
27 1,1-Dichloroethene	96	5.791	5.791	0.000	95	88584	1.00	1.03	
28 Acrylonitrile	53	5.888	5.888	0.000	94	66994	1.00	1.10	
29 2-Methyl-2-propanol	59	5.909	5.928	-0.019	95	170486	1.00	1.12	
30 1,1,2-Trichloro-1,2,2-trif	101	5.969	5.967	0.002	97	181259	1.00	1.05	
31 Methylene Chloride	84	6.114	6.115	-0.001	95	104813	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.130	6.131	-0.001	94	148527	1.00	0.9758	
33 Carbon disulfide	76	6.265	6.264	0.001	100	337735	1.00	1.03	
34 trans-1,2-Dichloroethene	96	6.885	6.885	0.000	96	116475	1.00	1.05	
35 2-Methylpentane	43	6.912	6.912	0.000	97	330908	1.00	1.06	
36 Methyl tert-butyl ether	73	7.009	7.014	-0.005	96	318217	1.00	1.09	
37 1,1-Dichloroethane	63	7.284	7.284	0.000	99	240669	1.00	1.04	
38 Vinyl acetate	43	7.392	7.395	-0.003	100	394053	1.00	1.08	
39 2-Butanone (MEK)	72	7.813	7.818	-0.005	97	58201	1.00	1.05	
40 Hexane	56	7.856	7.853	0.003	93	111715	1.00	1.07	
41 Isopropyl ether	45	8.007	8.011	-0.004	97	507640	1.00	1.12	
42 cis-1,2-Dichloroethene	96	8.239	8.236	0.003	97	122047	1.00	1.07	
43 Ethyl acetate	43	8.417	8.424	-0.007	97	321129	1.00	1.05	
44 Chloroform	83	8.573	8.571	0.002	96	256946	1.00	1.04	
45 Tert-butyl ethyl ether	59	8.659	8.666	-0.007	97	391101	1.00	1.11	
46 Tetrahydrofuran	42	8.945	8.955	-0.010	93	168468	1.00	1.06	
47 1,1,1-Trichloroethane	97	9.565	9.566	-0.001	96	270676	1.00	1.05	
48 1,2-Dichloroethane	62	9.668	9.666	0.002	97	184946	1.00	0.99	
49 Benzene	78	10.164	10.163	0.001	96	347772	1.00	1.09	
50 Cyclohexane	69	10.164	10.163	0.001	86	58584	1.00	1.08	
52 Carbon tetrachloride	117	10.191	10.189	0.002	97	248072	1.00	0.99	
51 n-Butanol	31	10.180	10.196	-0.016	68	57786	1.00	1.08	
53 2,3-Dimethylpentane	71	10.299	10.299	0.000	92	84345	1.00	1.02	
54 Thiophene	84	10.439	10.436	0.003	97	196946	1.00	1.03	
55 Tert-amyl methyl ether	73	10.649	10.667	-0.018	93	321993	1.00	1.08	
56 Isooctane	57	10.946	10.947	-0.001	96	674471	1.00	1.06	
57 n-Heptane	71	11.329	11.330	-0.001	95	130124	1.00	1.06	
58 1,2-Dichloropropane	63	11.388	11.386	0.002	87	138256	1.00	1.03	
59 Trichloroethene	130	11.431	11.432	-0.001	96	160008	1.00	0.9818	
60 Dibromomethane	93	11.501	11.503	-0.002	96	133482	1.00	1.01	
61 Dichlorobromomethane	83	11.658	11.657	0.001	98	251968	1.00	1.04	
62 1,4-Dioxane	88	11.674	11.683	-0.009	96	50028	1.00	1.10	
63 Methyl methacrylate	41	11.765	11.772	-0.007	93	194991	1.00	1.06	
64 Methylcyclohexane	83	12.208	12.210	-0.002	89	274309	1.00	1.05	
65 4-Methyl-2-pentanone (MIBK	43	12.617	12.624	-0.007	99	338785	1.00	1.07	
66 cis-1,3-Dichloropropene	75	12.671	12.671	0.000	97	204774	1.00	1.06	
67 trans-1,3-Dichloropropene	75	13.372	13.373	-0.001	94	188129	1.00	1.05	
68 Toluene	91	13.502	13.500	0.002	93	406249	1.00	1.09	
69 1,1,2-Trichloroethane	83	13.566	13.569	-0.003	99	119256	1.00	1.08	
70 2-Methylthiophene	97	13.647	13.650	-0.003	98	330165	1.00	1.09	
71 3-Methylthiophene	97	13.852	13.853	-0.001	99	321258	1.00	1.07	
72 2-Hexanone	58	13.971	13.977	-0.006	90	136674	1.00	1.09	
73 n-Octane	85	14.214	14.216	-0.002	98	143620	1.00	1.08	
74 Chlorodibromomethane	129	14.273	14.275	-0.002	98	223494	1.00	1.06	
75 Ethylene Dibromide	107	14.559	14.560	-0.001	98	212205	1.00	1.08	
76 Tetrachloroethene	129	14.650	14.650	0.000	94	146899	1.00	1.02	
77 Chlorobenzene	112	15.529	15.531	-0.002	91	312622	1.00	1.07	
78 2,3-Dimethylheptane	43	15.572	15.572	0.000	94	506793	1.00	1.05	
79 Ethylbenzene	91	15.826	15.828	-0.002	99	538836	1.00	1.10	
80 2-Ethylthiophene	97	15.928	15.928	0.000	99	401734	1.00	1.09	
81 m-Xylene & p-Xylene	91	15.988	15.991	-0.003	99	825448	2.00	2.24	
83 Bromoform	173	16.424	16.426	-0.002	95	207947	1.00	1.11	
82 n-Nonane	57	16.430	16.433	-0.003	95	312041	1.00	1.14	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.457	16.458	-0.001	98	282916	1.00	1.16	
85 o-Xylene	91	16.516	16.517	-0.001	98	446363	1.00	1.11	
86 1,1,2,2-Tetrachloroethane	83	16.840	16.840	0.000	99	313402	1.00	1.14	
87 1,2,3-Trichloropropane	110	16.996	16.997	-0.001	96	94294	1.00	1.09	
88 Isopropylbenzene	105	17.109	17.112	-0.003	97	579924	1.00	1.10	
89 N-Propylbenzene	120	17.659	17.662	-0.003	99	167001	1.00	1.11	
90 2-Chlorotoluene	126	17.702	17.702	0.000	98	150400	1.00	1.09	
91 4-Ethyltoluene	105	17.816	17.817	-0.001	98	591610	1.00	1.11	
92 1,3,5-Trimethylbenzene	120	17.891	17.895	-0.004	92	285491	1.00	1.13	
93 Alpha Methyl Styrene	118	18.128	18.129	-0.001	87	214264	1.00	1.10	
94 n-Decane	57	18.204	18.204	0.000	87	408210	1.00	1.14	
95 tert-Butylbenzene	119	18.322	18.327	-0.005	92	547089	1.00	1.12	
96 1,2,4-Trimethylbenzene	105	18.339	18.340	-0.001	96	506585	1.00	1.13	
97 sec-Butylbenzene	105	18.598	18.602	-0.004	98	740908	1.00	1.14	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	98	322475	1.00	1.06	
99 Benzyl chloride	91	18.684	18.685	-0.001	97	428446	1.00	1.10	
100 1,4-Dichlorobenzene	146	18.695	18.698	-0.003	92	319554	1.00	1.07	
101 4-Isopropyltoluene	119	18.765	18.768	-0.003	96	632109	1.00	1.13	
102 1,2,3-Trimethylbenzene	105	18.813	18.817	-0.004	98	406003	1.00	1.13	
103 Butylcyclohexane	83	18.878	18.879	-0.001	88	420867	1.00	1.12	
104 1,2-Dichlorobenzene	146	19.061	19.062	-0.001	91	317656	1.00	1.07	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	93	463443	1.00	1.14	
106 Indene	116	19.191	19.193	-0.002	91	335005	1.00	1.14	
107 n-Butylbenzene	91	19.207	19.209	-0.002	99	607900	1.00	1.16	
108 Undecane	57	19.536	19.537	-0.001	93	469100	1.00	1.18	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.584	19.584	0.000	98	479493	1.00	1.14	
110 1,2-Dibromo-3-Chloropropan	157	19.665	19.668	-0.003	98	127564	1.00	1.12	
111 1,2,4,5-Tetramethylbenzene	119	19.973	19.972	0.001	97	586705	1.00	1.16	
112 1,2,3,5-Tetramethylbenzene	119	20.026	20.026	0.000	95	362793	1.00	1.15	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	485588	1.00	1.16	
114 Dodecane	57	20.598	20.599	-0.001	91	407897	1.00	1.17	
115 1,2,4-Trichlorobenzene	180	20.765	20.768	-0.003	94	206625	1.00	1.00	
116 Naphthalene	128	20.900	20.903	-0.003	99	538019	1.00	1.22	
117 Benzo(b)thiophene	134	21.003	21.004	-0.002	99	269530	1.00	1.07	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	95	271349	1.00	1.00	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	95	208161	1.00	1.05	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	170766	3.13	3.34	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	100	194359	3.13	3.54	
A 124 Toluene Range	1	13.497	(13.462-13.532)		0	997295	1.00	1.04	
A 125 C8 Range	1	14.210	(14.184-14.254)		0	1579487	1.00	1.07	
S 126 Xylenes, Total	100				0		3.00	3.35	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.12	

Reagents:

40L5DNP_00004	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

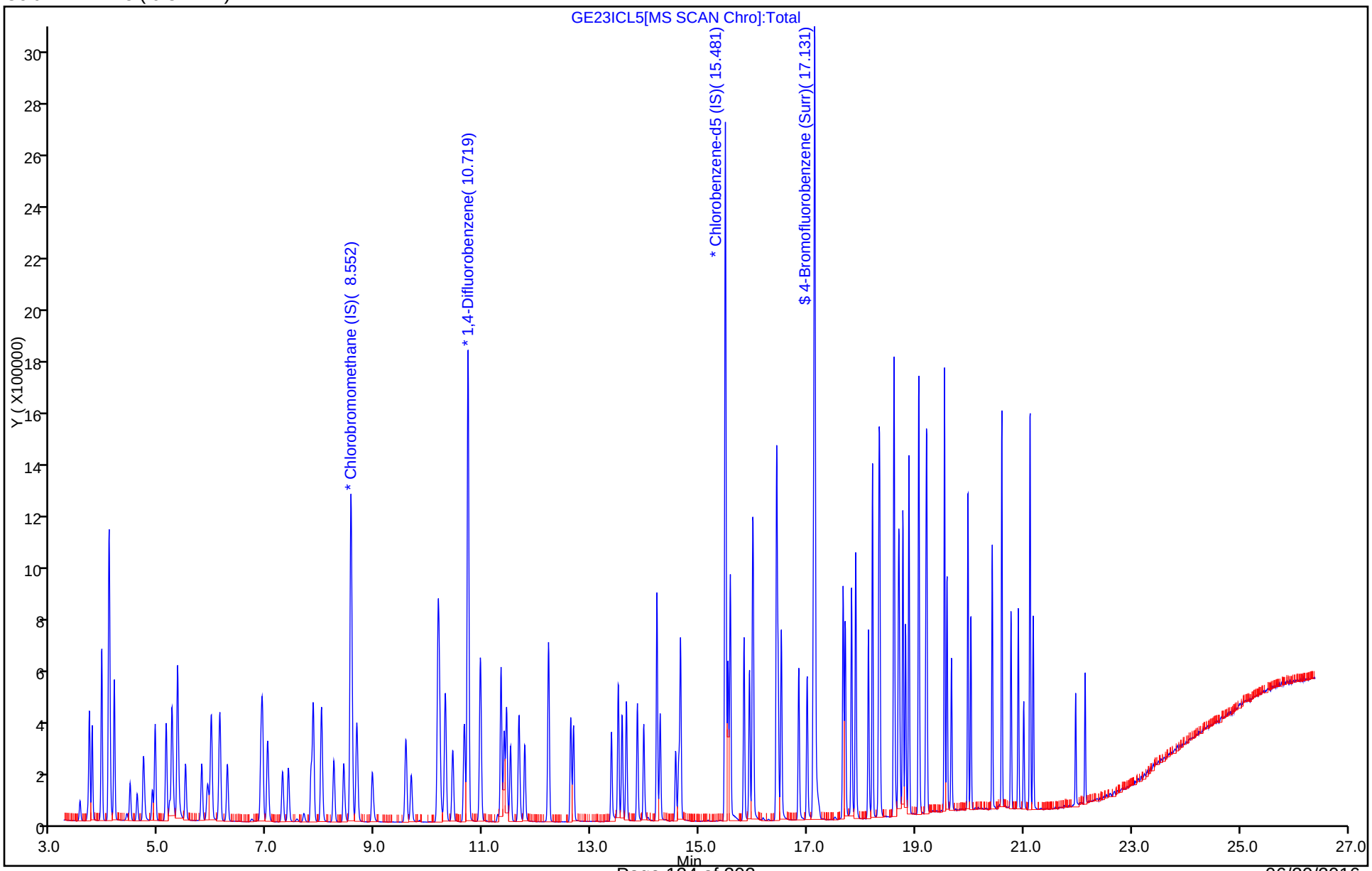
Report Date: 26-May-2016 14:56:02 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL5.D

Injection Date:	23-May-2016 16:34:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

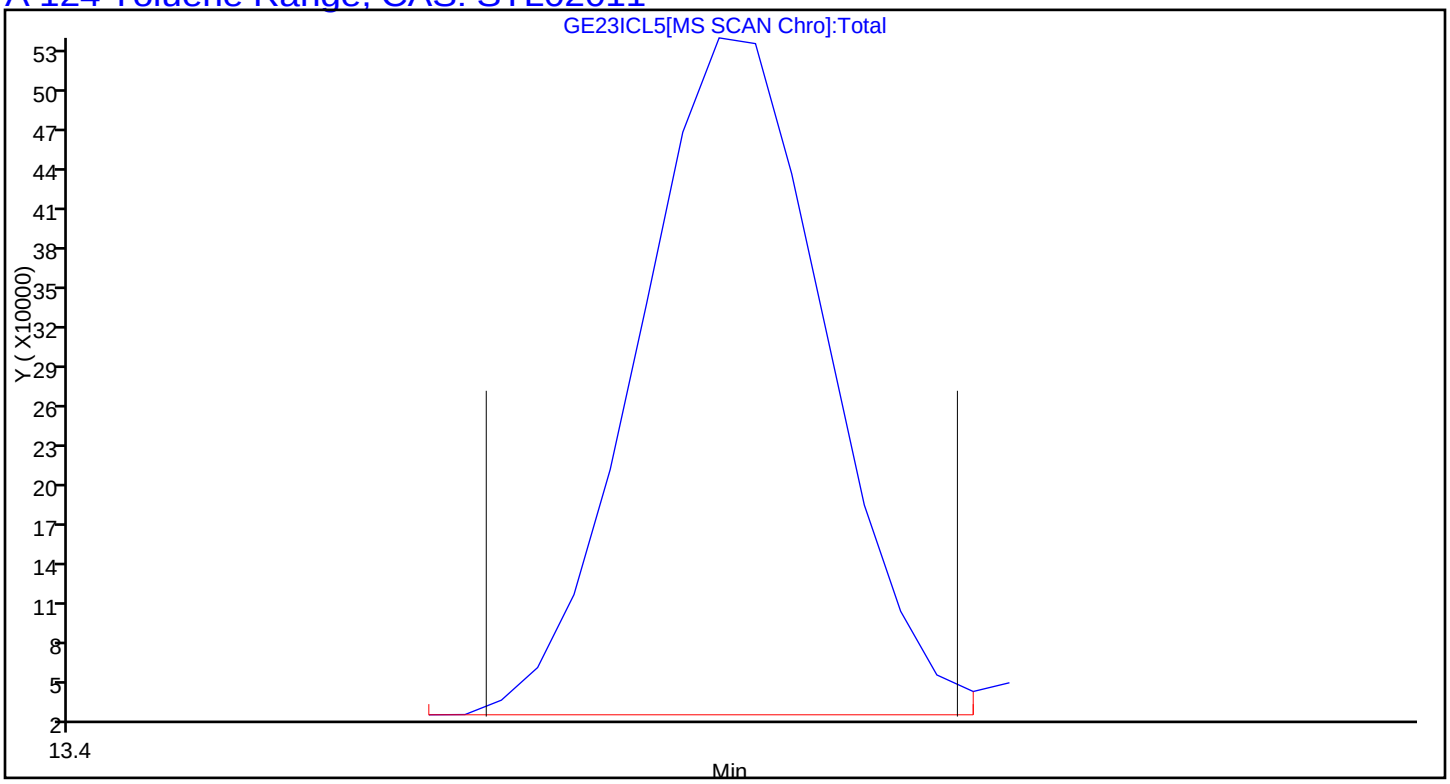


Report Date: 26-May-2016 14:56:02 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL5.D				
Injection Date:	23-May-2016 16:34:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

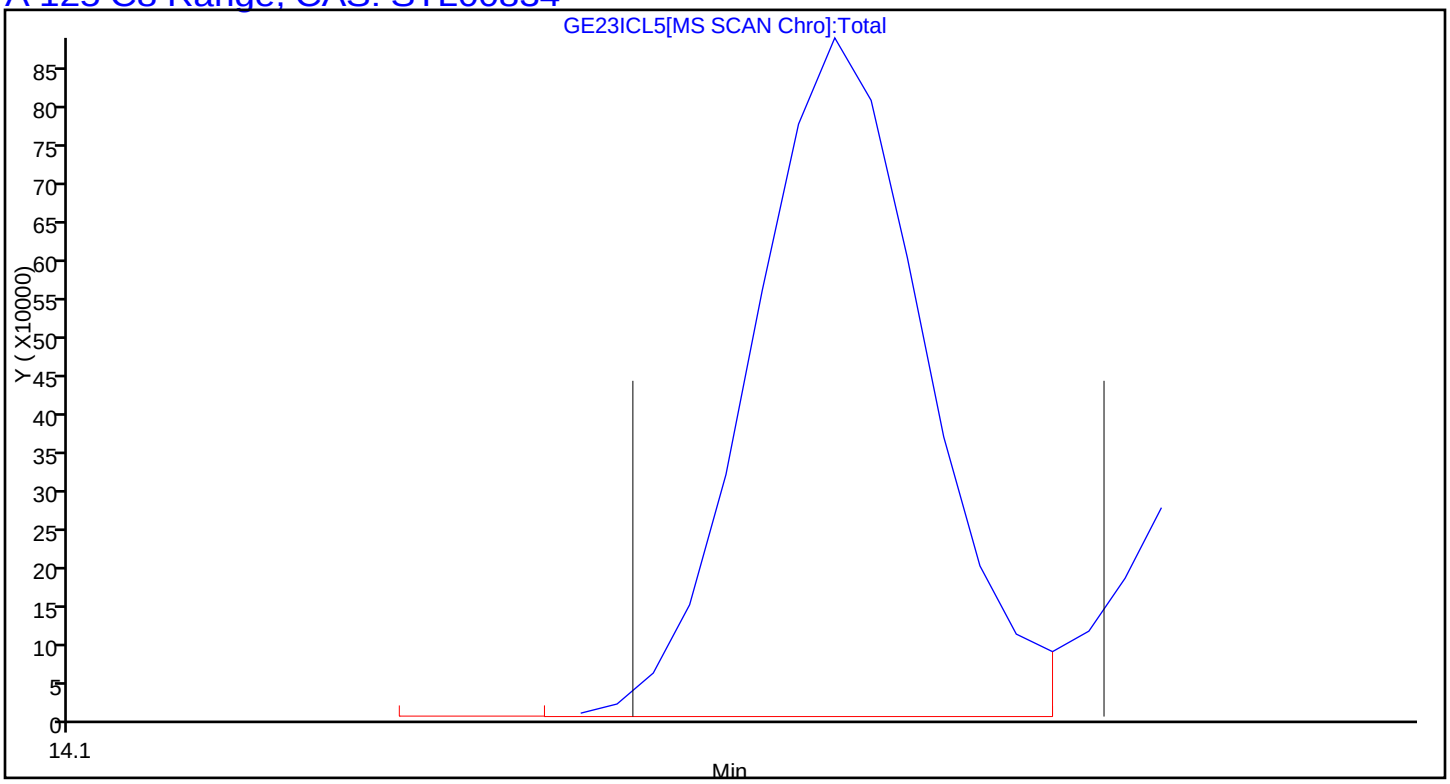


Report Date: 26-May-2016 14:56:02 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL5.D				
Injection Date:	23-May-2016 16:34:30	Instrument ID:	MG		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL6.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 7
Inject. Date: 23-May-2016 17:18:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041179
Misc. Info.: 140-0002910-007
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:56:06 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 18:20:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.541	8.550	-0.009	96	350491	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.714	10.719	-0.005	96	1697995	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.481	15.482	-0.001	90	1572028	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.131	17.135	-0.004	90	1153961	4.00	4.04	
6 Chlorodifluoromethane	67	3.698	3.704	-0.006	98	58810	2.00	1.92	
7 Propene	41	3.709	3.714	-0.005	98	244998	2.00	1.98	
8 Dichlorodifluoromethane	85	3.758	3.763	-0.005	100	587900	2.00	1.96	
9 Chloromethane	52	3.925	3.928	-0.003	98	72923	2.00	2.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.936	3.940	-0.004	91	365602	2.00	1.95	
11 Acetaldehyde	44	4.065	4.073	-0.008	85	573197	9.99	11.2	
12 Vinyl chloride	62	4.081	4.088	-0.007	99	223498	2.00	1.96	
13 Butadiene	54	4.162	4.169	-0.007	65	191868	2.00	1.94	
14 Butane	43	4.162	4.171	-0.009	86	429432	2.00	2.00	
15 Bromomethane	94	4.459	4.464	-0.005	99	189721	2.00	1.89	
16 Chloroethane	64	4.588	4.595	-0.007	84	107665	2.00	1.78	
17 Ethanol	31	4.691	4.716	-0.025	97	514022	9.99	9.07	
18 Vinyl bromide	106	4.868	4.877	-0.009	98	170443	2.00	1.84	
19 2-Methylbutane	43	4.917	4.927	-0.010	93	286852	2.00	1.88	
20 Trichlorofluoromethane	101	5.122	5.131	-0.009	99	530333	2.00	1.86	
21 Acrolein	56	5.122	5.134	-0.012	33	50835	2.00	1.53	
22 Acetonitrile	40	5.181	5.199	-0.018	98	94122	2.00	1.84	
23 Acetone	58	5.224	5.243	-0.019	99	298270	5.99	6.04	
24 Pentane	72	5.327	5.339	-0.012	96	31720	2.00	1.84	
25 Isopropyl alcohol	45	5.327	5.360	-0.033	93	831261	5.99	5.83	
26 Ethyl ether	31	5.478	5.493	-0.015	87	246848	2.00	1.80	
27 1,1-Dichloroethene	96	5.785	5.791	-0.006	95	146847	2.00	1.71	
28 Acrylonitrile	53	5.877	5.888	-0.011	94	107817	2.00	1.77	
29 2-Methyl-2-propanol	59	5.882	5.928	-0.046	96	289108	2.00	1.90	
30 1,1,2-Trichloro-1,2,2-trif	101	5.958	5.967	-0.009	95	304058	2.00	1.77	
31 Methylene Chloride	84	6.109	6.115	-0.006	95	183222	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.125	6.131	-0.006	94	283456	2.00	1.87	
33 Carbon disulfide	76	6.260	6.264	-0.004	100	643704	2.00	1.97	
34 trans-1,2-Dichloroethene	96	6.874	6.885	-0.011	96	216639	2.00	1.96	
35 2-Methylpentane	43	6.901	6.912	-0.011	97	611465	2.00	1.96	
36 Methyl tert-butyl ether	73	6.993	7.014	-0.021	96	593659	2.00	2.03	
37 1,1-Dichloroethane	63	7.273	7.284	-0.011	99	447381	2.00	1.94	
38 Vinyl acetate	43	7.381	7.395	-0.014	100	749199	2.00	2.07	
39 2-Butanone (MEK)	72	7.802	7.818	-0.016	97	111249	2.00	2.01	
40 Hexane	56	7.845	7.853	-0.008	92	209250	2.00	2.02	
41 Isopropyl ether	45	7.991	8.011	-0.020	96	956491	2.00	2.11	
42 cis-1,2-Dichloroethene	96	8.228	8.236	-0.008	97	229174	2.00	2.01	
43 Ethyl acetate	43	8.406	8.424	-0.018	97	620209	2.00	2.03	
44 Chloroform	83	8.562	8.571	-0.009	96	481628	2.00	1.96	
45 Tert-butyl ethyl ether	59	8.649	8.666	-0.017	98	738036	2.00	2.09	
46 Tetrahydrofuran	42	8.934	8.955	-0.021	92	321159	2.00	2.03	
47 1,1,1-Trichloroethane	97	9.560	9.566	-0.006	96	507828	2.00	1.97	
48 1,2-Dichloroethane	62	9.657	9.666	-0.009	97	350360	2.00	1.89	
49 Benzene	78	10.158	10.163	-0.005	95	633318	2.00	1.99	
50 Cyclohexane	69	10.158	10.163	-0.005	80	109588	2.00	2.02	
52 Carbon tetrachloride	117	10.185	10.189	-0.004	95	498890	2.00	2.00	
51 n-Butanol	31	10.142	10.196	-0.054	95	113779	2.00	2.14	
53 2,3-Dimethylpentane	71	10.293	10.299	-0.006	92	157118	2.00	1.91	
54 Thiophene	84	10.428	10.436	-0.008	96	371302	2.00	1.94	
55 Tert-amyl methyl ether	73	10.638	10.663	-0.025	93	606271	2.00	2.04	
56 Isooctane	57	10.940	10.947	-0.007	96	1252549	2.00	1.98	
57 n-Heptane	71	11.323	11.330	-0.007	95	243662	2.00	1.98	
58 1,2-Dichloropropane	63	11.382	11.386	-0.004	88	263748	2.00	1.97	
59 Trichloroethene	130	11.426	11.432	-0.006	95	306174	2.00	1.89	
60 Dibromomethane	93	11.501	11.503	-0.002	97	255683	2.00	1.93	
61 Dichlorobromomethane	83	11.652	11.657	-0.005	98	495432	2.00	2.06	
62 1,4-Dioxane	88	11.663	11.683	-0.020	97	93051	2.00	2.06	
63 Methyl methacrylate	41	11.760	11.772	-0.012	93	383714	2.00	2.10	
64 Methylcyclohexane	83	12.202	12.210	-0.008	89	502085	2.00	1.93	
65 4-Methyl-2-pentanone (MIBK	43	12.607	12.624	-0.017	99	623139	2.00	1.98	
66 cis-1,3-Dichloropropene	75	12.666	12.671	-0.005	97	388193	2.00	2.01	
67 trans-1,3-Dichloropropene	75	13.367	13.373	-0.006	94	359472	2.00	2.01	
68 Toluene	91	13.496	13.500	-0.004	93	742025	2.00	2.00	
69 1,1,2-Trichloroethane	83	13.566	13.569	-0.003	99	221314	2.00	2.01	
70 2-Methylthiophene	97	13.647	13.650	-0.003	98	610794	2.00	2.02	
71 3-Methylthiophene	97	13.847	13.853	-0.006	99	596168	2.00	2.00	
72 2-Hexanone	58	13.960	13.977	-0.017	90	263138	2.00	2.10	
73 n-Octane	85	14.213	14.216	-0.003	98	268241	2.00	2.02	
74 Chlorodibromomethane	129	14.267	14.275	-0.008	98	455663	2.00	2.17	
75 Ethylene Dibromide	107	14.559	14.560	-0.001	98	407653	2.00	2.07	
76 Tetrachloroethene	129	14.645	14.650	-0.005	95	271625	2.00	1.89	
77 Chlorobenzene	112	15.529	15.531	-0.002	91	582391	2.00	1.99	
78 2,3-Dimethylheptane	43	15.567	15.572	-0.005	94	933407	2.00	1.94	
79 Ethylbenzene	91	15.826	15.828	-0.002	99	989298	2.00	2.02	
80 2-Ethylthiophene	97	15.923	15.928	-0.005	99	749579	2.00	2.04	
81 m-Xylene & p-Xylene	91	15.988	15.991	-0.003	99	1503498	3.99	4.09	
83 Bromoform	173	16.419	16.426	-0.007	96	440603	2.00	2.35	
82 n-Nonane	57	16.430	16.433	-0.003	96	566380	2.00	2.08	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.451	16.458	-0.007	98	545097	2.00	2.24	
85 o-Xylene	91	16.516	16.517	-0.001	98	808596	2.00	2.02	
86 1,1,2,2-Tetrachloroethane	83	16.834	16.840	-0.006	99	562843	2.00	2.05	
87 1,2,3-Trichloropropane	110	16.991	16.997	-0.006	95	173282	2.00	2.01	
88 Isopropylbenzene	105	17.109	17.112	-0.003	97	1052061	2.00	2.00	
89 N-Propylbenzene	120	17.659	17.662	-0.003	99	304922	2.00	2.04	
90 2-Chlorotoluene	126	17.697	17.702	-0.005	98	275317	2.00	2.01	
91 4-Ethyltoluene	105	17.816	17.817	-0.001	98	1085101	2.00	2.05	
92 1,3,5-Trimethylbenzene	120	17.891	17.895	-0.004	92	510058	2.00	2.03	
93 Alpha Methyl Styrene	118	18.128	18.129	-0.001	87	424170	2.00	2.18	
94 n-Decane	57	18.204	18.204	0.000	87	731186	2.00	2.04	
95 tert-Butylbenzene	119	18.322	18.327	-0.005	93	966224	2.00	1.99	
96 1,2,4-Trimethylbenzene	105	18.339	18.340	-0.001	96	903027	2.00	2.02	
97 sec-Butylbenzene	105	18.597	18.602	-0.005	98	1299063	2.00	2.01	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	98	585006	2.00	1.93	
99 Benzyl chloride	91	18.684	18.685	-0.001	97	831632	2.00	2.14	
100 1,4-Dichlorobenzene	146	18.695	18.698	-0.004	92	587055	2.00	1.98	
101 4-Isopropyltoluene	119	18.765	18.768	-0.003	96	1122985	2.00	2.01	
102 1,2,3-Trimethylbenzene	105	18.813	18.817	-0.004	99	721034	2.00	2.01	
103 Butylcyclohexane	83	18.878	18.879	-0.001	88	742195	2.00	1.98	
104 1,2-Dichlorobenzene	146	19.056	19.062	-0.006	92	570407	2.00	1.93	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	93	819538	2.00	2.01	
106 Indene	116	19.191	19.193	-0.002	93	609681	2.00	2.08	
107 n-Butylbenzene	91	19.207	19.209	-0.002	98	1073688	2.00	2.05	
108 Undecane	57	19.536	19.537	-0.001	92	824556	2.00	2.08	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.579	19.584	-0.005	98	858299	2.00	2.04	
110 1,2-Dibromo-3-Chloropropan	157	19.665	19.668	-0.003	91	248870	2.00	2.19	
111 1,2,4,5-Tetramethylbenzene	119	19.973	19.972	0.000	97	1029847	2.00	2.03	
112 1,2,3,5-Tetramethylbenzene	119	20.026	20.026	0.000	95	633810	2.00	2.02	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	861011	2.00	2.05	
114 Dodecane	57	20.598	20.599	-0.001	91	730849	2.00	2.10	
115 1,2,4-Trichlorobenzene	180	20.765	20.768	-0.003	95	401668	2.00	1.96	
116 Naphthalene	128	20.900	20.903	-0.003	99	981405	2.00	2.24	
117 Benzo(b)thiophene	134	21.002	21.004	-0.002	99	519181	2.00	2.06	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	96	518766	2.00	1.91	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	95	387869	2.00	1.96	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	334073	6.24	6.54	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	100	354478	6.24	6.47	
A 124 Toluene Range	1	13.491	(13.456-13.526)		0	1911712	2.00	2.00	
A 125 C8 Range	1	14.207	(14.183-14.253)		0	2908638	2.00	1.98	
S 126 Xylenes, Total	100				0		5.99	6.11	
S 127 1,2-Dichloroethene, Total	1				0		3.99	3.97	

Reagents:

40L6DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

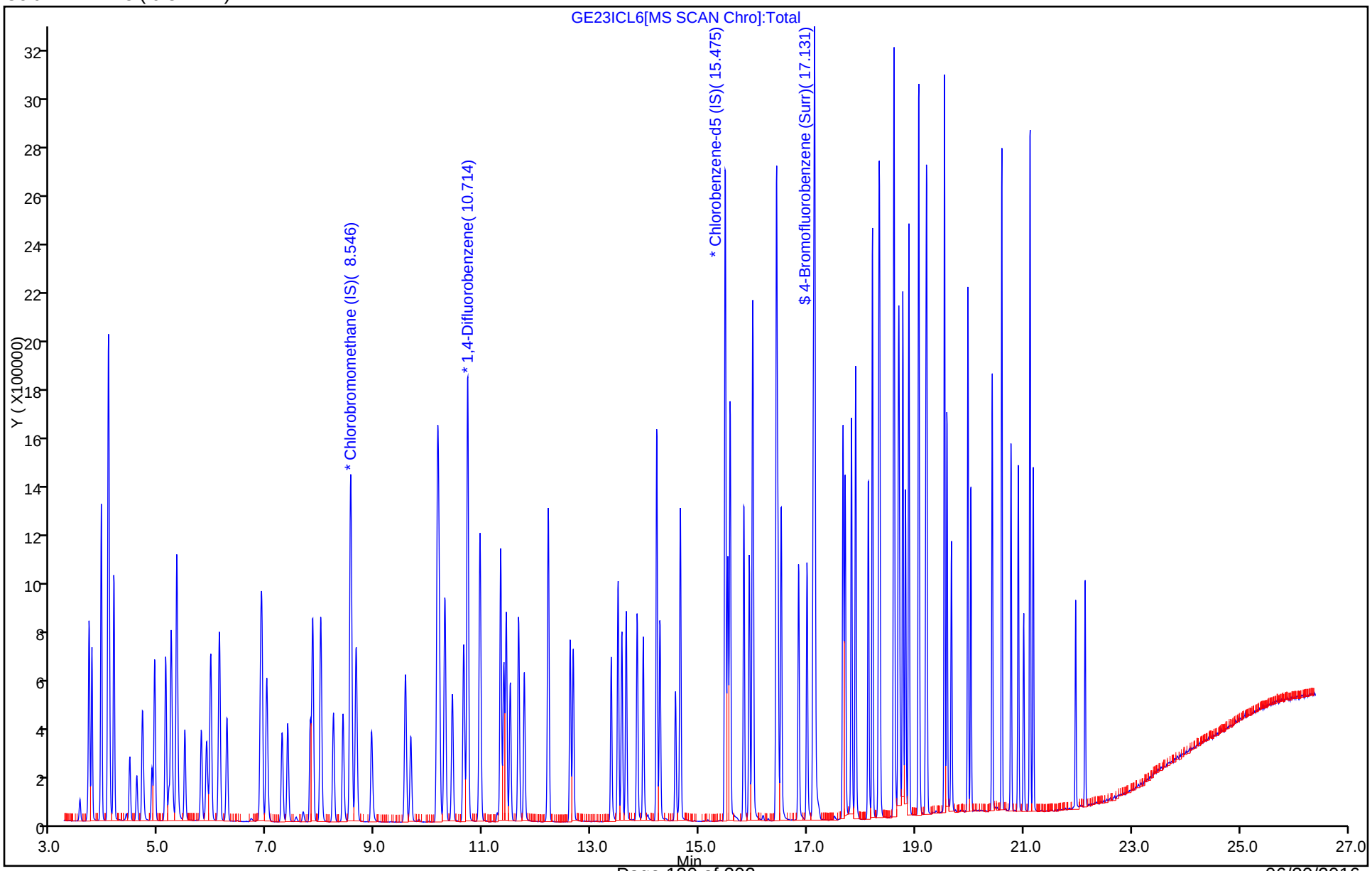
Report Date: 26-May-2016 14:56:07 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL6.D

Injection Date:	23-May-2016 17:18:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

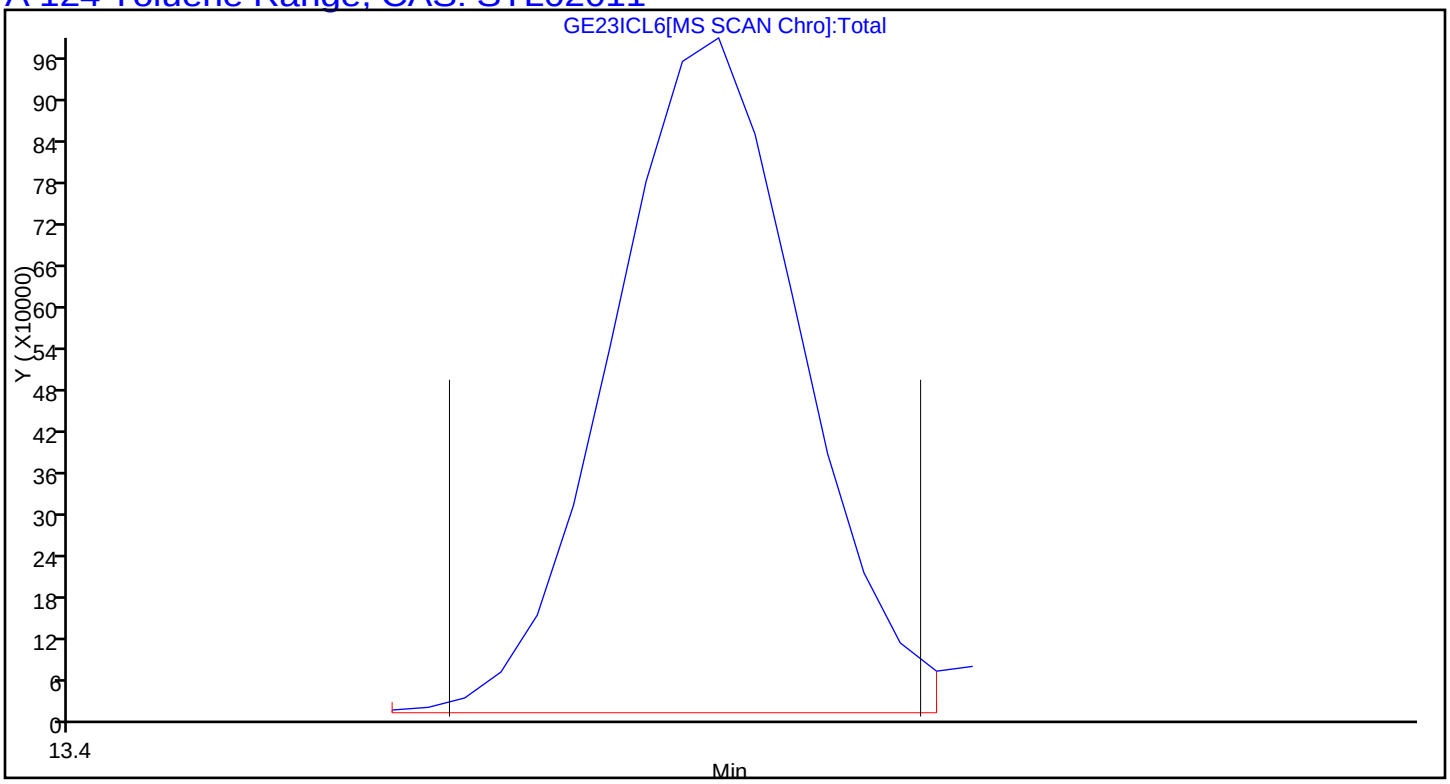


Report Date: 26-May-2016 14:56:07 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL6.D				
Injection Date:	23-May-2016 17:18:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

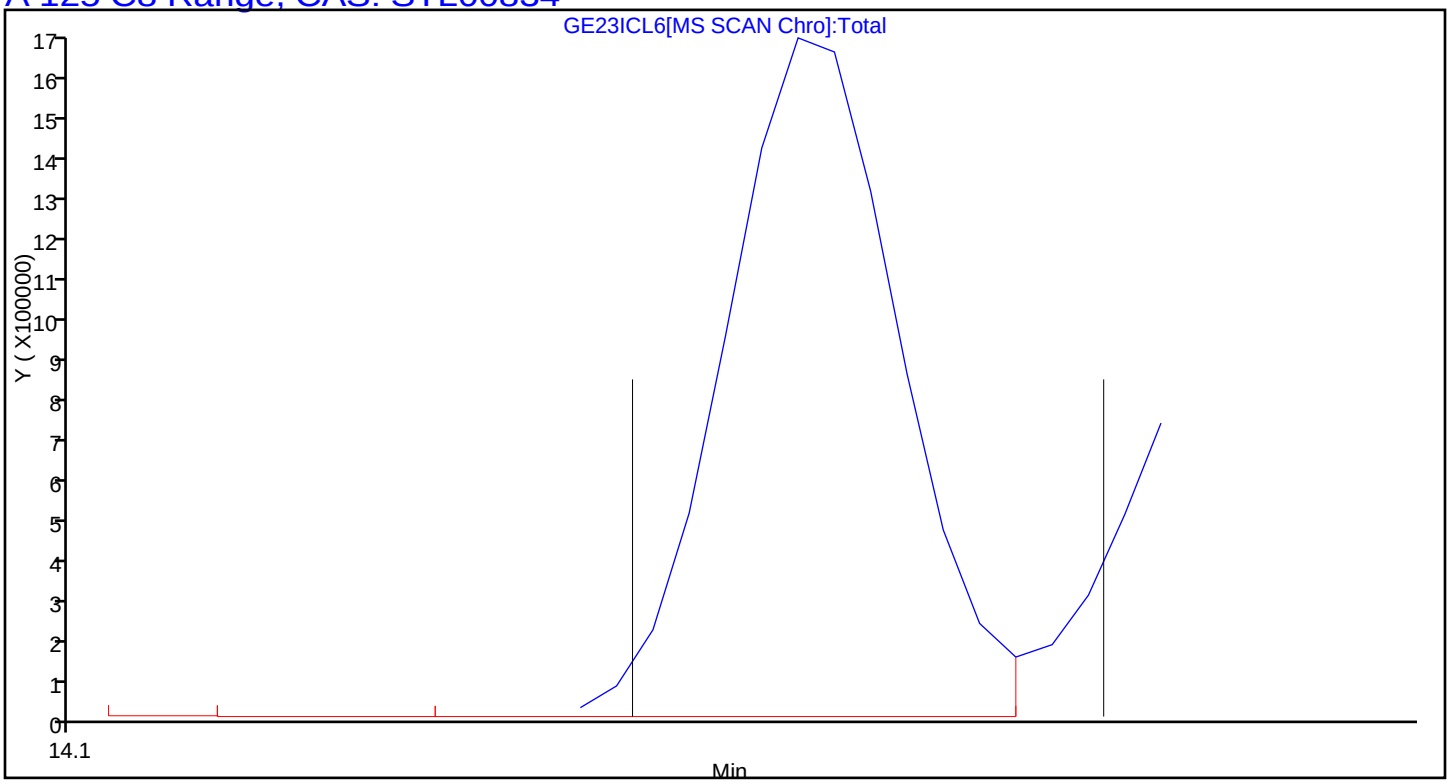


Report Date: 26-May-2016 14:56:07 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL6.D				
Injection Date:	23-May-2016 17:18:30	Instrument ID:	MG		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL7.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 6
Inject. Date: 23-May-2016 18:01:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041178
Misc. Info.: 140-0002910-008
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:56:12 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 19:00:22

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.546	8.550	-0.004	95	339596	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.714	10.719	-0.005	96	1560507	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.481	15.482	-0.001	90	1493283	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.136	17.135	0.001	91	1078635	4.00	3.98	
6 Chlorodifluoromethane	67	3.698	3.704	-0.006	98	115477	4.00	3.89	
7 Propene	41	3.709	3.714	-0.005	98	465136	4.00	3.87	
8 Dichlorodifluoromethane	85	3.758	3.763	-0.005	100	1135464	4.00	3.90	
9 Chloromethane	52	3.919	3.928	-0.009	98	138749	4.00	3.93	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.940	-0.010	91	704028	4.00	3.88	
11 Acetaldehyde	44	4.065	4.073	-0.008	85	924095	20.0	18.6	
12 Vinyl chloride	62	4.081	4.088	-0.007	99	418991	4.00	3.79	
13 Butadiene	54	4.162	4.169	-0.007	66	377796	4.00	3.94	
14 Butane	43	4.162	4.171	-0.009	86	819556	4.00	3.93	
15 Bromomethane	94	4.459	4.464	-0.005	99	377271	4.00	3.87	
16 Chloroethane	64	4.588	4.595	-0.007	84	216318	4.00	3.70	
17 Ethanol	31	4.707	4.716	-0.009	97	998919	20.0	18.2	
18 Vinyl bromide	106	4.868	4.877	-0.009	98	343434	4.00	3.83	
19 2-Methylbutane	43	4.917	4.927	-0.010	93	574893	4.00	3.88	
20 Trichlorofluoromethane	101	5.122	5.131	-0.009	99	1052176	4.00	3.81	
21 Acrolein	56	5.122	5.134	-0.012	34	117212	4.00	3.63	
22 Acetonitrile	40	5.187	5.199	-0.012	98	184719	4.00	3.74	
23 Acetone	58	5.224	5.243	-0.019	99	537985	12.0	11.2	
24 Pentane	72	5.332	5.339	-0.007	97	63856	4.00	3.82	
25 Isopropyl alcohol	45	5.343	5.360	-0.017	94	1640262	12.0	11.9	
26 Ethyl ether	31	5.478	5.493	-0.015	87	514181	4.00	3.87	
27 1,1-Dichloroethene	96	5.785	5.791	-0.006	95	305871	4.00	3.69	
28 Acrylonitrile	53	5.877	5.888	-0.011	94	224854	4.00	3.82	
29 2-Methyl-2-propanol	59	5.898	5.928	-0.030	96	582378	4.00	3.94	
30 1,1,2-Trichloro-1,2,2-trif	101	5.958	5.967	-0.009	95	620973	4.00	3.73	
31 Methylene Chloride	84	6.109	6.115	-0.006	95	361913	4.00	3.74	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.125	6.131	-0.006	94	547242	4.00	3.72	
33 Carbon disulfide	76	6.260	6.264	-0.004	100	1265839	4.00	4.00	
34 trans-1,2-Dichloroethene	96	6.880	6.885	-0.005	96	420363	4.00	3.92	
35 2-Methylpentane	43	6.907	6.912	-0.005	97	1190926	4.00	3.94	
36 Methyl tert-butyl ether	73	6.993	7.014	-0.021	96	1158474	4.00	4.09	
37 1,1-Dichloroethane	63	7.279	7.284	-0.005	99	889252	4.00	3.99	
38 Vinyl acetate	43	7.387	7.395	-0.008	100	1504415	4.00	4.28	
39 2-Butanone (MEK)	72	7.802	7.818	-0.016	97	206010	4.00	3.83	
40 Hexane	56	7.845	7.853	-0.008	92	405247	4.00	4.03	
41 Isopropyl ether	45	7.996	8.011	-0.015	96	1852021	4.00	4.22	
42 cis-1,2-Dichloroethene	96	8.233	8.236	-0.003	97	446715	4.00	4.05	
43 Ethyl acetate	43	8.406	8.424	-0.018	97	1222288	4.00	4.13	
44 Chloroform	83	8.568	8.571	-0.003	95	940727	4.00	3.95	
45 Tert-butyl ethyl ether	59	8.648	8.666	-0.018	98	1440138	4.00	4.22	
46 Tetrahydrofuran	42	8.934	8.955	-0.021	92	630181	4.00	4.12	
47 1,1,1-Trichloroethane	97	9.565	9.566	-0.001	96	1002430	4.00	4.02	
48 1,2-Dichloroethane	62	9.662	9.666	-0.004	97	691693	4.00	4.06	
49 Benzene	78	10.158	10.163	-0.005	96	1180451	4.00	4.03	
50 Cyclohexane	69	10.158	10.163	-0.005	80	202917	4.00	4.08	
52 Carbon tetrachloride	117	10.185	10.189	-0.004	96	988338	4.00	4.32	
51 n-Butanol	31	10.148	10.196	-0.048	69	214303	4.00	4.39	
53 2,3-Dimethylpentane	71	10.293	10.299	-0.006	91	304115	4.00	4.02	
54 Thiophene	84	10.433	10.436	-0.003	97	722397	4.00	4.12	
55 Tert-amyl methyl ether	73	10.638	10.659	-0.021	93	1174999	4.00	4.30	M
56 Isooctane	57	10.940	10.947	-0.007	96	2394793	4.00	4.11	
57 n-Heptane	71	11.323	11.330	-0.007	95	468902	4.00	4.16	
58 1,2-Dichloropropane	63	11.382	11.386	-0.004	87	509968	4.00	4.14	
59 Trichloroethene	130	11.431	11.432	-0.001	95	580642	4.00	3.89	
60 Dibromomethane	93	11.501	11.503	-0.002	97	500885	4.00	4.12	
61 Dichlorobromomethane	83	11.657	11.657	0.000	98	974669	4.00	4.41	
62 1,4-Dioxane	88	11.668	11.683	-0.015	97	177359	4.00	4.27	
63 Methyl methacrylate	41	11.765	11.772	-0.007	93	766165	4.00	4.57	
64 Methylcyclohexane	83	12.207	12.210	-0.003	89	957324	4.00	4.01	
65 4-Methyl-2-pentanone (MIBK	43	12.612	12.624	-0.012	99	1228001	4.00	4.25	
66 cis-1,3-Dichloropropene	75	12.666	12.671	-0.005	97	764297	4.00	4.30	
67 trans-1,3-Dichloropropene	75	13.372	13.373	-0.001	94	714900	4.00	4.20	
68 Toluene	91	13.496	13.500	-0.004	93	1418298	4.00	4.02	
69 1,1,2-Trichloroethane	83	13.566	13.569	-0.003	99	428293	4.00	4.09	
70 2-Methylthiophene	97	13.647	13.650	-0.003	98	1186325	4.00	4.13	
71 3-Methylthiophene	97	13.852	13.853	-0.001	99	1149222	4.00	4.05	
72 2-Hexanone	58	13.965	13.977	-0.012	90	514077	4.00	4.32	
73 n-Octane	85	14.213	14.216	-0.003	98	504219	4.00	4.00	
74 Chlorodibromomethane	129	14.273	14.275	-0.002	98	922201	4.00	4.63	
75 Ethylene Dibromide	107	14.559	14.560	-0.001	98	801285	4.00	4.28	
76 Tetrachloroethene	129	14.650	14.650	0.000	94	520813	4.00	3.82	
77 Chlorobenzene	112	15.529	15.531	-0.002	91	1111638	4.00	4.00	
78 2,3-Dimethylheptane	43	15.572	15.572	0.000	93	1746511	4.00	3.83	
79 Ethylbenzene	91	15.826	15.828	-0.002	99	1889523	4.00	4.06	
80 2-Ethylthiophene	97	15.928	15.928	0.000	99	1428633	4.00	4.10	
81 m-Xylene & p-Xylene	91	15.993	15.991	0.002	99	2783803	8.00	7.97	
83 Bromoform	173	16.424	16.426	-0.002	96	932729	4.00	5.24	
82 n-Nonane	57	16.430	16.433	-0.003	94	989878	4.00	3.82	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.457	16.458	-0.001	98	1034682	4.00	4.47	
85 o-Xylene	91	16.516	16.517	-0.001	98	1527056	4.00	4.01	
86 1,1,2,2-Tetrachloroethane	83	16.840	16.840	0.000	99	1107231	4.00	4.24	
87 1,2,3-Trichloropropane	110	16.996	16.997	-0.001	95	335935	4.00	4.10	
88 Isopropylbenzene	105	17.109	17.112	-0.003	97	1976483	4.00	3.96	
89 N-Propylbenzene	120	17.659	17.662	-0.003	99	574412	4.00	4.04	
90 2-Chlorotoluene	126	17.702	17.702	0.000	97	525282	4.00	4.03	
91 4-Ethyltoluene	105	17.816	17.817	-0.001	98	2013870	4.00	4.00	
92 1,3,5-Trimethylbenzene	120	17.896	17.895	0.001	92	943293	4.00	3.95	
93 Alpha Methyl Styrene	118	18.128	18.129	-0.001	86	812310	4.00	4.39	
94 n-Decane	57	18.204	18.204	0.000	87	1311512	4.00	3.85	
95 tert-Butylbenzene	119	18.328	18.327	0.001	92	1767714	4.00	3.83	
96 1,2,4-Trimethylbenzene	105	18.339	18.340	-0.001	96	1660335	4.00	3.91	
97 sec-Butylbenzene	105	18.603	18.602	0.001	98	2340334	4.00	3.81	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	98	1117308	4.00	3.87	
99 Benzyl chloride	91	18.684	18.685	-0.001	97	1580204	4.00	4.28	
100 1,4-Dichlorobenzene	146	18.700	18.698	0.002	94	1135802	4.00	4.02	
101 4-Isopropyltoluene	119	18.770	18.768	0.002	96	2093444	4.00	3.95	
102 1,2,3-Trimethylbenzene	105	18.819	18.817	0.001	99	1348498	4.00	3.96	
103 Butylcyclohexane	83	18.878	18.879	-0.001	87	1337137	4.00	3.75	
104 1,2-Dichlorobenzene	146	19.061	19.062	-0.001	91	1082328	4.00	3.85	
105 2,3-Dihydroindene	117	19.061	19.063	-0.002	94	1482146	4.00	3.83	
106 Indene	116	19.191	19.193	-0.002	91	1098467	4.00	3.94	
107 n-Butylbenzene	91	19.207	19.209	-0.002	98	1940890	4.00	3.91	
108 Undecane	57	19.536	19.537	-0.001	91	1460549	4.00	3.88	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.584	19.584	0.000	98	1583874	4.00	3.96	
110 1,2-Dibromo-3-Chloropropan	157	19.665	19.668	-0.003	94	528233	4.00	4.90	
111 1,2,4,5-Tetramethylbenzene	119	19.972	19.972	0.000	97	1873479	4.00	3.90	
112 1,2,3,5-Tetramethylbenzene	119	20.026	20.026	0.000	95	1171438	4.00	3.93	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	97	1564586	4.00	3.93	
114 Dodecane	57	20.598	20.599	-0.001	90	1280901	4.00	3.88	
115 1,2,4-Trichlorobenzene	180	20.771	20.768	0.003	94	842747	4.00	4.32	
116 Naphthalene	128	20.900	20.903	-0.003	99	1835786	4.00	4.40	
117 Benzo(b)thiophene	134	21.002	21.004	-0.002	99	1018250	4.00	4.26	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	93	1108026	4.00	4.30	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	96	792268	4.00	4.21	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	670718	12.5	13.8	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	100	684531	12.5	13.1	
A 124 Toluene Range	1	13.491	(13.456-13.526)		0	3615865	4.00	4.13	
A 125 C8 Range	1	14.210	(14.183-14.253)		0	5473779	4.00	4.05	
S 126 Xylenes, Total	100				0		12.0	12.0	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.97	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L7DNP_00004	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

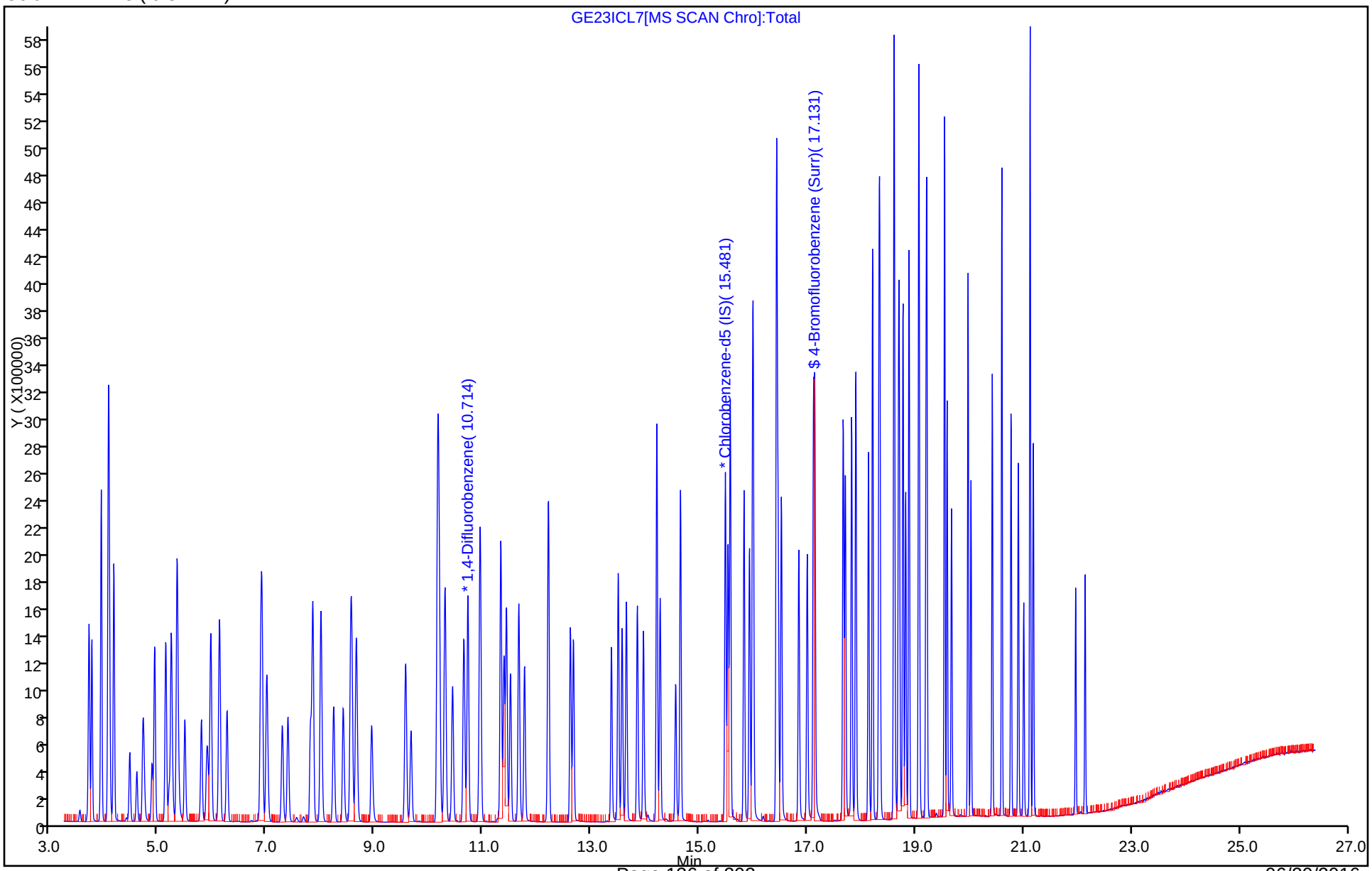
Report Date: 26-May-2016 14:56:14 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL7.D

Injection Date:	23-May-2016 18:01:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

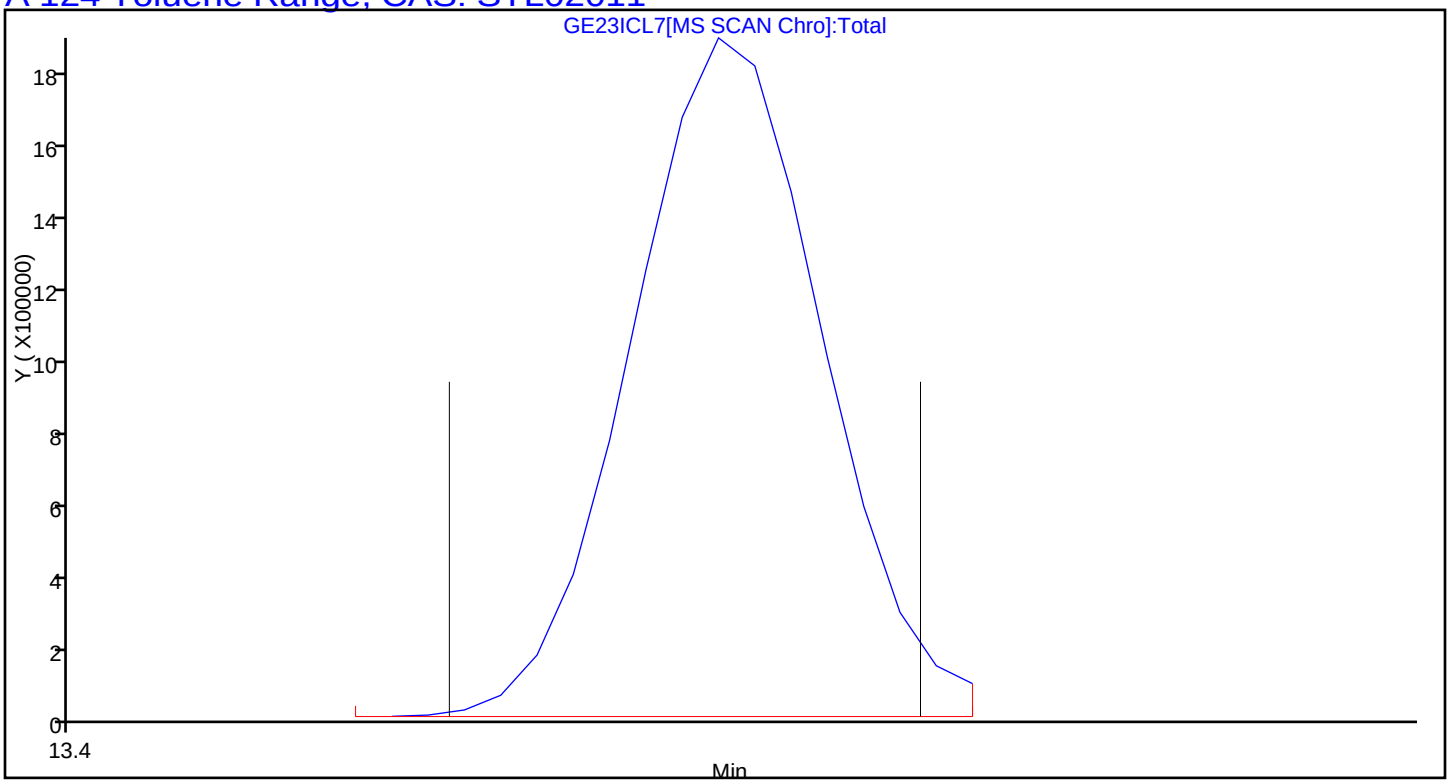


Report Date: 26-May-2016 14:56:14 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL7.D				
Injection Date:	23-May-2016 18:01:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

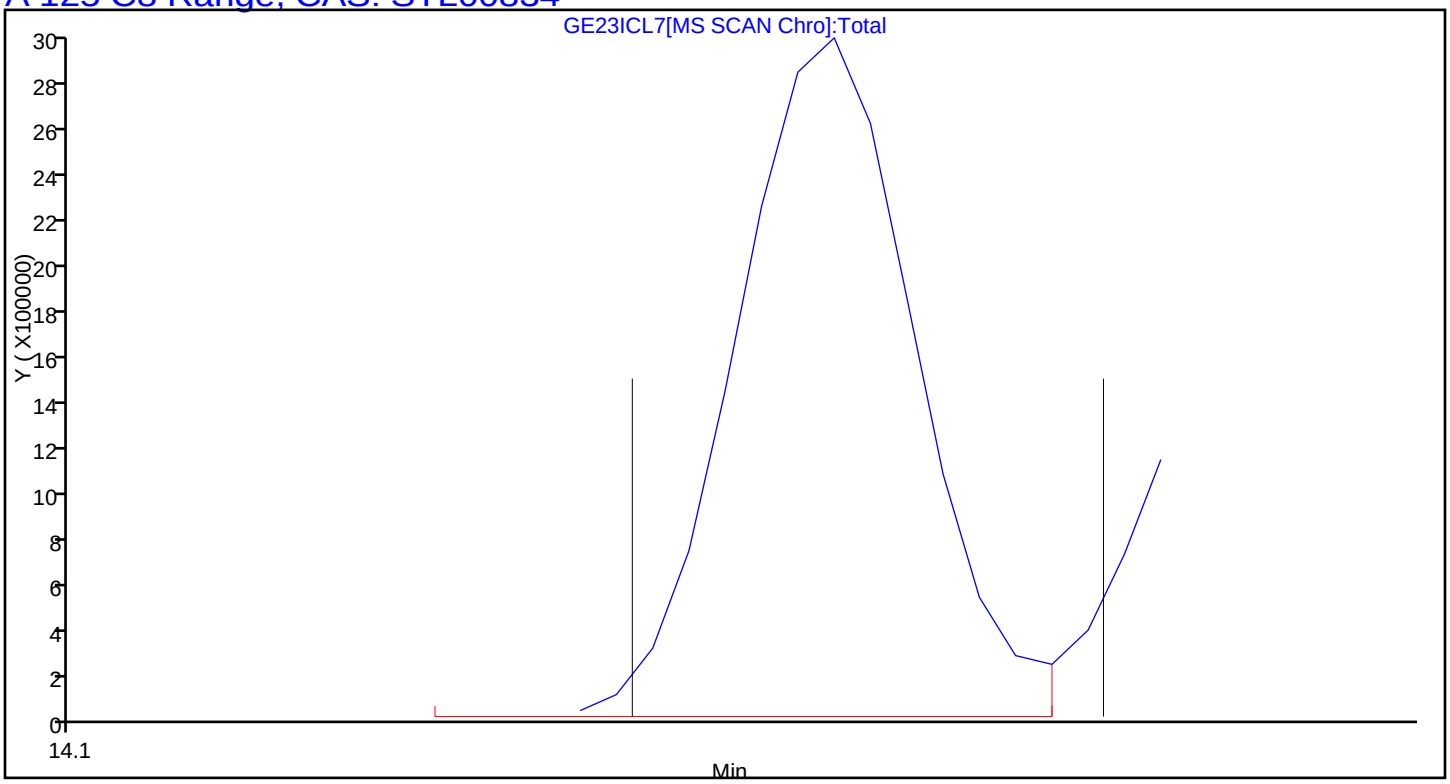


Report Date: 26-May-2016 14:56:14 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL7.D				
Injection Date:	23-May-2016 18:01:30	Instrument ID:	MG		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

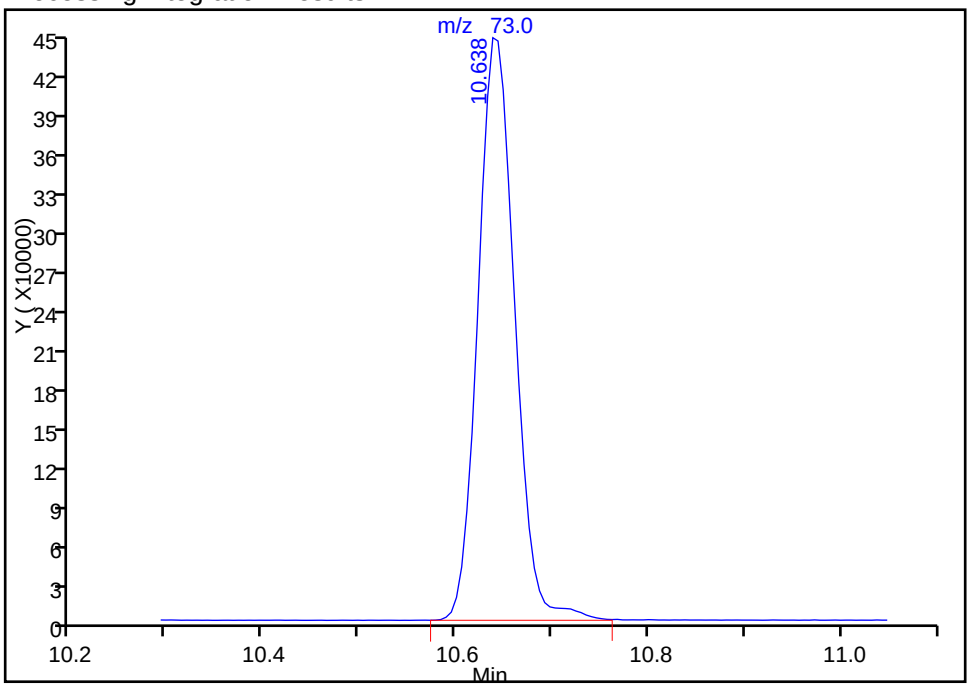
Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL7.D
Injection Date: 23-May-2016 18:01:30 Instrument ID: MG
Lims ID: IC L7
Client ID:
Operator ID: 403648 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

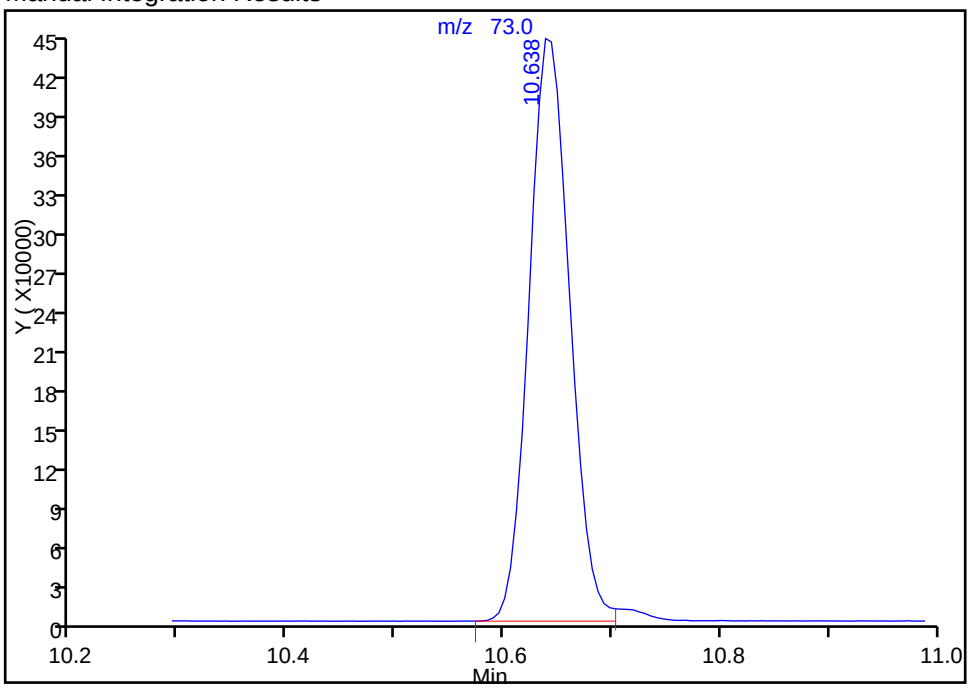
Processing Integration Results

RT: 10.64
Area: 1191542
Amount: 4.344299
Amount Units: ppb v/v



Manual Integration Results

RT: 10.64
Area: 1174999
Amount: 4.296180
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 26-May-2016 14:43:08
Audit Action: Split an Integrated Peak Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL8.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-May-2016 18:43:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041177
Misc. Info.: 140-0002910-009
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:56:19 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 23-May-2016 19:25:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.557	8.550	0.007	95	328287	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.725	10.719	0.006	96	1462477	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.486	15.482	0.004	90	1375086	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.136	17.135	0.001	92	985261	4.00	3.95	
6 Chlorodifluoromethane	67	3.698	3.704	-0.006	98	223282	8.00	7.78	
7 Propene	41	3.709	3.714	-0.005	98	880541	8.00	7.59	
8 Dichlorodifluoromethane	85	3.758	3.763	-0.005	100	2186292	8.00	7.77	
9 Chloromethane	52	3.925	3.928	-0.003	98	257788	8.00	7.55	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.936	3.940	-0.004	90	1322625	8.00	7.54	
11 Acetaldehyde	44	4.070	4.073	-0.003	89	1476299	40.0	30.7	
12 Vinyl chloride	62	4.087	4.088	-0.001	99	755367	8.00	7.06	
13 Butadiene	54	4.167	4.169	-0.002	66	701117	8.00	7.56	
14 Butane	43	4.167	4.171	-0.004	85	1518589	8.00	7.54	
15 Bromomethane	94	4.459	4.464	-0.005	99	743247	8.00	7.89	
16 Chloroethane	64	4.593	4.595	-0.002	85	430955	8.00	7.62	
17 Ethanol	31	4.723	4.716	0.007	97	1818052	40.0	34.2	
18 Vinyl bromide	106	4.874	4.877	-0.003	98	669749	8.00	7.74	
19 2-Methylbutane	43	4.922	4.927	-0.005	93	1099045	8.00	7.68	
20 Trichlorofluoromethane	101	5.127	5.131	-0.004	99	2031424	8.00	7.60	
21 Acrolein	56	5.133	5.134	-0.001	33	204749	8.00	6.56	
22 Acetonitrile	40	5.197	5.199	-0.002	98	333579	8.00	6.98	
23 Acetone	58	5.235	5.243	-0.008	99	865195	24.0	18.7	
24 Pentane	72	5.338	5.339	-0.001	97	121239	8.00	7.51	
25 Isopropyl alcohol	45	5.365	5.360	0.005	98	2930296	24.0	21.9	
26 Ethyl ether	31	5.483	5.493	-0.010	87	925648	8.00	7.20	
27 1,1-Dichloroethene	96	5.791	5.791	0.000	95	586291	8.00	7.31	
28 Acrylonitrile	53	5.888	5.888	0.000	94	414138	8.00	7.27	
29 2-Methyl-2-propanol	59	5.920	5.928	-0.008	96	1058611	8.00	7.41	
30 1,1,2-Trichloro-1,2,2-trif	101	5.963	5.967	-0.004	94	1176991	8.00	7.32	
31 Methylene Chloride	84	6.114	6.115	-0.001	94	675146	8.00	7.21	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.130	6.131	-0.001	95	1054480	8.00	7.41	
33 Carbon disulfide	76	6.265	6.264	0.001	99	2438445	8.00	7.97	
34 trans-1,2-Dichloroethene	96	6.885	6.885	0.000	95	783703	8.00	7.56	
35 2-Methylpentane	43	6.912	6.912	0.000	96	2211696	8.00	7.57	
36 Methyl tert-butyl ether	73	7.004	7.014	-0.010	96	2076231	8.00	7.59	
37 1,1-Dichloroethane	63	7.290	7.284	0.006	99	1685088	8.00	7.82	
38 Vinyl acetate	43	7.392	7.395	-0.003	100	2730633	8.00	8.04	
39 2-Butanone (MEK)	72	7.813	7.818	-0.005	97	351450	8.00	6.76	
40 Hexane	56	7.850	7.853	-0.003	91	746973	8.00	7.69	
41 Isopropyl ether	45	8.007	8.011	-0.004	96	3275437	8.00	7.72	
42 cis-1,2-Dichloroethene	96	8.239	8.236	0.003	98	845413	8.00	7.92	
43 Ethyl acetate	43	8.417	8.424	-0.007	97	2196882	8.00	7.69	
44 Chloroform	83	8.578	8.571	0.007	95	1785532	8.00	7.76	
45 Tert-butyl ethyl ether	59	8.659	8.666	-0.007	98	2564373	8.00	7.77	
46 Tetrahydrofuran	42	8.940	8.955	-0.015	92	1131002	8.00	7.65	
47 1,1,1-Trichloroethane	97	9.571	9.566	0.005	96	1902685	8.00	7.89	
48 1,2-Dichloroethane	62	9.673	9.666	0.007	97	1316454	8.00	8.24	
49 Benzene	78	10.164	10.163	0.001	97	2058003	8.00	7.50	
50 Cyclohexane	69	10.164	10.163	0.001	79	361874	8.00	7.76	
52 Carbon tetrachloride	117	10.191	10.189	0.002	97	1656677	8.00	7.72	
51 n-Butanol	31	10.153	10.196	-0.043	70	386588	8.00	8.45	
53 2,3-Dimethylpentane	71	10.299	10.299	0.000	91	568515	8.00	8.01	
54 Thiophene	84	10.439	10.436	0.003	97	1366556	8.00	8.31	
55 Tert-amyl methyl ether	73	10.649	10.658	-0.009	93	2088317	8.00	8.15	M
56 Isooctane	57	10.946	10.947	-0.001	96	4417623	8.00	8.09	
57 n-Heptane	71	11.329	11.330	-0.002	95	866093	8.00	8.19	
58 1,2-Dichloropropane	63	11.388	11.386	0.002	86	926950	8.00	8.04	
59 Trichloroethene	130	11.436	11.432	0.004	95	1179475	8.00	8.43	
60 Dibromomethane	93	11.506	11.503	0.003	95	953880	8.00	8.37	
61 Dichlorobromomethane	83	11.663	11.657	0.006	98	1852089	8.00	8.94	
62 1,4-Dioxane	88	11.674	11.683	-0.009	97	313140	8.00	8.04	
63 Methyl methacrylate	41	11.771	11.772	-0.001	92	1386017	8.00	8.82	
64 Methylcyclohexane	83	12.213	12.210	0.003	88	1749693	8.00	7.82	
65 4-Methyl-2-pentanone (MIBK	43	12.617	12.624	-0.007	99	2191476	8.00	8.09	
66 cis-1,3-Dichloropropene	75	12.677	12.671	0.006	97	1418459	8.00	8.52	
67 trans-1,3-Dichloropropene	75	13.378	13.373	0.005	94	1342570	8.00	8.57	
68 Toluene	91	13.502	13.500	0.002	93	2560352	8.00	7.88	
69 1,1,2-Trichloroethane	83	13.572	13.569	0.003	99	782354	8.00	8.12	
70 2-Methylthiophene	97	13.653	13.650	0.003	98	2164069	8.00	8.18	
71 3-Methylthiophene	97	13.858	13.853	0.005	99	2141086	8.00	8.20	
72 2-Hexanone	58	13.971	13.977	-0.006	90	923298	8.00	8.42	
73 n-Octane	85	14.219	14.216	0.003	97	906946	8.00	7.81	
74 Chlorodibromomethane	129	14.278	14.275	0.003	98	1740962	8.00	9.50	
75 Ethylene Dibromide	107	14.564	14.560	0.004	98	1511638	8.00	8.77	
76 Tetrachloroethene	129	14.650	14.650	0.000	93	981786	8.00	7.83	
77 Chlorobenzene	112	15.535	15.531	0.004	91	2041799	8.00	7.97	
78 2,3-Dimethylheptane	43	15.572	15.572	0.000	93	3129121	8.00	7.45	
79 Ethylbenzene	91	15.831	15.828	0.003	99	3325391	8.00	7.76	
80 2-Ethylthiophene	97	15.928	15.928	0.000	99	2577133	8.00	8.03	
81 m-Xylene & p-Xylene	91	15.993	15.991	0.002	99	4795898	16.0	14.9	
83 Bromoform	173	16.430	16.426	0.004	98	1950923	8.00	11.9	
82 n-Nonane	57	16.435	16.433	0.002	94	1664115	8.00	6.97	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.462	16.458	0.004	98	1854324	8.00	8.70	
85 o-Xylene	91	16.521	16.517	0.004	98	2690121	8.00	7.67	
86 1,1,2,2-Tetrachloroethane	83	16.845	16.840	0.005	99	1863153	8.00	7.76	
87 1,2,3-Trichloropropane	110	17.001	16.997	0.004	94	596540	8.00	7.91	
88 Isopropylbenzene	105	17.115	17.112	0.003	97	3464122	8.00	7.53	
89 N-Propylbenzene	120	17.665	17.662	0.003	99	999265	8.00	7.64	
90 2-Chlorotoluene	126	17.702	17.702	0.000	98	924206	8.00	7.70	
91 4-Ethyltoluene	105	17.821	17.817	0.004	98	3538018	8.00	7.63	
92 1,3,5-Trimethylbenzene	120	17.896	17.895	0.001	92	1637073	8.00	7.44	
93 Alpha Methyl Styrene	118	18.128	18.129	-0.001	87	1502876	8.00	8.81	
94 n-Decane	57	18.209	18.204	0.005	87	2245607	8.00	7.16	
95 tert-Butylbenzene	119	18.328	18.327	0.001	92	3046749	8.00	7.17	
96 1,2,4-Trimethylbenzene	105	18.344	18.340	0.004	96	2822914	8.00	7.21	
97 sec-Butylbenzene	105	18.603	18.602	0.001	99	3930155	8.00	6.94	
98 1,3-Dichlorobenzene	146	18.608	18.609	-0.001	97	2075568	8.00	7.82	
99 Benzyl chloride	91	18.689	18.685	0.004	97	2803898	8.00	8.25	
100 1,4-Dichlorobenzene	146	18.700	18.698	0.002	95	2080461	8.00	8.00	
101 4-Isopropyltoluene	119	18.770	18.768	0.002	97	3627700	8.00	7.42	
102 1,2,3-Trimethylbenzene	105	18.819	18.817	0.002	99	2342067	8.00	7.48	
103 Butylcyclohexane	83	18.883	18.879	0.004	86	2310744	8.00	7.04	
104 1,2-Dichlorobenzene	146	19.067	19.062	0.005	85	1989164	8.00	7.68	
105 2,3-Dihydroindene	117	19.067	19.063	0.004	92	2543378	8.00	7.15	
106 Indene	116	19.196	19.193	0.003	90	2036130	8.00	7.94	
107 n-Butylbenzene	91	19.212	19.209	0.003	98	3249235	8.00	7.11	
108 Undecane	57	19.541	19.537	0.004	90	2422695	8.00	6.99	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.584	19.584	0.000	98	2781683	8.00	7.55	
110 1,2-Dibromo-3-Chloropropan	157	19.671	19.668	0.002	95	971737	8.00	9.79	
111 1,2,4,5-Tetramethylbenzene	119	19.972	19.972	0.000	97	3279942	8.00	7.41	
112 1,2,3,5-Tetramethylbenzene	119	20.026	20.026	0.000	95	2094172	8.00	7.62	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.421	-0.001	98	2756996	8.00	7.51	
114 Dodecane	57	20.598	20.599	-0.001	89	2177460	8.00	7.17	
115 1,2,4-Trichlorobenzene	180	20.771	20.768	0.003	94	1761526	8.00	9.80	
116 Naphthalene	128	20.905	20.903	0.002	99	3404142	8.00	8.87	
117 Benzo(b)thiophene	134	21.002	21.004	-0.002	99	2003971	8.00	9.11	
118 Hexachlorobutadiene	225	21.121	21.121	0.000	90	2559984	8.00	10.8	
119 1,2,3-Trichlorobenzene	180	21.180	21.181	-0.001	95	1621390	8.00	9.35	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	1481044	25.0	33.2	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	100	1453050	25.0	30.3	
A 124 Toluene Range	1	13.497	(13.462-13.532)		0	6586960	8.00	8.02	
A 125 C8 Range	1	14.212	(14.189-14.259)		0	9839548	8.00	7.77	
S 126 Xylenes, Total	100				0		24.0	22.6	
S 127 1,2-Dichloroethene, Total	1				0		16.0	15.5	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L8DNP_00004	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

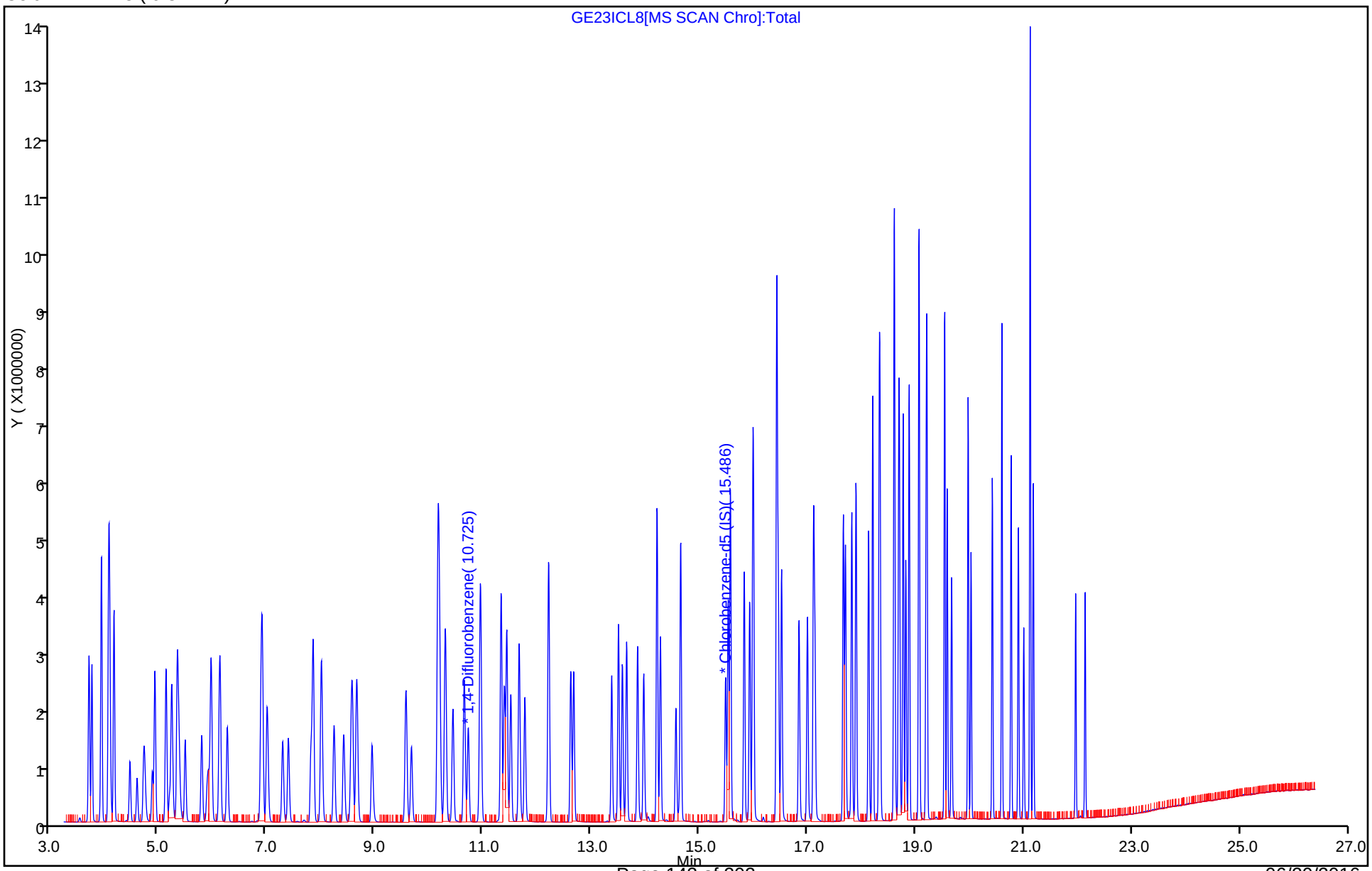
Report Date: 26-May-2016 14:56:21 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL8.D

Injection Date:	23-May-2016 18:43:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

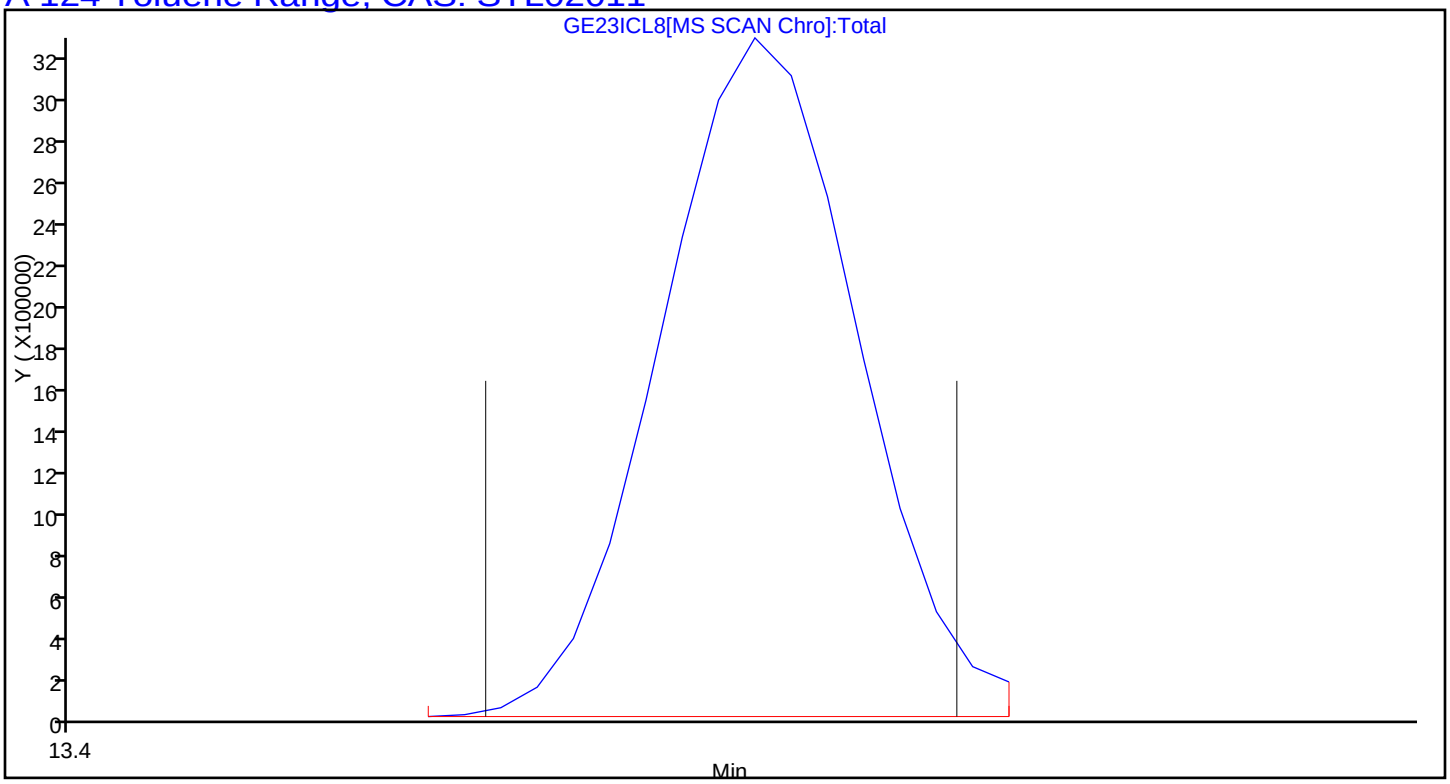


Report Date: 26-May-2016 14:56:21 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL8.D				
Injection Date:	23-May-2016 18:43:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

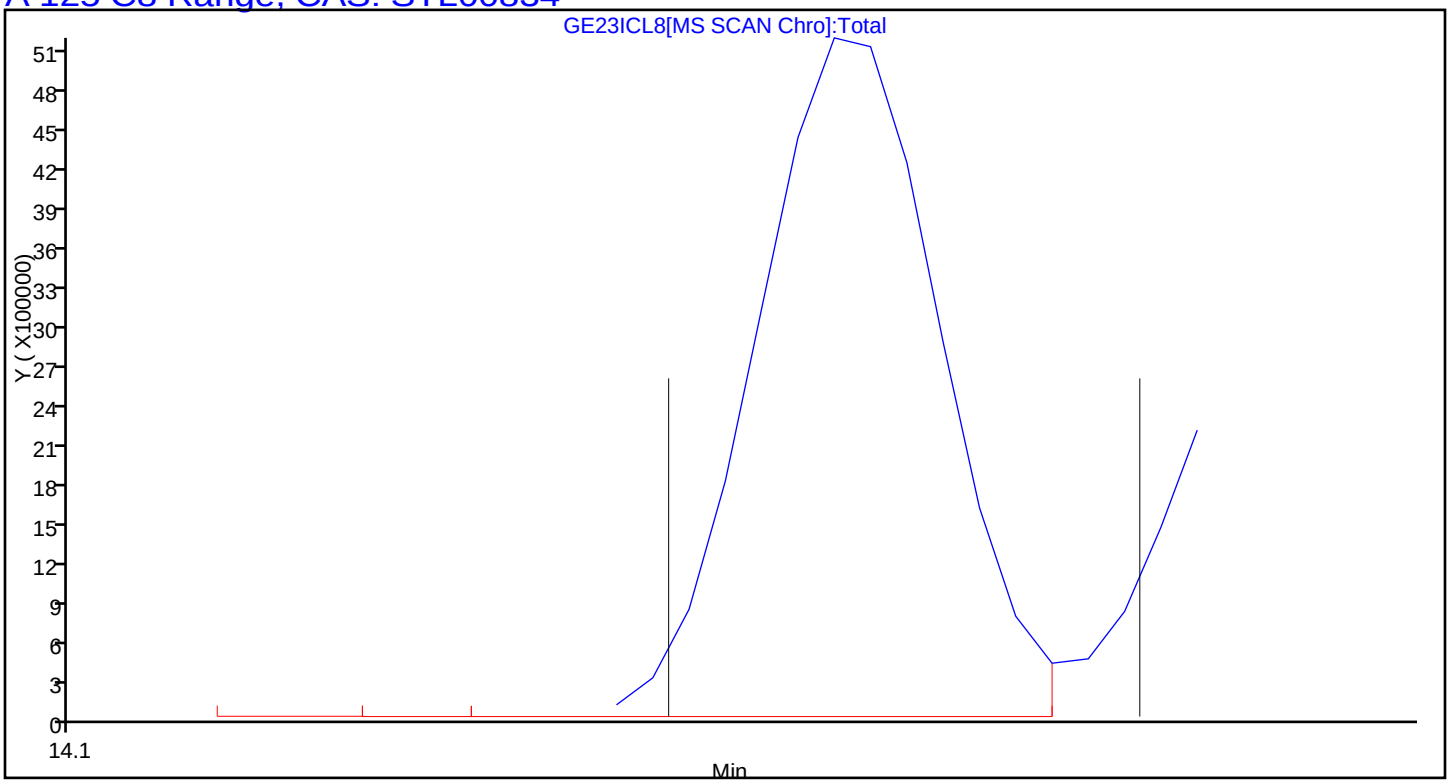


Report Date: 26-May-2016 14:56:21 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL8.D				
Injection Date:	23-May-2016 18:43:30	Instrument ID:	MG		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

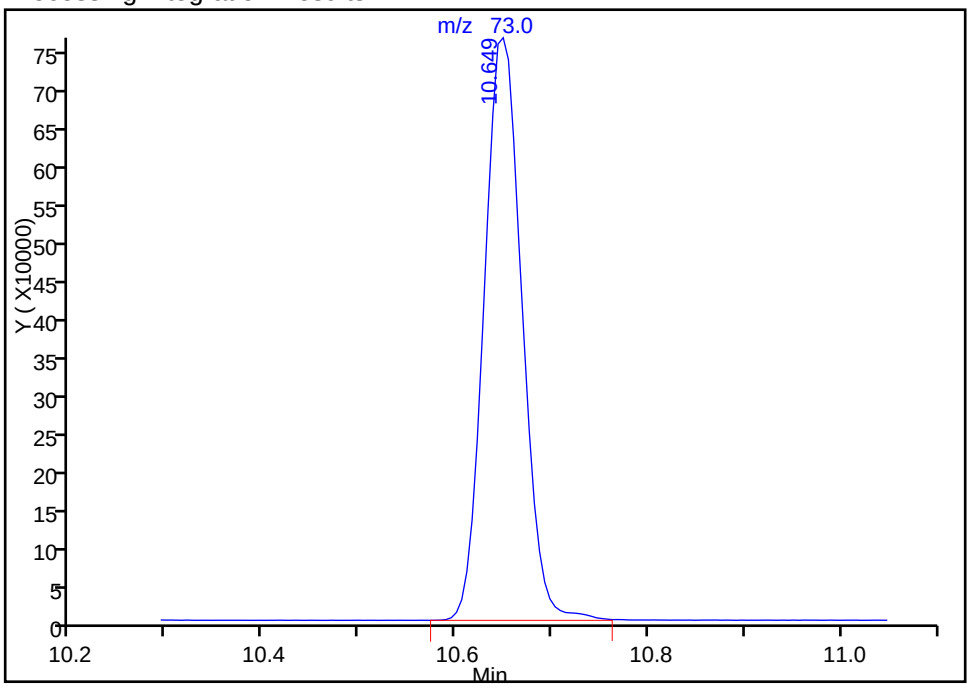
Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL8.D
Injection Date: 23-May-2016 18:43:30 Instrument ID: MG
Lims ID: IC L8
Client ID:
Operator ID: 403648 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

55 Tert-amyl methyl ether, CAS: 994-05-8

Signal: 1

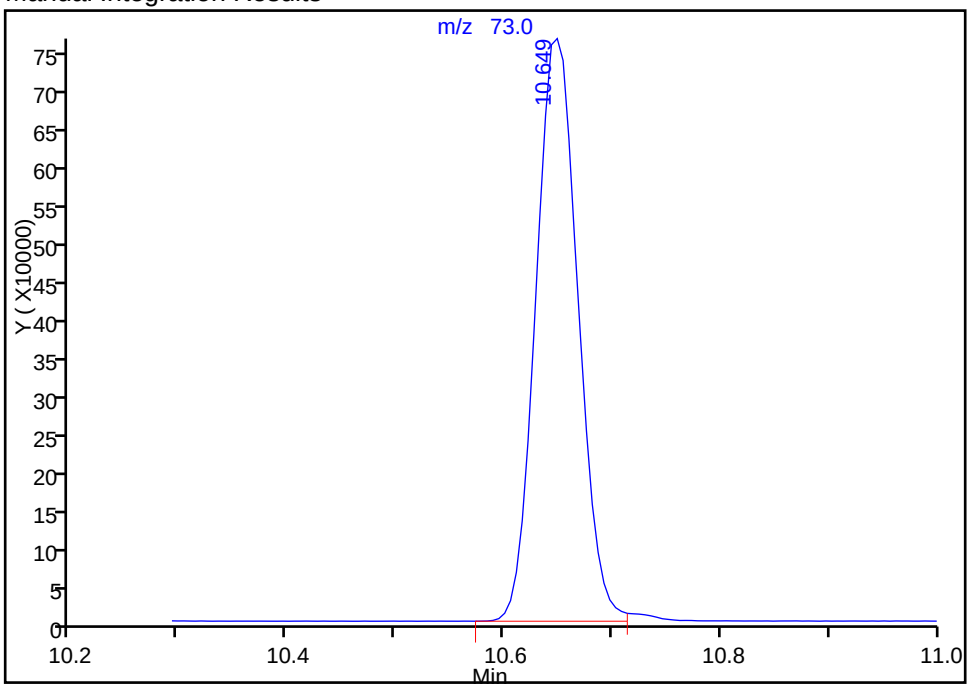
Processing Integration Results

RT: 10.65
Area: 2104020
Amount: 8.200796
Amount Units: ppb v/v



Manual Integration Results

RT: 10.65
Area: 2088317
Amount: 8.147383
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 26-May-2016 14:43:29
Audit Action: Split an Integrated Peak Audit Reason: Peak Tail

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 23-May-2016 19:26:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 041176
Misc. Info.: 140-0002910-010
Operator ID: 403648 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 14:56:26 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 24-May-2016 12:09:02

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.562	8.550	0.012	96	369218	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.730	10.719	0.011	96	1765108	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.491	15.482	0.009	89	1624842	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.147	17.135	0.012	94	1131818	4.00	3.84	
6 Chlorodifluoromethane	67	3.698	3.704	-0.006	98	445250	16.0	13.8	
7 Propene	41	3.709	3.714	-0.005	97	1648921	16.0	12.6	
8 Dichlorodifluoromethane	85	3.758	3.763	-0.005	99	4212555	16.0	13.3	
9 Chloromethane	52	3.925	3.928	-0.003	100	468626	16.0	12.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.936	3.940	-0.004	89	2577316	16.0	13.1	
11 Acetaldehyde	44	4.070	4.073	-0.003	87	2817377	80.0	52.1	
12 Vinyl chloride	62	4.087	4.088	-0.001	100	1300669	16.0	10.8	
13 Butadiene	54	4.167	4.169	-0.002	67	1297159	16.0	12.4	
14 Butane	43	4.167	4.171	-0.004	84	2796444	16.0	12.3	
15 Bromomethane	94	4.464	4.464	0.000	98	1436179	16.0	13.6	
16 Chloroethane	64	4.599	4.595	0.004	85	849280	16.0	13.4	
17 Ethanol	31	4.750	4.716	0.034	97	4002207	80.0	67.0	
18 Vinyl bromide	106	4.879	4.877	0.002	98	1326664	16.0	13.6	
19 2-Methylbutane	43	4.922	4.927	-0.005	92	2159081	16.0	13.4	
20 Trichlorofluoromethane	101	5.133	5.131	0.002	99	4105132	16.0	13.7	
21 Acrolein	56	5.133	5.134	-0.001	93	259657	16.0	7.40	
22 Acetonitrile	40	5.203	5.199	0.004	98	760678	16.0	14.2	
23 Acetone	58	5.241	5.243	-0.003	99	1903811	48.0	36.6	
24 Pentane	72	5.338	5.339	-0.001	97	247338	16.0	13.6	
25 Isopropyl alcohol	45	5.397	5.360	0.037	98	6467753	48.0	43.1	
26 Ethyl ether	31	5.489	5.493	-0.004	87	2113865	16.0	14.6	
27 1,1-Dichloroethene	96	5.791	5.791	0.000	94	1192440	16.0	13.2	
28 Acrylonitrile	53	5.898	5.888	0.010	94	976472	16.0	15.3	
29 2-Methyl-2-propanol	59	5.952	5.928	0.024	95	2301176	16.0	14.3	
30 1,1,2-Trichloro-1,2,2-trif	101	5.968	5.967	0.001	90	2400839	16.0	13.3	
31 Methylene Chloride	84	6.119	6.115	0.004	94	1337988	16.0	12.7	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.136	6.131	0.005	96	2152975	16.0	13.5	
33 Carbon disulfide	76	6.265	6.264	0.001	99	4817505	16.0	14.0	
34 trans-1,2-Dichloroethene	96	6.891	6.885	0.006	96	1530923	16.0	13.1	
35 2-Methylpentane	43	6.918	6.912	0.006	96	4261999	16.0	13.0	
36 Methyl tert-butyl ether	73	7.004	7.014	-0.010	96	4764724	16.0	15.5	
37 1,1-Dichloroethane	63	7.295	7.284	0.011	99	3471525	16.0	14.3	
38 Vinyl acetate	43	7.403	7.395	0.008	100	5944033	16.0	15.6	
39 2-Butanone (MEK)	72	7.823	7.818	0.005	96	765682	16.0	13.1	
40 Hexane	56	7.856	7.853	0.003	89	1435371	16.0	13.1	
41 Isopropyl ether	45	8.012	8.011	0.001	98	7302704	16.0	15.3	
42 cis-1,2-Dichloroethene	96	8.249	8.236	0.013	97	1765889	16.0	14.7	
43 Ethyl acetate	43	8.427	8.424	0.003	97	5133057	16.0	16.0	
44 Chloroform	83	8.589	8.571	0.018	95	3702435	16.0	14.3	
45 Tert-butyl ethyl ether	59	8.670	8.666	0.004	98	5828407	16.0	15.7	
46 Tetrahydrofuran	42	8.950	8.955	-0.005	91	2636931	16.0	15.9	
47 1,1,1-Trichloroethane	97	9.576	9.566	0.010	96	3969023	16.0	14.6	
48 1,2-Dichloroethane	62	9.678	9.666	0.012	97	2865740	16.0	14.9	
49 Benzene	78	10.175	10.163	0.012	97	3837863	16.0	11.6	
50 Cyclohexane	69	10.164	10.163	0.001	85	660938	16.0	11.7	
52 Carbon tetrachloride	117	10.196	10.189	0.007	96	3860223	16.0	14.9	
51 n-Butanol	31	10.180	10.196	-0.016	70	822404	16.0	14.9	
53 2,3-Dimethylpentane	71	10.304	10.299	0.005	91	1114942	16.0	13.0	
54 Thiophene	84	10.450	10.436	0.014	97	2819901	16.0	14.2	
55 Tert-amyl methyl ether	73	10.660	10.658	0.002	93	4678972	16.0	15.1	
56 Isooctane	57	10.951	10.947	0.004	95	8632872	16.0	13.1	
57 n-Heptane	71	11.339	11.330	0.009	95	1685515	16.0	13.2	
58 1,2-Dichloropropane	63	11.399	11.386	0.013	85	1907236	16.0	13.7	
59 Trichloroethene	130	11.442	11.432	0.010	95	2196358	16.0	13.0	
60 Dibromomethane	93	11.517	11.503	0.014	90	1936637	16.0	14.1	
61 Dichlorobromomethane	83	11.674	11.657	0.017	98	3808685	16.0	15.2	
62 1,4-Dioxane	88	11.690	11.683	0.007	96	671575	16.0	14.3	
63 Methyl methacrylate	41	11.781	11.772	0.009	92	3274111	16.0	17.3	
64 Methylcyclohexane	83	12.218	12.210	0.008	87	3380052	16.0	12.5	
65 4-Methyl-2-pentanone (MIBK	43	12.633	12.624	0.009	99	4954098	16.0	15.2	
66 cis-1,3-Dichloropropene	75	12.682	12.671	0.011	96	2946899	16.0	14.7	
67 trans-1,3-Dichloropropene	75	13.388	13.373	0.015	93	2942738	16.0	15.9	
68 Toluene	91	13.512	13.500	0.012	93	5413181	16.0	14.1	
69 1,1,2-Trichloroethane	83	13.583	13.569	0.013	98	1640367	16.0	14.4	
70 2-Methylthiophene	97	13.663	13.650	0.013	99	4619558	16.0	14.8	
71 3-Methylthiophene	97	13.863	13.853	0.010	98	4494718	16.0	14.6	
72 2-Hexanone	58	13.982	13.977	0.005	89	2094484	16.0	16.2	
73 n-Octane	85	14.224	14.216	0.008	97	1748943	16.0	12.7	
74 Chlorodibromomethane	129	14.289	14.275	0.014	98	3758894	16.0	17.4	
75 Ethylene Dibromide	107	14.575	14.560	0.015	98	3187713	16.0	15.7	
76 Tetrachloroethene	129	14.661	14.650	0.011	92	2037558	16.0	13.8	
77 Chlorobenzene	112	15.540	15.531	0.009	91	4252834	16.0	14.1	
78 2,3-Dimethylheptane	43	15.578	15.572	0.006	93	5984740	16.0	12.1	
79 Ethylbenzene	91	15.837	15.828	0.008	99	7140072	16.0	14.1	
80 2-Ethylthiophene	97	15.939	15.928	0.011	99	5616108	16.0	14.8	
81 m-Xylene & p-Xylene	91	16.004	15.991	0.013	99	10317665	32.0	27.2	
83 Bromoform	173	16.440	16.426	0.014	98	5600863	16.0	28.9	
82 n-Nonane	57	16.440	16.433	0.007	94	3201156	16.0	11.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.467	16.458	0.009	98	3994143	16.0	15.9	
85 o-Xylene	91	16.527	16.517	0.010	98	5833465	16.0	14.1	
86 1,1,2,2-Tetrachloroethane	83	16.850	16.840	0.010	99	4042260	16.0	14.2	
87 1,2,3-Trichloropropane	110	17.007	16.997	0.010	93	1346622	16.0	15.1	
88 Isopropylbenzene	105	17.120	17.112	0.008	97	7588243	16.0	14.0	
89 N-Propylbenzene	120	17.670	17.662	0.008	99	2176203	16.0	14.1	
90 2-Chlorotoluene	126	17.713	17.702	0.011	96	1984828	16.0	14.0	
91 4-Ethyltoluene	105	17.826	17.817	0.009	98	7787572	16.0	14.2	
92 1,3,5-Trimethylbenzene	120	17.907	17.895	0.012	93	3641230	16.0	14.0	
93 Alpha Methyl Styrene	118	18.139	18.129	0.010	87	3339194	16.0	16.6	
94 n-Decane	57	18.215	18.204	0.011	87	4408930	16.0	11.9	
95 tert-Butylbenzene	119	18.339	18.327	0.012	95	7138340	16.0	14.2	
96 1,2,4-Trimethylbenzene	105	18.349	18.340	0.009	96	6295796	16.0	13.6	
97 sec-Butylbenzene	105	18.614	18.602	0.012	98	9223066	16.0	13.8	
98 1,3-Dichlorobenzene	146	18.619	18.609	0.010	93	5547778	16.0	17.7	
99 Benzyl chloride	91	18.694	18.685	0.009	98	6137893	16.0	15.3	
100 1,4-Dichlorobenzene	146	18.711	18.698	0.013	97	4987498	16.0	16.2	
101 4-Isopropyltoluene	119	18.781	18.768	0.013	97	8220408	16.0	14.2	
102 1,2,3-Trimethylbenzene	105	18.829	18.817	0.012	99	5160515	16.0	13.9	
103 Butylcyclohexane	83	18.889	18.879	0.010	86	4525792	16.0	11.7	
104 1,2-Dichlorobenzene	146	19.072	19.062	0.010	92	5305731	16.0	17.3	
105 2,3-Dihydroindene	117	19.072	19.063	0.009	93	6143579	16.0	14.6	
106 Indene	116	19.201	19.193	0.008	92	4626656	16.0	15.3	
107 n-Butylbenzene	91	19.218	19.209	0.009	97	6985294	16.0	12.9	
108 Undecane	57	19.541	19.537	0.004	90	4779398	16.0	11.7	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.590	19.584	0.006	98	6112247	16.0	14.0	
110 1,2-Dibromo-3-Chloropropan	157	19.676	19.668	0.008	94	2362102	16.0	20.1	
111 1,2,4,5-Tetramethylbenzene	119	19.978	19.972	0.006	98	7365655	16.0	14.1	
112 1,2,3,5-Tetramethylbenzene	119	20.032	20.026	0.006	95	4531057	16.0	14.0	
113 1,2,3,4-Tetramethylbenzene	119	20.425	20.421	0.004	98	5988864	16.0	13.8	
114 Dodecane	57	20.603	20.599	0.004	89	4138526	16.0	11.5	
115 1,2,4-Trichlorobenzene	180	20.771	20.768	0.003	91	4922445	16.0	23.2	
116 Naphthalene	128	20.905	20.903	0.002	99	7419033	16.0	16.4	
117 Benzo(b)thiophene	134	21.008	21.004	0.004	99	4544716	16.0	17.5	
118 Hexachlorobutadiene	225	21.126	21.121	0.005	88	8222510	16.0	29.3	
119 1,2,3-Trichlorobenzene	180	21.186	21.181	0.005	94	4248910	16.0	20.7	
120 2-Methylnaphthalene	142	21.962	21.963	-0.001	100	2317014	50.0	43.9	
121 1-Methylnaphthalene	142	22.140	22.139	0.001	100	1951554	50.0	34.4	
A 124 Toluene Range	1	13.507	(13.472-13.542)		0	14085138	16.0	14.2	
A 125 C8 Range	1	14.220	(14.194-14.264)		0	19140553	16.0	12.5	
S 126 Xylenes, Total	100				0		48.0	41.2	
S 127 1,2-Dichloroethene, Total	1				0		32.0	27.8	

Reagents:

40L9DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

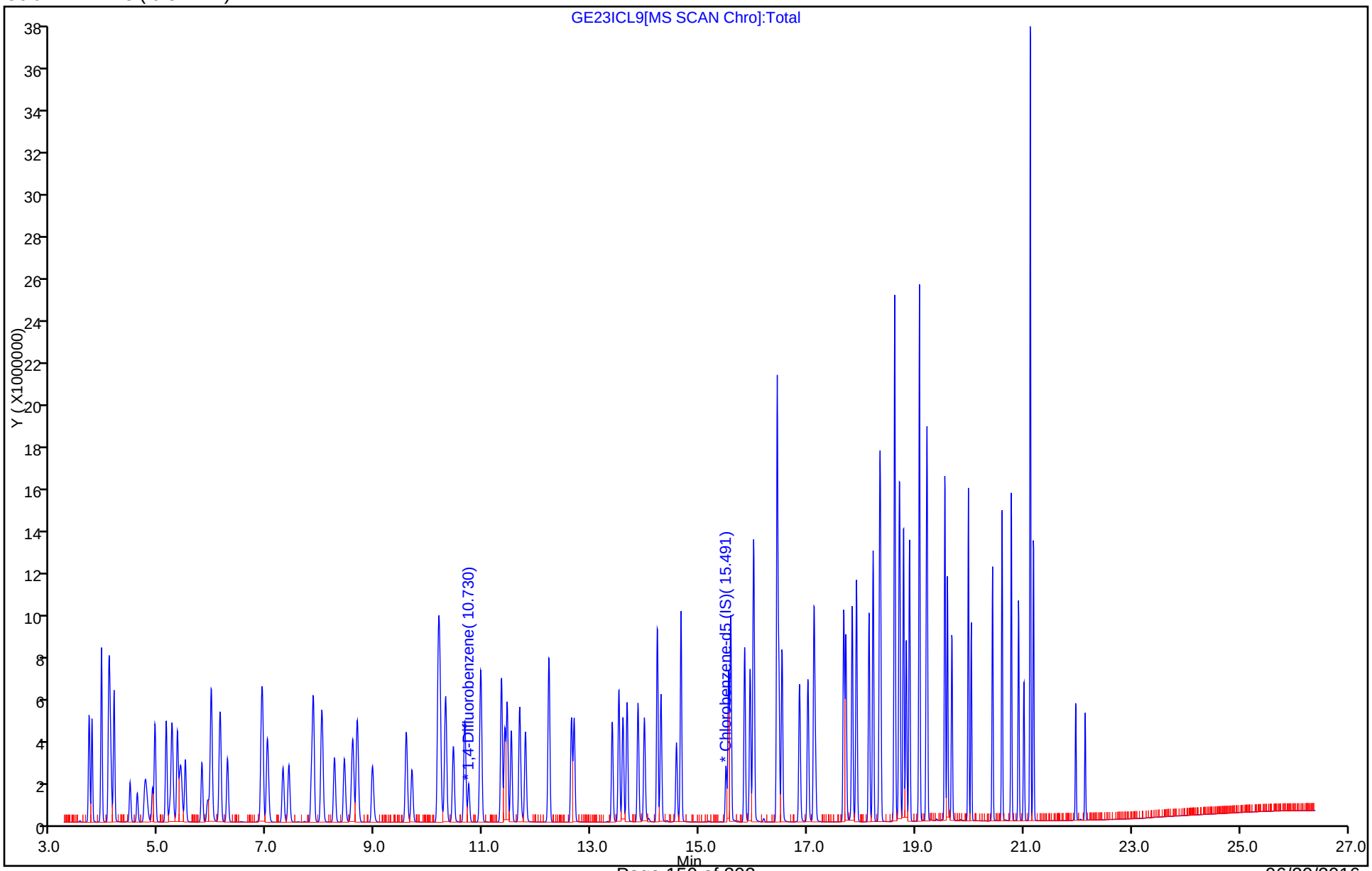
Report Date: 26-May-2016 14:56:28 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Injection Date:	23-May-2016 19:26:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

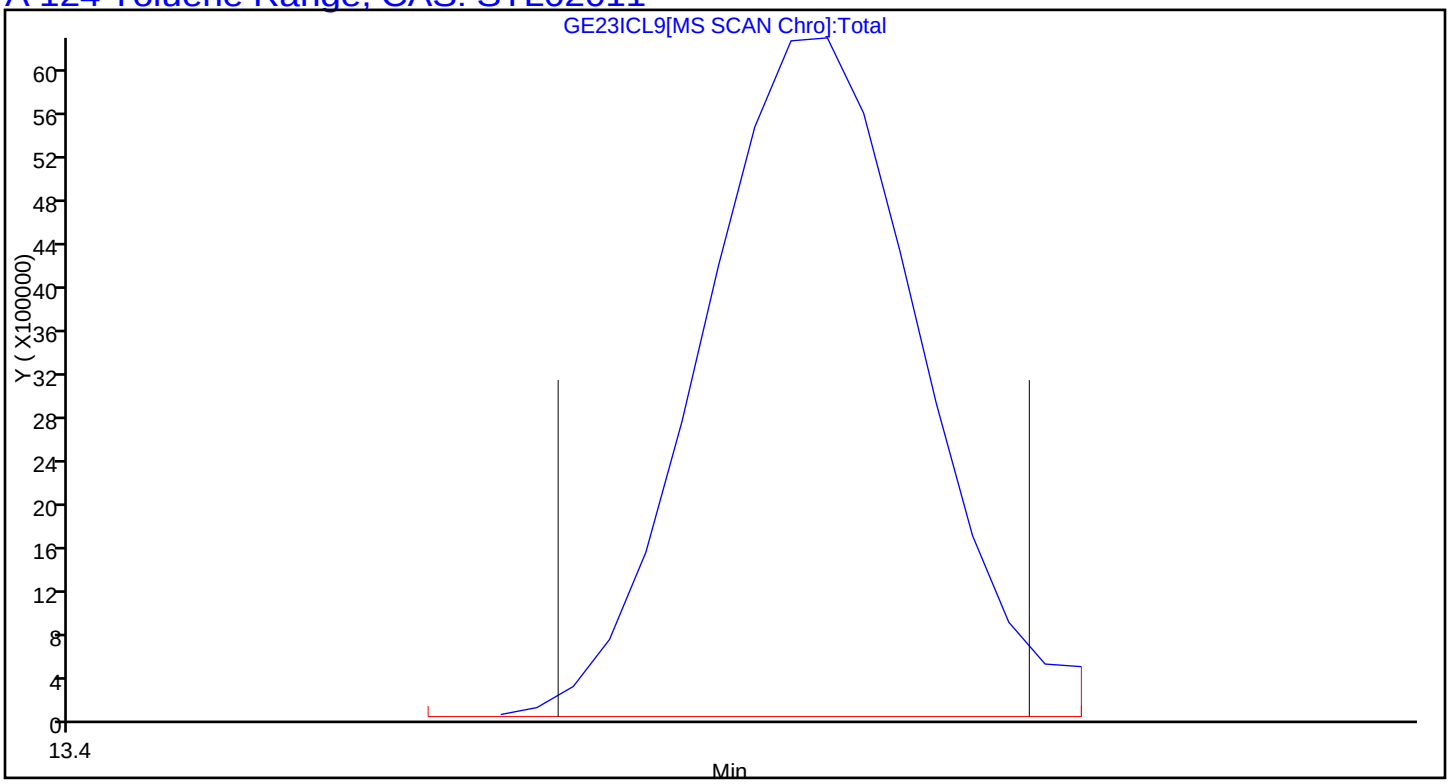


Report Date: 26-May-2016 14:56:28 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Injection Date:	23-May-2016 19:26:30	Instrument ID:	MG		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

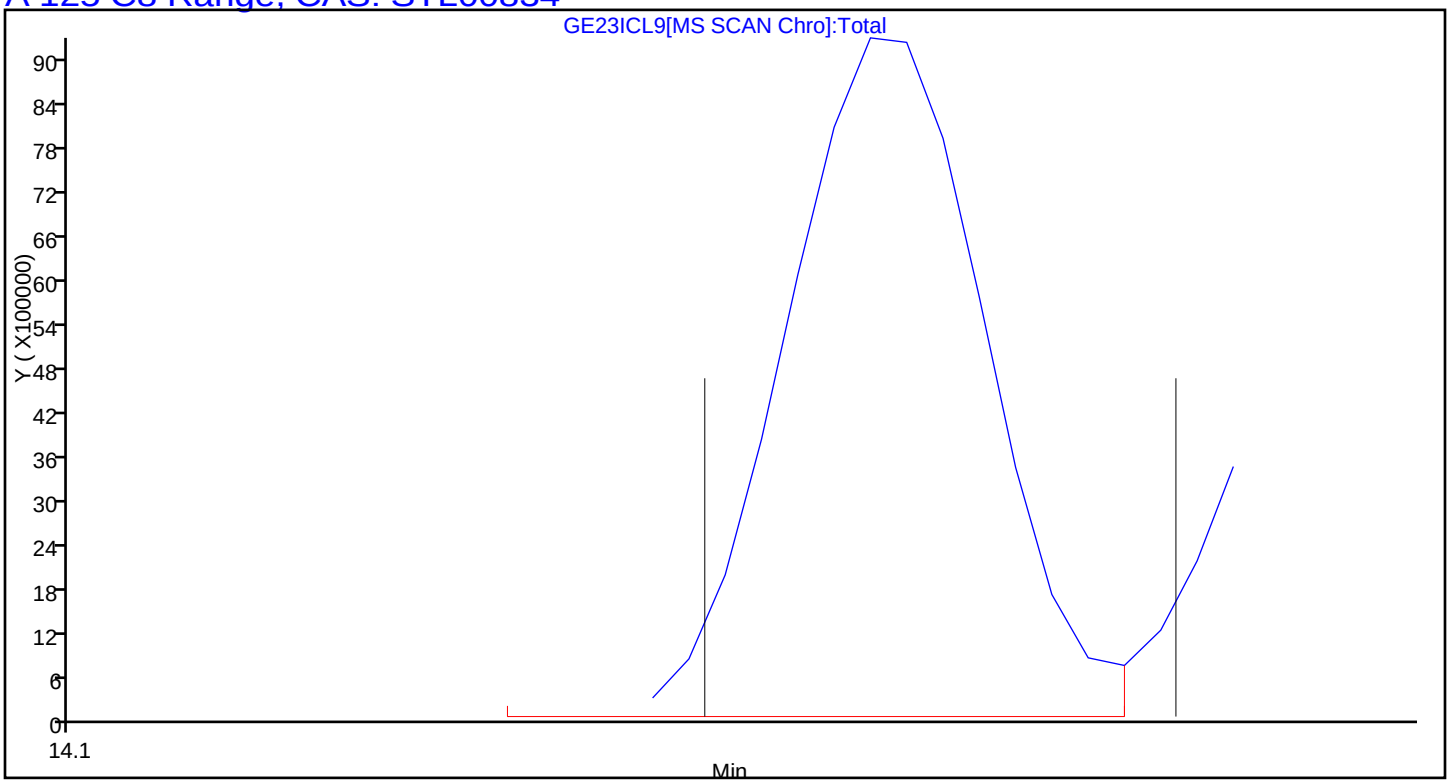


Report Date: 26-May-2016 14:56:28 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Injection Date:	23-May-2016 19:26:30	Instrument ID:	MG		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab Sample ID: ICV 140-5077/12 Calibration Date: 05/23/2016 20:50

Instrument ID: MG Calib Start Date: 05/23/2016 13:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/23/2016 19:26

Lab File ID: GE19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3497	0.3763		2.14	1.99	7.6	35.0
Propene	Ave	1.414	1.543		2.17	1.99	9.1	35.0
Dichlorodifluoromethane	Ave	3.430	3.747		2.18	1.99	9.2	35.0
Chloromethane	Ave	0.4158	0.4392		2.10	1.99	5.6	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.137	2.276		2.12	1.99	6.5	35.0
Acetaldehyde	Ave	0.5854	0.3978		6.77	9.96	-32.0	35.0
Vinyl chloride	Ave	1.303	1.404		2.14	1.99	7.7	35.0
1,3-Butadiene	Ave	1.130	1.148		2.02	1.99	1.6	35.0
Butane	Ave	2.454	2.658		2.16	1.99	8.3	35.0
Bromomethane	Ave	1.148	1.126		1.95	1.99	-1.9	35.0
Chloroethane	Ave	0.6888	0.6420		1.86	1.99	-6.8	35.0
Ethanol	Ave	0.6468	0.4918		7.57	9.96	-24.0	35.0
Vinyl bromide	Ave	1.055	1.114		2.10	1.99	5.6	35.0
2-Methylbutane	Ave	1.743	1.842		2.10	1.99	5.6	35.0
Acrolein	Ave	0.3803	0.3101		1.62	1.99	-18.4	35.0
Trichlorofluoromethane	Ave	3.255	3.305		2.02	1.99	1.5	35.0
Acetonitrile	Ave	0.5822	0.4261		1.46	1.99	-26.8	35.0
Acetone	Ave	0.5637	0.3854		4.08	5.97	-31.6	35.0
Isopropyl alcohol	Ave	1.627	1.434		5.26	5.97	-11.9	35.0
Pentane	Ave	0.1968	0.2073		2.10	1.99	5.3	35.0
Ethyl ether	Ave	1.565	1.224		1.56	1.99	-21.8	35.0
1,1-Dichloroethene	Ave	0.9773	0.9147		1.86	1.99	-6.4	35.0
Acrylonitrile	Ave	0.6937	0.4893		1.40	1.99	-29.5	35.0
tert-Butyl alcohol	Ave	1.740	1.489		1.70	1.99	-14.5	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.960	1.797		1.83	1.99	-8.3	35.0
Methylene Chloride	Ave	1.140	1.143		2.00	1.99	0.3	35.0
3-Chloropropene	Ave	1.733	1.648		1.89	1.99	-4.9	35.0
Carbon disulfide	Ave	3.729	4.075		2.18	1.99	9.3	35.0
trans-1,2-Dichloroethene	Ave	1.263	1.318		2.08	1.99	4.4	35.0
2-Methylpentane	Ave	3.561	4.107		2.30	1.99	15.3	35.0
Methyl tert-butyl ether	Ave	3.333	2.809		1.68	1.99	-15.7	35.0
1,1-Dichloroethane	Ave	2.626	2.650		2.01	1.99	0.9	35.0
Vinyl acetate	Ave	4.140	3.373		1.62	1.99	-18.5	35.0
2-Butanone (MEK)	Ave	0.6330	0.4625		1.45	1.99	-26.9	35.0
Hexane	Ave	1.184	1.249		2.10	1.99	5.5	35.0
Isopropyl ether	Ave	5.167	4.456		1.72	1.99	-13.8	35.0
cis-1,2-Dichloroethene	Ave	1.300	1.332		2.04	1.99	2.4	35.0
Ethyl acetate	Ave	3.483	2.645		1.51	1.99	-24.0	35.0
Chloroform	Ave	2.804	2.747		1.95	1.99	-2.0	35.0
Tert-butyl ethyl ether	Ave	4.022	3.603		1.78	1.99	-10.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab Sample ID: ICV 140-5077/12 Calibration Date: 05/23/2016 20:50

Instrument ID: MG Calib Start Date: 05/23/2016 13:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/23/2016 19:26

Lab File ID: GE19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.802	1.502		1.66	1.99	-16.6	35.0
1,1,1-Trichloroethane	Ave	2.939	2.934		1.99	1.99	-0.2	35.0
1,2-Dichloroethane	Ave	0.4367	0.4018		1.83	1.99	-8.0	35.0
1-Butanol	Ave	0.1251	0.1404		2.24	1.99	12.2	35.0
Benzene	Ave	0.7503	0.7251		1.92	1.99	-3.4	35.0
Cyclohexane	Ave	0.1276	0.1490		2.33	1.99	16.8	35.0
Carbon tetrachloride	Ave	0.5867	0.6527		2.22	1.99	11.2	35.0
2,3-Dimethylpentane	Ave	0.1941	0.1893		1.94	1.99	-2.5	35.0
Thiophene	Ave	0.4499	0.4825		2.14	1.99	7.2	35.0
Tert-amyl methyl ether	Ave	0.7011	0.6301		1.79	1.99	-10.1	35.0
2,2,4-Trimethylpentane	Ave	1.493	1.625		2.17	1.99	8.8	35.0
Heptane	Ave	0.2892	0.3137		2.16	1.99	8.5	35.0
1,2-Dichloropropane	Ave	0.3154	0.2821		1.78	1.99	-10.6	35.0
Trichloroethene	Ave	0.3826	0.4367		2.27	1.99	14.1	35.0
Dibromomethane	Ave	0.3116	0.3341		2.14	1.99	7.2	35.0
Bromodichloromethane	Ave	0.5665	0.6230		2.19	1.99	10.0	35.0
1,4-Dioxane	Ave	0.1066	0.0913		1.71	1.99	-14.3	35.0
Methyl methacrylate	Ave	0.4299	0.3722		1.72	1.99	-13.4	35.0
Methylcyclohexane	Ave	0.6123	0.5298		1.72	1.99	-13.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7406	0.6531		1.76	1.99	-11.8	35.0
cis-1,3-Dichloropropene	Ave	0.4555	0.4475		1.96	1.99	-1.8	35.0
trans-1,3-Dichloropropene	Ave	0.4555	0.4207		1.84	1.99	-7.6	35.0
Toluene	Ave	0.9449	0.8491		1.79	1.99	-10.1	35.0
1,1,2-Trichloroethane	Ave	0.2802	0.2555		1.82	1.99	-8.8	35.0
2-Methylthiophene	Ave	0.7698	0.7214		1.87	1.99	-6.3	35.0
3-Methylthiophene	Ave	0.7596	0.7400		1.94	1.99	-2.6	35.0
2-Hexanone	Ave	0.3189	0.2904		1.81	1.99	-9.0	35.0
Octane	Ave	0.3379	0.3532		2.08	1.99	4.5	35.0
Dibromochloromethane	Ave	0.5333	0.5652		2.11	1.99	6.0	35.0
1,2-Dibromoethane (EDB)	Ave	0.5012	0.4748		1.89	1.99	-5.3	35.0
Tetrachloroethene	Ave	0.3647	0.3603		1.97	1.99	-1.2	35.0
Chlorobenzene	Ave	0.7451	0.6909		1.85	1.99	-7.3	35.0
2,3-Dimethylheptane	Ave	1.221	1.230		2.01	1.99	0.7	35.0
Ethylbenzene	Ave	1.247	1.069		1.71	1.99	-14.3	35.0
2-Ethylthiophene	Ave	0.9335	0.8083		1.72	1.99	-13.4	35.0
m-Xylene & p-Xylene	Ave	0.9354	0.8146		3.47	3.98	-12.9	35.0
Bromoform	Ave	0.4764	0.4982		2.08	1.99	4.6	35.0
Nonane	Ave	0.6942	0.7061		2.03	1.99	1.7	35.0
Styrene	Ave	0.6200	0.5882		1.89	1.99	-5.1	35.0
o-Xylene	Ave	1.020	0.8526		1.66	1.99	-16.4	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6989	0.6235		1.78	1.99	-10.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab Sample ID: ICV 140-5077/12 Calibration Date: 05/23/2016 20:50

Instrument ID: MG Calib Start Date: 05/23/2016 13:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/23/2016 19:26

Lab File ID: GE19ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2193	0.1833		1.66	1.99	-16.4	35.0
Isopropylbenzene	Ave	1.338	1.142		1.70	1.99	-14.6	35.0
Propylbenzene	Ave	0.3806	0.3232		1.69	1.99	-15.1	35.0
2-Chlorotoluene	Ave	0.3491	0.3115		1.78	1.99	-10.8	35.0
4-Ethyltoluene	Ave	1.349	1.081		1.60	1.99	-19.9	35.0
1,3,5-Trimethylbenzene	Ave	0.6398	0.5415		1.69	1.99	-15.4	35.0
Alpha Methyl Styrene	Ave	0.4960	0.4517		1.81	1.99	-8.9	35.0
Decane	Ave	0.9128	0.8673		1.89	1.99	-5.0	35.0
tert-Butylbenzene	Ave	1.236	1.028		1.66	1.99	-16.8	35.0
1,2,4-Trimethylbenzene	Ave	1.138	0.9532		1.67	1.99	-16.3	35.0
sec-Butylbenzene	Ave	1.647	1.376		1.66	1.99	-16.5	35.0
1,3-Dichlorobenzene	Ave	0.7725	0.6718		1.73	1.99	-13.0	35.0
Benzyl chloride	Ave	0.9886	0.8894		1.79	1.99	-10.0	35.0
1,4-Dichlorobenzene	Ave	0.7561	0.6651		1.75	1.99	-12.0	35.0
4-Isopropyltoluene	Ave	1.421	1.156		1.62	1.99	-18.7	35.0
1,2,3-Trimethylbenzene	Ave	0.9113	0.7957		1.74	1.99	-12.7	35.0
Butylcyclohexane	Ave	0.9553	0.8533		1.78	1.99	-10.7	35.0
1,2-Dichlorobenzene	Ave	0.7534	0.6313		1.67	1.99	-16.2	35.0
Indane	Ave	1.035	0.8158		1.57	1.99	-21.2	35.0
Indene	Ave	0.7461	0.8127		2.17	1.99	8.9	35.0
Butylbenzene	Ave	1.330	1.121		1.68	1.99	-15.7	35.0
Undecane	Ave	1.008	0.9257		1.83	1.99	-8.1	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.072	1.073		1.99	1.99	0.0	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2887	0.1917		1.32	1.99	-33.6	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.288	1.130		1.75	1.99	-12.3	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.7994	0.7097		1.77	1.99	-11.2	35.0
1,2,3,4-Tetramethylbenzene	Ave	1.067	0.9198		1.72	1.99	-13.8	35.0
Dodecane	Ave	0.8838	0.8390		1.89	1.99	-5.1	35.0
1,2,4-Trichlorobenzene	Ave	0.5226	0.4177		1.59	1.99	-20.1	35.0
Naphthalene	Ave	1.117	0.9903		1.77	1.99	-11.3	35.0
Benzo(b)thiophene	Ave	0.6399	0.5608		1.75	1.99	-12.4	35.0
Hexachlorobutadiene	Ave	0.6903	0.5190		1.50	1.99	-24.8	35.0
1,2,3-Trichlorobenzene	Ave	0.5045	0.4017		1.59	1.99	-20.4	35.0
2-Methylnaphthalene	Ave	0.1299	0.1409		6.75	6.22	8.4	50.0
1-Methylnaphthalene	Ave	0.1395	0.1415		6.31	6.22	1.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7262	0.7450		4.10	4.00	2.6	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE19ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-May-2016 20:50:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 040755/S8
Misc. Info.: 140-0002910-012
Operator ID: 403648 Instrument ID: MG
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 26-May-2016 15:19:26 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 26-May-2016 15:19:24

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.535	8.550	-0.015	95	318849	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.708	10.719	-0.011	96	1421809	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.475	15.482	-0.007	91	1374396	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.131	17.128	-0.004	89	1023858	4.00	4.10	
6 Chlorodifluoromethane	67	3.698	3.698	-0.006	97	59737	1.99	2.14	
7 Propene	41	3.704	3.708	-0.010	97	244959	1.99	2.17	
8 Dichlorodifluoromethane	85	3.752	3.757	-0.011	100	594766	1.99	2.18	
9 Chloromethane	52	3.919	3.921	-0.009	98	69723	1.99	2.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.930	3.933	-0.010	91	361304	1.99	2.12	
11 Acetaldehyde	44	4.060	4.066	-0.013	90	315767	9.96	6.77	
12 Vinyl chloride	62	4.076	4.081	-0.012	99	222830	1.99	2.14	
13 Butadiene	54	4.162	4.162	-0.007	63	182173	1.99	2.02	
14 Butane	43	4.162	4.164	-0.009	87	421916	1.99	2.16	
15 Bromomethane	94	4.453	4.457	-0.011	98	178772	1.99	1.95	
16 Chloroethane	64	4.583	4.588	-0.012	84	101912	1.99	1.86	
17 Ethanol	31	4.680	4.708	-0.036	97	390357	9.96	7.57	
18 Vinyl bromide	106	4.863	4.869	-0.014	98	176913	1.99	2.10	
19 2-Methylbutane	43	4.912	4.919	-0.015	93	292338	1.99	2.10	
20 Trichlorofluoromethane	101	5.117	5.122	-0.014	99	524704	1.99	2.02	
21 Acrolein	56	5.117	5.126	-0.017	33	49231	1.99	1.62	
22 Acetonitrile	40	5.181	5.191	-0.018	99	67633	1.99	1.46	
23 Acetone	58	5.219	5.234	-0.024	99	183542	5.97	4.08	
24 Pentane	72	5.327	5.330	-0.012	95	32909	1.99	2.10	
25 Isopropyl alcohol	45	5.311	5.351	-0.049	96	682949	5.97	5.26	
26 Ethyl ether	31	5.472	5.484	-0.021	87	194373	1.99	1.56	
27 1,1-Dichloroethene	96	5.780	5.781	-0.011	94	145203	1.99	1.86	
28 Acrylonitrile	53	5.866	5.878	-0.022	54	77672	1.99	1.40	
29 2-Methyl-2-propanol	59	5.871	5.918	-0.057	96	236292	1.99	1.70	
30 1,1,2-Trichloro-1,2,2-trif	101	5.952	5.957	-0.015	94	285316	1.99	1.83	
31 Methylene Chloride	84	6.103	6.105	-0.012	95	181505	1.99	2.00	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.120	6.121	-0.011	94	261673	1.99	1.89	
33 Carbon disulfide	76	6.254	6.254	-0.010	100	646809	1.99	2.18	
34 trans-1,2-Dichloroethene	96	6.874	6.874	-0.011	96	209225	1.99	2.08	
35 2-Methylpentane	43	6.896	6.901	-0.016	97	651911	1.99	2.30	
36 Methyl tert-butyl ether	73	6.988	7.002	-0.026	96	445971	1.99	1.68	
37 1,1-Dichloroethane	63	7.273	7.272	-0.011	99	420630	1.99	2.01	
38 Vinyl acetate	43	7.376	7.383	-0.019	100	535437	1.99	1.62	
39 2-Butanone (MEK)	72	7.797	7.805	-0.021	97	73419	1.99	1.45	
40 Hexane	56	7.840	7.840	-0.013	92	198238	1.99	2.10	
41 Isopropyl ether	45	7.985	7.998	-0.026	96	707484	1.99	1.72	
42 cis-1,2-Dichloroethene	96	8.223	8.222	-0.013	97	211478	1.99	2.04	
43 Ethyl acetate	43	8.400	8.410	-0.024	97	419954	1.99	1.51	
44 Chloroform	83	8.557	8.556	-0.014	96	436070	1.99	1.95	
45 Tert-butyl ethyl ether	59	8.643	8.651	-0.023	98	572064	1.99	1.78	
46 Tetrahydrofuran	42	8.929	8.940	-0.026	92	238431	1.99	1.66	
47 1,1,1-Trichloroethane	97	9.554	9.550	-0.012	96	465765	1.99	1.99	
48 1,2-Dichloroethane	62	9.652	9.657	-0.014	97	284388	1.99	1.83	
49 Benzene	78	10.153	10.154	-0.010	95	513278	1.99	1.92	
50 Cyclohexane	69	10.158	10.154	-0.005	84	105441	1.99	2.33	
52 Carbon tetrachloride	117	10.180	10.179	-0.009	95	461990	1.99	2.22	
51 n-Butanol	31	10.126	10.186	-0.070	94	99375	1.99	2.24	
53 2,3-Dimethylpentane	71	10.288	10.289	-0.011	91	133982	1.99	1.94	
54 Thiophene	84	10.423	10.426	-0.013	97	341521	1.99	2.14	
55 Tert-amyl methyl ether	73	10.633	10.648	-0.025	94	446060	1.99	1.79	
56 Isooctane	57	10.935	10.937	-0.012	97	1150022	1.99	2.17	
57 n-Heptane	71	11.318	11.320	-0.012	96	222080	1.99	2.16	
58 1,2-Dichloropropane	63	11.377	11.375	-0.009	86	199683	1.99	1.78	
59 Trichloroethene	130	11.420	11.421	-0.012	94	309153	1.99	2.27	
60 Dibromomethane	93	11.496	11.492	-0.007	96	236498	1.99	2.14	
61 Dichlorobromomethane	83	11.647	11.646	-0.010	98	441002	1.99	2.19	
62 1,4-Dioxane	88	11.657	11.672	-0.026	96	64606	1.99	1.71	
63 Methyl methacrylate	41	11.755	11.761	-0.017	93	263466	1.99	1.72	
64 Methylcyclohexane	83	12.202	12.198	-0.008	89	375052	1.99	1.72	
65 4-Methyl-2-pentanone (MIBK	43	12.607	12.613	-0.017	99	462332	1.99	1.76	
66 cis-1,3-Dichloropropene	75	12.660	12.659	-0.011	97	316782	1.99	1.96	
67 trans-1,3-Dichloropropene	75	13.367	13.367	-0.006	94	287863	1.99	1.84	
68 Toluene	91	13.491	13.494	-0.009	93	581041	1.99	1.79	
69 1,1,2-Trichloroethane	83	13.561	13.546	-0.008	99	174795	1.99	1.82	
70 2-Methylthiophene	97	13.642	13.644	-0.008	98	493646	1.99	1.87	
71 3-Methylthiophene	97	13.847	13.847	-0.006	99	506331	1.99	1.94	
72 2-Hexanone	58	13.960	13.971	-0.017	90	198675	1.99	1.81	
73 n-Octane	85	14.208	14.210	-0.008	98	241667	1.99	2.08	
74 Chlorodibromomethane	129	14.267	14.269	-0.008	98	386719	1.99	2.11	
75 Ethylene Dibromide	107	14.553	14.554	-0.007	98	324865	1.99	1.89	
76 Tetrachloroethene	129	14.645	14.644	-0.005	95	246560	1.99	1.97	
77 Chlorobenzene	112	15.524	15.524	-0.007	90	472759	1.99	1.85	
78 2,3-Dimethylheptane	43	15.567	15.565	-0.005	94	841794	1.99	2.01	
79 Ethylbenzene	91	15.820	15.821	-0.008	99	731199	1.99	1.71	
80 2-Ethylthiophene	97	15.923	15.921	-0.005	99	553088	1.99	1.72	
81 m-Xylene & p-Xylene	91	15.988	15.984	-0.003	99	1114748	3.98	3.47	
83 Bromoform	173	16.419	16.419	-0.007	96	340891	1.99	2.08	
82 n-Nonane	57	16.424	16.426	-0.009	95	483177	1.99	2.03	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.451	16.451	-0.007	98	402476	1.99	1.89	
85 o-Xylene	91	16.511	16.510	-0.006	98	583369	1.99	1.66	
86 1,1,2,2-Tetrachloroethane	83	16.834	16.832	-0.006	99	426661	1.99	1.78	
87 1,2,3-Trichloropropane	110	16.991	16.990	-0.006	96	125424	1.99	1.66	
88 Isopropylbenzene	105	17.104	17.105	-0.008	97	781435	1.99	1.70	
89 N-Propylbenzene	120	17.659	17.654	-0.003	99	221162	1.99	1.69	
90 2-Chlorotoluene	126	17.697	17.694	-0.005	97	213161	1.99	1.78	
91 4-Ethyltoluene	105	17.810	17.809	-0.007	98	739566	1.99	1.60	
92 1,3,5-Trimethylbenzene	120	17.891	17.887	-0.004	92	370514	1.99	1.69	
93 Alpha Methyl Styrene	118	18.123	18.122	-0.006	87	309061	1.99	1.81	
94 n-Decane	57	18.198	18.197	-0.006	87	593446	1.99	1.89	
95 tert-Butylbenzene	119	18.322	18.319	-0.005	92	703145	1.99	1.66	
96 1,2,4-Trimethylbenzene	105	18.333	18.332	-0.007	96	652232	1.99	1.67	
97 sec-Butylbenzene	105	18.597	18.594	-0.005	98	941343	1.99	1.66	
98 1,3-Dichlorobenzene	146	18.603	18.601	-0.006	98	459718	1.99	1.73	
99 Benzyl chloride	91	18.678	18.677	-0.007	97	608551	1.99	1.79	
100 1,4-Dichlorobenzene	146	18.695	18.690	-0.003	95	455123	1.99	1.75	
101 4-Isopropyltoluene	119	18.765	18.760	-0.003	97	790689	1.99	1.62	
102 1,2,3-Trimethylbenzene	105	18.813	18.809	-0.004	99	544435	1.99	1.74	
103 Butylcyclohexane	83	18.878	18.871	-0.001	88	583906	1.99	1.78	
104 1,2-Dichlorobenzene	146	19.056	19.054	-0.006	92	431940	1.99	1.67	
105 2,3-Dihydroindene	117	19.061	19.055	-0.002	93	558202	1.99	1.57	
106 Indene	116	19.191	19.185	-0.002	91	556066	1.99	2.17	
107 n-Butylbenzene	91	19.201	19.200	-0.008	98	766971	1.99	1.68	
108 Undecane	57	19.536	19.529	-0.001	92	633406	1.99	1.83	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.579	19.575	-0.005	98	734011	1.99	1.99	
110 1,2-Dibromo-3-Chloropropan	157	19.665	19.659	-0.003	94	131151	1.99	1.32	
111 1,2,4,5-Tetramethylbenzene	119	19.967	19.964	-0.005	97	772921	1.99	1.75	
112 1,2,3,5-Tetramethylbenzene	119	20.021	20.017	-0.005	95	485638	1.99	1.77	
113 1,2,3,4-Tetramethylbenzene	119	20.420	20.412	-0.001	97	629394	1.99	1.72	
114 Dodecane	57	20.593	20.590	-0.006	91	574089	1.99	1.89	
115 1,2,4-Trichlorobenzene	180	20.765	20.759	-0.003	94	285817	1.99	1.59	
116 Naphthalene	128	20.900	20.894	-0.003	99	677592	1.99	1.77	
117 Benzo(b)thiophene	134	21.002	20.995	-0.002	99	383755	1.99	1.75	
118 Hexachlorobutadiene	225	21.116	21.112	-0.005	96	355152	1.99	1.50	
119 1,2,3-Trichlorobenzene	180	21.175	21.172	-0.006	95	274836	1.99	1.59	
120 2-Methylnaphthalene	142	21.962	21.954	-0.001	100	301223	6.22	6.75	
121 1-Methylnaphthalene	142	22.140	22.130	0.001	100	302544	6.22	6.31	
A 124 Toluene Range	1	13.496	(13.472-13.519)		0	1490536	1.99	1.87	
A 125 C8 Range	1	14.212	(14.194-14.230)		0	2639798	1.99	2.14	
S 126 Xylenes, Total	100				0		5.97	5.13	
S 127 1,2-Dichloroethene, Total	1				0		3.98	4.12	

Reagents:

40CV101S_00008	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

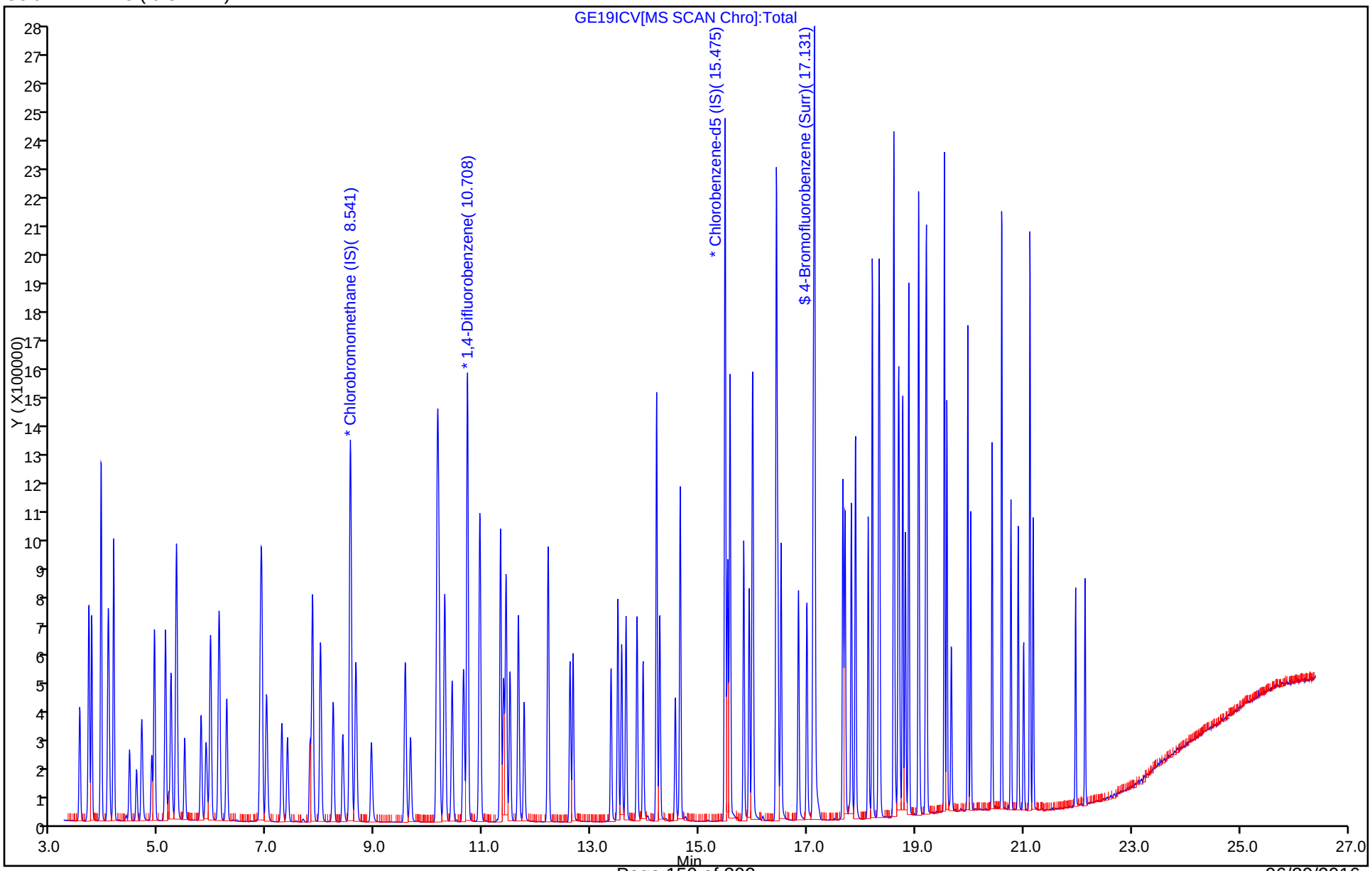
Report Date: 26-May-2016 15:19:28 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE19ICV.D

Injection Date:	23-May-2016 20:50:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab Sample ID: CCVIS 140-5183/2 Calibration Date: 06/08/2016 10:36

Instrument ID: MG Calib Start Date: 05/23/2016 13:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/23/2016 19:26

Lab File ID: GCCVF08.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3497	0.3908		2.24	2.00	11.8	30.0
Propene	Ave	1.414	1.703		2.41	2.00	20.4	30.0
Dichlorodifluoromethane	Ave	3.430	4.193		2.45	2.00	22.3	30.0
Chloromethane	Ave	0.4158	0.5336		2.57	2.00	28.3	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.137	2.327		2.18	2.00	8.9	30.0
Acetaldehyde	Ave	0.5854	0.5698		9.74	10.0	-2.7	30.0
Vinyl chloride	Ave	1.303	1.581		2.43	2.00	21.3	30.0
1,3-Butadiene	Ave	1.130	1.316		2.33	2.00	16.5	30.0
Butane	Ave	2.454	3.140		2.56	2.00	28.0	30.0
Bromomethane	Ave	1.148	1.334		2.32	2.00	16.2	30.0
Chloroethane	Ave	0.6888	0.7915		2.30	2.00	14.9	30.0
Ethanol	Ave	0.6468	0.7343		11.4	10.0	13.5	30.0
Vinyl bromide	Ave	1.055	1.215		2.30	2.00	15.1	30.0
2-Methylbutane	Ave	1.743	2.261		2.60	2.00	29.7	30.0
Acrolein	Ave	0.3803	0.4124		2.17	2.00	8.4	30.0
Trichlorofluoromethane	Ave	3.255	3.945		2.43	2.00	21.2	30.0
Acetonitrile	Ave	0.5822	0.6143		2.11	2.00	5.5	30.0
Acetone	Ave	0.5637	0.5477		5.83	6.00	-2.8	30.0
Pentane	Ave	0.1968	0.2420		2.46	2.00	23.0	30.0
Isopropyl alcohol	Ave	1.627	2.225		8.21	6.00	36.7*	30.0
Ethyl ether	Ave	1.565	1.892		2.42	2.00	20.8	30.0
1,1-Dichloroethene	Ave	0.9773	1.201		2.46	2.00	22.9	30.0
Acrylonitrile	Ave	0.6937	0.8096		2.34	2.00	16.7	30.0
tert-Butyl alcohol	Ave	1.740	2.114		2.43	2.00	21.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	1.960	2.314		2.36	2.00	18.0	30.0
Methylene Chloride	Ave	1.140	1.271		2.23	2.00	11.4	30.0
3-Chloropropene	Ave	1.733	1.899		2.19	2.00	9.6	30.0
Carbon disulfide	Ave	3.729	4.186		2.25	2.00	12.3	30.0
trans-1,2-Dichloroethene	Ave	1.263	1.336		2.12	2.00	5.8	30.0
2-Methylpentane	Ave	3.561	4.049		2.28	2.00	13.7	30.0
Methyl tert-butyl ether	Ave	3.333	3.541		2.13	2.00	6.2	30.0
1,1-Dichloroethane	Ave	2.626	2.937		2.24	2.00	11.8	30.0
Vinyl acetate	Ave	4.140	4.404		2.13	2.00	6.4	30.0
2-Butanone (MEK)	Ave	0.6330	0.5886		1.86	2.00	-7.0	30.0
Hexane	Ave	1.184	1.277		2.16	2.00	7.9	30.0
Isopropyl ether	Ave	5.167	5.910		2.29	2.00	14.4	30.0
cis-1,2-Dichloroethene	Ave	1.300	1.404		2.16	2.00	8.0	30.0
Ethyl acetate	Ave	3.483	3.708		2.13	2.00	6.5	30.0
Chloroform	Ave	2.804	3.067		2.19	2.00	9.4	30.0
Tert-butyl ethyl ether	Ave	4.022	4.504		2.24	2.00	12.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab Sample ID: CCVIS 140-5183/2 Calibration Date: 06/08/2016 10:36

Instrument ID: MG Calib Start Date: 05/23/2016 13:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/23/2016 19:26

Lab File ID: GCCVF08.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.802	1.934		2.15	2.00	7.4	30.0
1,1,1-Trichloroethane	Ave	2.939	3.257		2.22	2.00	10.8	30.0
1,2-Dichloroethane	Ave	0.4367	0.4859		2.23	2.00	11.3	30.0
Benzene	Ave	0.7503	0.8452		2.25	2.00	12.6	30.0
Cyclohexane	Ave	0.1276	0.1666		2.61	2.00	30.6*	30.0
1-Butanol	Ave	0.1251	0.1720		2.75	2.00	37.5*	30.0
Carbon tetrachloride	Ave	0.5867	0.7323		2.50	2.00	24.8	30.0
2,3-Dimethylpentane	Ave	0.1941	0.2327		2.40	2.00	19.9	30.0
Thiophene	Ave	0.4499	0.5209		2.32	2.00	15.8	30.0
Tert-amyl methyl ether	Ave	0.7011	0.8609		2.46	2.00	22.8	30.0
2,2,4-Trimethylpentane	Ave	1.493	1.859		2.49	2.00	24.5	30.0
Heptane	Ave	0.2892	0.3421		2.37	2.00	18.3	30.0
1,2-Dichloropropane	Ave	0.3154	0.3522		2.23	2.00	11.7	30.0
Trichloroethene	Ave	0.3826	0.4439		2.32	2.00	16.0	30.0
Dibromomethane	Ave	0.3116	0.3834		2.46	2.00	23.0	30.0
Bromodichloromethane	Ave	0.5665	0.7198		2.54	2.00	27.1	30.0
1,4-Dioxane	Ave	0.1066	0.1188		2.23	2.00	11.5	30.0
Methyl methacrylate	Ave	0.4299	0.5383		2.51	2.00	25.2	30.0
Methylcyclohexane	Ave	0.6123	0.7404		2.42	2.00	20.9	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.7406	0.8325		2.25	2.00	12.4	30.0
cis-1,3-Dichloropropene	Ave	0.4555	0.5195		2.28	2.00	14.1	30.0
trans-1,3-Dichloropropene	Ave	0.4555	0.4990		2.19	2.00	9.5	30.0
Toluene	Ave	0.9449	0.9764		2.07	2.00	3.3	30.0
1,1,2-Trichloroethane	Ave	0.2802	0.3120		2.23	2.00	11.4	30.0
2-Methylthiophene	Ave	0.7698	0.8237		2.14	2.00	7.0	30.0
3-Methylthiophene	Ave	0.7596	0.8101		2.13	2.00	6.7	30.0
2-Hexanone	Ave	0.3189	0.3492		2.19	2.00	9.5	30.0
Octane	Ave	0.3379	0.3999		2.37	2.00	18.3	30.0
Dibromochloromethane	Ave	0.5333	0.6407		2.40	2.00	20.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5012	0.5500		2.20	2.00	9.8	30.0
Tetrachloroethene	Ave	0.3647	0.3979		2.18	2.00	9.1	30.0
Chlorobenzene	Ave	0.7451	0.7803		2.10	2.00	4.7	30.0
2,3-Dimethylheptane	Ave	1.221	1.473		2.41	2.00	20.6	30.0
Ethylbenzene	Ave	1.247	1.356		2.18	2.00	8.7	30.0
2-Ethylthiophene	Ave	0.9335	1.015		2.18	2.00	8.7	30.0
m-Xylene & p-Xylene	Ave	0.9354	1.027		4.40	4.00	9.8	30.0
Bromoform	Ave	0.4764	0.5172		2.17	2.00	8.6	30.0
Nonane	Ave	0.6942	0.8501		2.45	2.00	22.5	30.0
Styrene	Ave	0.6200	0.7189		2.32	2.00	16.0	30.0
o-Xylene	Ave	1.020	1.116		2.19	2.00	9.4	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6989	0.8256		2.36	2.00	18.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Lab Sample ID: CCVIS 140-5183/2 Calibration Date: 06/08/2016 10:36

Instrument ID: MG Calib Start Date: 05/23/2016 13:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 05/23/2016 19:26

Lab File ID: GCCVF08.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2193	0.2331		2.13	2.00	6.2	30.0
Isopropylbenzene	Ave	1.338	1.416		2.12	2.00	5.8	30.0
Propylbenzene	Ave	0.3806	0.3971		2.09	2.00	4.3	30.0
2-Chlorotoluene	Ave	0.3491	0.3614		2.07	2.00	3.5	30.0
4-Ethyltoluene	Ave	1.349	1.449		2.15	2.00	7.4	30.0
1,3,5-Trimethylbenzene	Ave	0.6398	0.6797		2.13	2.00	6.2	30.0
Alpha Methyl Styrene	Ave	0.4960	0.5500		2.22	2.00	10.9	30.0
Decane	Ave	0.9128	1.080		2.37	2.00	18.3	30.0
tert-Butylbenzene	Ave	1.236	1.289		2.09	2.00	4.3	30.0
1,2,4-Trimethylbenzene	Ave	1.138	1.241		2.18	2.00	9.0	30.0
sec-Butylbenzene	Ave	1.647	1.764		2.14	2.00	7.1	30.0
1,3-Dichlorobenzene	Ave	0.7725	0.7279		1.89	2.00	-5.8	30.0
Benzyl chloride	Ave	0.9886	1.091		2.21	2.00	10.4	30.0
1,4-Dichlorobenzene	Ave	0.7561	0.7303		1.93	2.00	-3.4	30.0
4-Isopropyltoluene	Ave	1.421	1.512		2.13	2.00	6.4	30.0
1,2,3-Trimethylbenzene	Ave	0.9113	0.999		2.19	2.00	9.6	30.0
Butylcyclohexane	Ave	0.9553	1.089		2.28	2.00	14.0	30.0
1,2-Dichlorobenzene	Ave	0.7534	0.7228		1.92	2.00	-4.1	30.0
Indane	Ave	1.035	1.092		2.11	2.00	5.5	30.0
Indene	Ave	0.7461	0.8062		2.16	2.00	8.1	30.0
Butylbenzene	Ave	1.330	1.495		2.25	2.00	12.4	30.0
Undecane	Ave	1.008	1.136		2.26	2.00	12.8	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	1.072	1.124		2.10	2.00	4.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2887	0.2939		2.04	2.00	1.8	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.288	1.308		2.03	2.00	1.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7994	0.8143		2.04	2.00	1.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	1.067	1.060		1.99	2.00	-0.7	30.0
Dodecane	Ave	0.8838	0.8510		1.93	2.00	-3.7	30.0
1,2,4-Trichlorobenzene	Ave	0.5226	0.3745		1.43	2.00	-28.3	30.0
Naphthalene	Ave	1.117	1.052		1.88	2.00	-5.9	30.0
Benzo(b)thiophene	Ave	0.6399	0.4886		1.53	2.00	-23.7	30.0
Hexachlorobutadiene	Ave	0.6903	0.5079		1.47	2.00	-26.4	30.0
1,2,3-Trichlorobenzene	Ave	0.5045	0.3530		1.40	2.00	-30.0	30.0
2-Methylnaphthalene	Ave	0.1299	0.0729		3.51	6.25	-43.9	50.0
1-Methylnaphthalene	Ave	0.1395	0.0709		3.18	6.25	-49.1	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7262	0.7868		4.33	4.00	8.3	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GCCVF08.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Jun-2016 10:36:30 ALS Bottle#: 1 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: P20
Misc. Info.: G060816,TO15,140-0002946-002
Operator ID: 7126 Instrument ID: MG
Sublist: chrom-MG_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Jun-2016 08:06:57 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: tajh Date: 09-Jun-2016 08:06:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.551	8.551	0.000	94	281217	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.714	10.714	0.000	97	1208815	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.475	15.475	0.000	93	1156942	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.131	17.131	0.000	82	910281	4.00	4.33	
6 Chlorodifluoromethane	67	3.714	3.714	0.000	98	54983	2.00	2.24	
7 Propene	41	3.720	3.720	0.000	97	239585	2.00	2.41	
8 Dichlorodifluoromethane	85	3.774	3.774	0.000	99	589920	2.00	2.45	
9 Chloromethane	52	3.941	3.941	0.000	98	75066	2.00	2.57	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.952	3.952	0.000	94	327386	2.00	2.18	
11 Acetaldehyde	44	4.081	4.081	0.000	86	400794	10.0	9.74	
12 Vinyl chloride	62	4.097	4.097	0.000	99	222416	2.00	2.43	
13 Butadiene	54	4.178	4.178	0.000	63	185143	2.00	2.33	
14 Butane	43	4.178	4.178	0.000	87	441796	2.00	2.56	
15 Bromomethane	94	4.475	4.475	0.000	98	187644	2.00	2.32	
16 Chloroethane	64	4.604	4.604	0.000	82	111349	2.00	2.30	
17 Ethanol	31	4.723	4.723	0.000	96	516483	10.0	11.4	
18 Vinyl bromide	106	4.885	4.885	0.000	99	170869	2.00	2.30	
19 2-Methylbutane	43	4.933	4.933	0.000	93	318059	2.00	2.60	
20 Trichlorofluoromethane	101	5.138	5.138	0.000	99	555066	2.00	2.43	
21 Acrolein	56	5.138	5.138	0.000	33	58015	2.00	2.17	
22 Acetonitrile	40	5.208	5.208	0.000	98	86419	2.00	2.11	
23 Acetone	58	5.246	5.246	0.000	99	231171	6.00	5.83	
24 Pentane	72	5.348	5.348	0.000	96	34049	2.00	2.46	
25 Isopropyl alcohol	45	5.370	5.370	0.000	96	939010	6.00	8.21	
26 Ethyl ether	31	5.499	5.499	0.000	85	266156	2.00	2.42	
27 1,1-Dichloroethene	96	5.796	5.796	0.000	94	168949	2.00	2.46	
28 Acrylonitrile	53	5.893	5.893	0.000	94	113894	2.00	2.34	
29 2-Methyl-2-propanol	59	5.931	5.931	0.000	95	297444	2.00	2.43	
30 1,1,2-Trichloro-1,2,2-trif	101	5.974	5.974	0.000	93	325486	2.00	2.36	
31 Methylene Chloride	84	6.119	6.119	0.000	94	178778	2.00	2.23	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.136	6.136	0.000	94	267119	2.00	2.19	
33 Carbon disulfide	76	6.270	6.270	0.000	99	588962	2.00	2.25	
34 trans-1,2-Dichloroethene	96	6.890	6.890	0.000	96	187919	2.00	2.12	
35 2-Methylpentane	43	6.917	6.917	0.000	97	569638	2.00	2.28	
36 Methyl tert-butyl ether	73	7.009	7.009	0.000	95	498127	2.00	2.13	
37 1,1-Dichloroethane	63	7.290	7.290	0.000	99	413153	2.00	2.24	
38 Vinyl acetate	43	7.397	7.397	0.000	100	619506	2.00	2.13	
39 2-Butanone (MEK)	72	7.813	7.813	0.000	97	82809	2.00	1.86	
40 Hexane	56	7.856	7.856	0.000	91	179625	2.00	2.16	
41 Isopropyl ether	45	8.007	8.007	0.000	96	831550	2.00	2.29	
42 cis-1,2-Dichloroethene	96	8.233	8.233	0.000	98	197499	2.00	2.16	
43 Ethyl acetate	43	8.417	8.417	0.000	97	521702	2.00	2.13	
44 Chloroform	83	8.573	8.573	0.000	96	431523	2.00	2.19	
45 Tert-butyl ethyl ether	59	8.659	8.659	0.000	98	633664	2.00	2.24	
46 Tetrahydrofuran	42	8.945	8.945	0.000	92	272143	2.00	2.15	
47 1,1,1-Trichloroethane	97	9.565	9.565	0.000	96	458206	2.00	2.22	
48 1,2-Dichloroethane	62	9.662	9.662	0.000	97	293831	2.00	2.23	
49 Benzene	78	10.158	10.158	0.000	95	511094	2.00	2.25	
50 Cyclohexane	69	10.158	10.158	0.000	89	100727	2.00	2.61	
51 n-Butanol	31	10.180	10.180	0.000	69	104037	2.00	2.75	
52 Carbon tetrachloride	117	10.185	10.185	0.000	97	442826	2.00	2.50	
53 2,3-Dimethylpentane	71	10.298	10.298	0.000	91	140710	2.00	2.40	
54 Thiophene	84	10.433	10.433	0.000	96	314992	2.00	2.32	
55 Tert-amyl methyl ether	73	10.649	10.649	0.000	93	520676	2.00	2.46	
56 Isooctane	57	10.946	10.946	0.000	96	1124069	2.00	2.49	
57 n-Heptane	71	11.328	11.328	0.000	96	206882	2.00	2.37	
58 1,2-Dichloropropane	63	11.382	11.382	0.000	86	212995	2.00	2.23	
59 Trichloroethene	130	11.425	11.425	0.000	92	268409	2.00	2.32	
60 Dibromomethane	93	11.501	11.501	0.000	89	231821	2.00	2.46	
61 Dichlorobromomethane	83	11.652	11.652	0.000	97	435260	2.00	2.54	
62 1,4-Dioxane	88	11.668	11.668	0.000	92	71837	2.00	2.23	
63 Methyl methacrylate	41	11.765	11.765	0.000	92	325508	2.00	2.51	
64 Methylcyclohexane	83	12.202	12.202	0.000	87	447748	2.00	2.42	
65 4-Methyl-2-pentanone (MIBK	43	12.617	12.617	0.000	98	503439	2.00	2.25	
66 cis-1,3-Dichloropropene	75	12.666	12.666	0.000	97	314179	2.00	2.28	
67 trans-1,3-Dichloropropene	75	13.367	13.367	0.000	93	288781	2.00	2.19	
68 Toluene	91	13.496	13.496	0.000	93	565142	2.00	2.07	
69 1,1,2-Trichloroethane	83	13.566	13.566	0.000	98	180595	2.00	2.23	
70 2-Methylthiophene	97	13.647	13.647	0.000	99	476720	2.00	2.14	
71 3-Methylthiophene	97	13.847	13.847	0.000	98	468875	2.00	2.13	
72 2-Hexanone	58	13.965	13.965	0.000	89	202091	2.00	2.19	
73 n-Octane	85	14.213	14.213	0.000	98	231443	2.00	2.37	
74 Chlorodibromomethane	129	14.267	14.267	0.000	97	370806	2.00	2.40	
75 Ethylene Dibromide	107	14.553	14.553	0.000	98	318345	2.00	2.20	
76 Tetrachloroethene	129	14.645	14.645	0.000	90	230296	2.00	2.18	
77 Chlorobenzene	112	15.524	15.524	0.000	89	451646	2.00	2.10	
78 2,3-Dimethylheptane	43	15.567	15.567	0.000	93	852494	2.00	2.41	
79 Ethylbenzene	91	15.820	15.820	0.000	99	784547	2.00	2.18	
80 2-Ethylthiophene	97	15.923	15.923	0.000	99	587294	2.00	2.18	
81 m-Xylene & p-Xylene	91	15.987	15.987	0.000	98	1189359	4.00	4.40	
83 Bromoform	173	16.419	16.419	0.000	93	299322	2.00	2.17	
82 n-Nonane	57	16.430	16.430	0.000	94	492032	2.00	2.45	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	16.451	16.451	0.000	97	416069	2.00	2.32	
85 o-Xylene	91	16.510	16.510	0.000	98	645820	2.00	2.19	
86 1,1,2,2-Tetrachloroethane	83	16.834	16.834	0.000	99	477819	2.00	2.36	
87 1,2,3-Trichloropropane	110	16.990	16.990	0.000	95	134884	2.00	2.13	
88 Isopropylbenzene	105	17.104	17.104	0.000	98	819279	2.00	2.12	
89 N-Propylbenzene	120	17.654	17.654	0.000	98	229823	2.00	2.09	
90 2-Chlorotoluene	126	17.697	17.697	0.000	98	209180	2.00	2.07	
91 4-Ethyltoluene	105	17.810	17.810	0.000	98	838362	2.00	2.15	
92 1,3,5-Trimethylbenzene	120	17.891	17.891	0.000	91	393413	2.00	2.13	
93 Alpha Methyl Styrene	118	18.123	18.123	0.000	85	318330	2.00	2.22	
94 n-Decane	57	18.198	18.198	0.000	86	624837	2.00	2.37	
95 tert-Butylbenzene	119	18.317	18.317	0.000	89	746036	2.00	2.09	
96 1,2,4-Trimethylbenzene	105	18.333	18.333	0.000	97	718230	2.00	2.18	
97 sec-Butylbenzene	105	18.592	18.592	0.000	98	1021002	2.00	2.14	
98 1,3-Dichlorobenzene	146	18.603	18.603	0.000	98	421292	2.00	1.89	
99 Benzyl chloride	91	18.678	18.678	0.000	97	631733	2.00	2.21	
100 1,4-Dichlorobenzene	146	18.689	18.689	0.000	94	422688	2.00	1.93	
101 4-Isopropyltoluene	119	18.759	18.759	0.000	96	875362	2.00	2.13	
102 1,2,3-Trimethylbenzene	105	18.813	18.813	0.000	99	578263	2.00	2.19	
103 Butylcyclohexane	83	18.872	18.872	0.000	86	630472	2.00	2.28	
104 1,2-Dichlorobenzene	146	19.056	19.056	0.000	78	418344	2.00	1.92	
105 2,3-Dihydroindene	117	19.056	19.056	0.000	92	631864	2.00	2.11	
106 Indene	116	19.185	19.185	0.000	90	466622	2.00	2.16	
107 n-Butylbenzene	91	19.201	19.201	0.000	98	865169	2.00	2.25	
108 Undecane	57	19.530	19.530	0.000	91	657768	2.00	2.26	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.579	19.579	0.000	98	650794	2.00	2.10	
110 1,2-Dibromo-3-Chloropropan	157	19.660	19.660	0.000	86	170098	2.00	2.04	
111 1,2,4,5-Tetramethylbenzene	119	19.967	19.967	0.000	96	757307	2.00	2.03	
112 1,2,3,5-Tetramethylbenzene	119	20.021	20.021	0.000	94	471314	2.00	2.04	
113 1,2,3,4-Tetramethylbenzene	119	20.415	20.415	0.000	97	613671	2.00	1.99	
114 Dodecane	57	20.592	20.592	0.000	89	492537	2.00	1.93	
115 1,2,4-Trichlorobenzene	180	20.760	20.760	0.000	93	216748	2.00	1.43	
116 Naphthalene	128	20.894	20.894	0.000	99	608609	2.00	1.88	
117 Benzo(b)thiophene	134	20.997	20.997	0.000	99	282776	2.00	1.53	
118 Hexachlorobutadiene	225	21.116	21.116	0.000	93	293933	2.00	1.47	
119 1,2,3-Trichlorobenzene	180	21.175	21.175	0.000	93	204319	2.00	1.40	
120 2-Methylnaphthalene	142	21.957	21.957	0.000	99	131905	6.25	3.51	
121 1-Methylnaphthalene	142	22.135	22.135	0.000	99	128291	6.25	3.18	
A 124 Toluene Range	1	13.491	(13.456-13.526)		0	1473492	2.00	2.17	
A 125 C8 Range	1	14.207	(14.183-14.253)		0	2627337	2.00	2.51	
S 126 Xylenes, Total	100				0		6.00	6.58	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.28	

Reagents:

40CV101S_00011	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

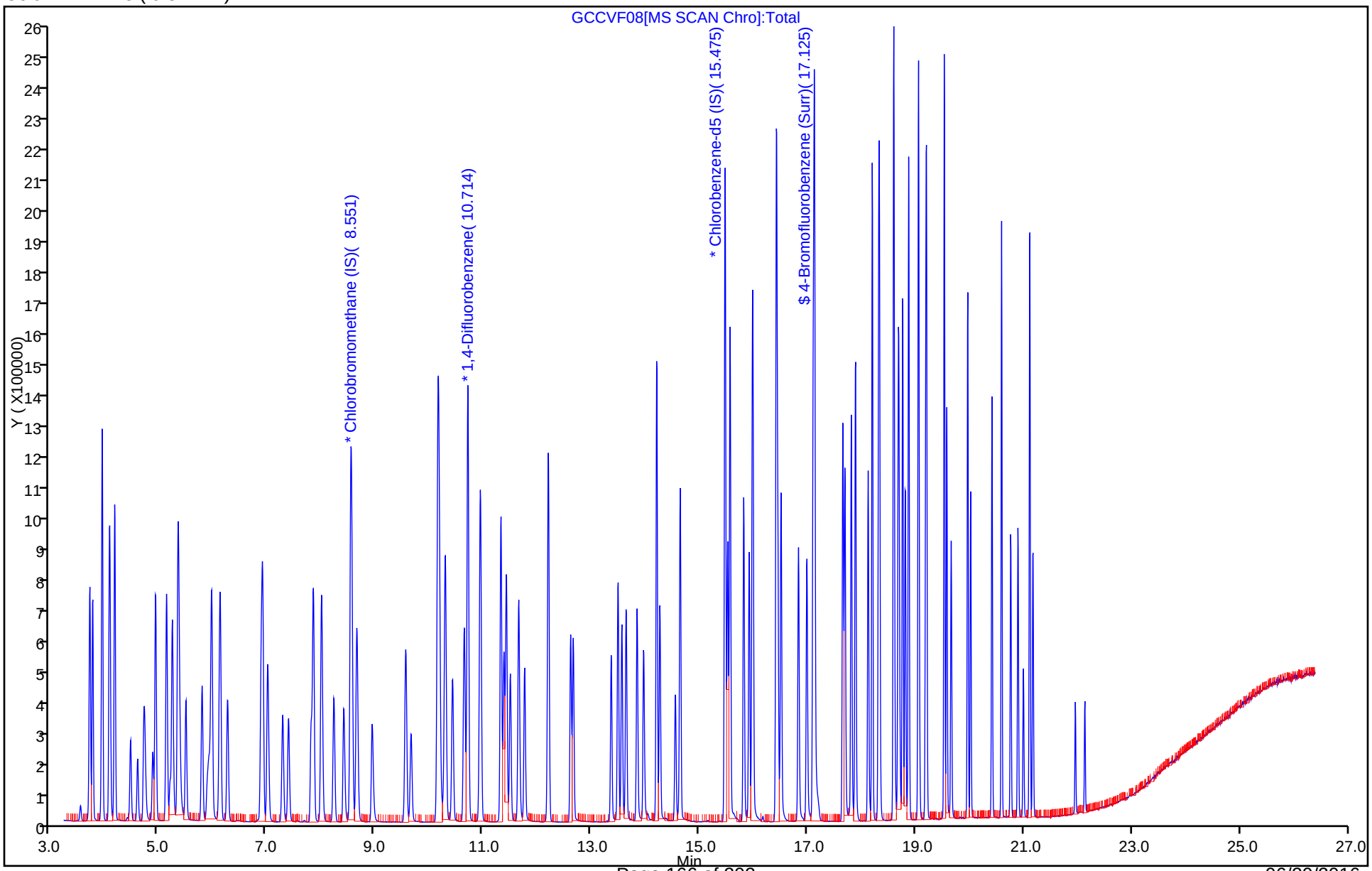
Report Date: 09-Jun-2016 08:06:58 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GCCVF08.D

Injection Date:	08-Jun-2016 10:36:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GBFBE23.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	23-May-2016 13:11:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	bfb,,3,,,				
Misc. Info.:	140-0002910-001				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	26-May-2016 14:55:41	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK048				
First Level Reviewer: barlozhetskayaa		Date:	23-May-2016 13:53:47		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	5.084	4.459	0.625	0	632695	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

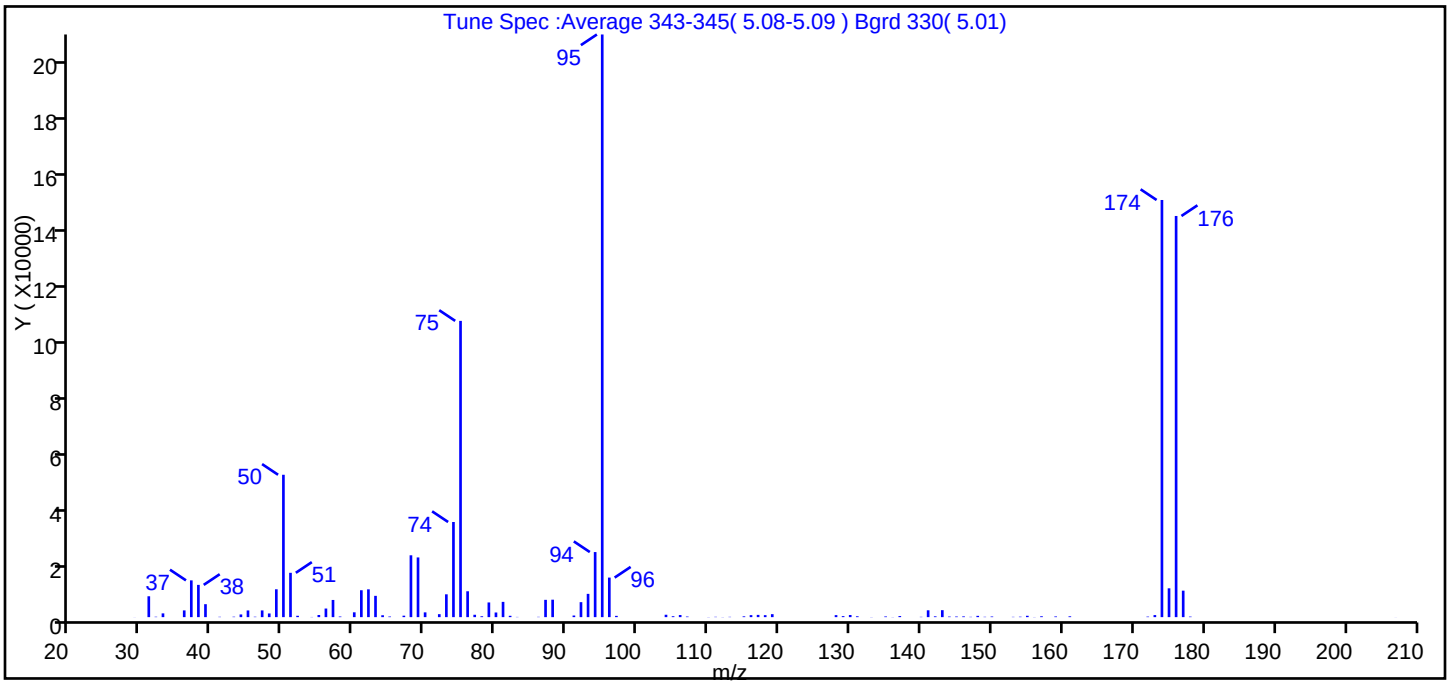
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GBFBE23.D
Injection Date: 23-May-2016 13:11:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	24.4
75	30 to 60% of m/z 95	50.8
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	71.6
175	5 to 9% of m/z 174	4.9 (6.9)
176	Greater than 95% but less than 101% of m/z 174	68.9 (96.2)
177	5 to 9% of m/z 176	4.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GBFBE23.D\MG_TO15.rslt\spectra.d
Injection Date: 23-May-2016 13:11:30
Spectrum: Tune Spec :Average 343-345(5.08-5.09) Bgrd 330(5.01)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 103

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	25	62.00	10024	94.00	23456	141.00	2469
31.00	7523	63.00	7673	95.00	209984	142.00	288
32.00	147	64.00	682	96.00	14257	143.00	2513
33.00	1358	65.00	220	97.00	464	144.00	206
36.00	2432	67.00	526	104.00	864	145.00	223
37.00	13253	68.00	22288	105.00	327	146.00	270
38.00	11627	69.00	21520	106.00	764	147.00	111
39.00	4672	70.00	1722	107.00	211	148.00	466
41.00	123	72.00	1072	110.00	53	149.00	121
43.00	158	73.00	8230	111.00	118	150.00	228
44.00	972	74.00	34288	112.00	50	153.00	108
45.00	2414	75.00	106768	113.00	110	154.00	160
46.00	148	76.00	9326	115.00	287	155.00	490
47.00	2424	77.00	856	116.00	723	156.00	54
48.00	1327	78.00	314	117.00	811	157.00	310
49.00	10043	79.00	5297	118.00	713	159.00	250
50.00	51312	80.00	1676	119.00	1074	161.00	297
51.00	15981	81.00	5504	128.00	724	172.00	192
52.00	491	82.00	487	129.00	362	173.00	742
54.00	64	83.00	77	130.00	771	174.00	150336
55.00	772	86.00	109	131.00	308	175.00	10392
56.00	3103	87.00	6235	133.00	51	176.00	144576
57.00	6194	88.00	6292	135.00	245	177.00	9546
58.00	220	91.00	586	136.00	50	178.00	192
60.00	1742	92.00	5399	137.00	389	207.00	20
61.00	9697	93.00	8392	140.00	111		

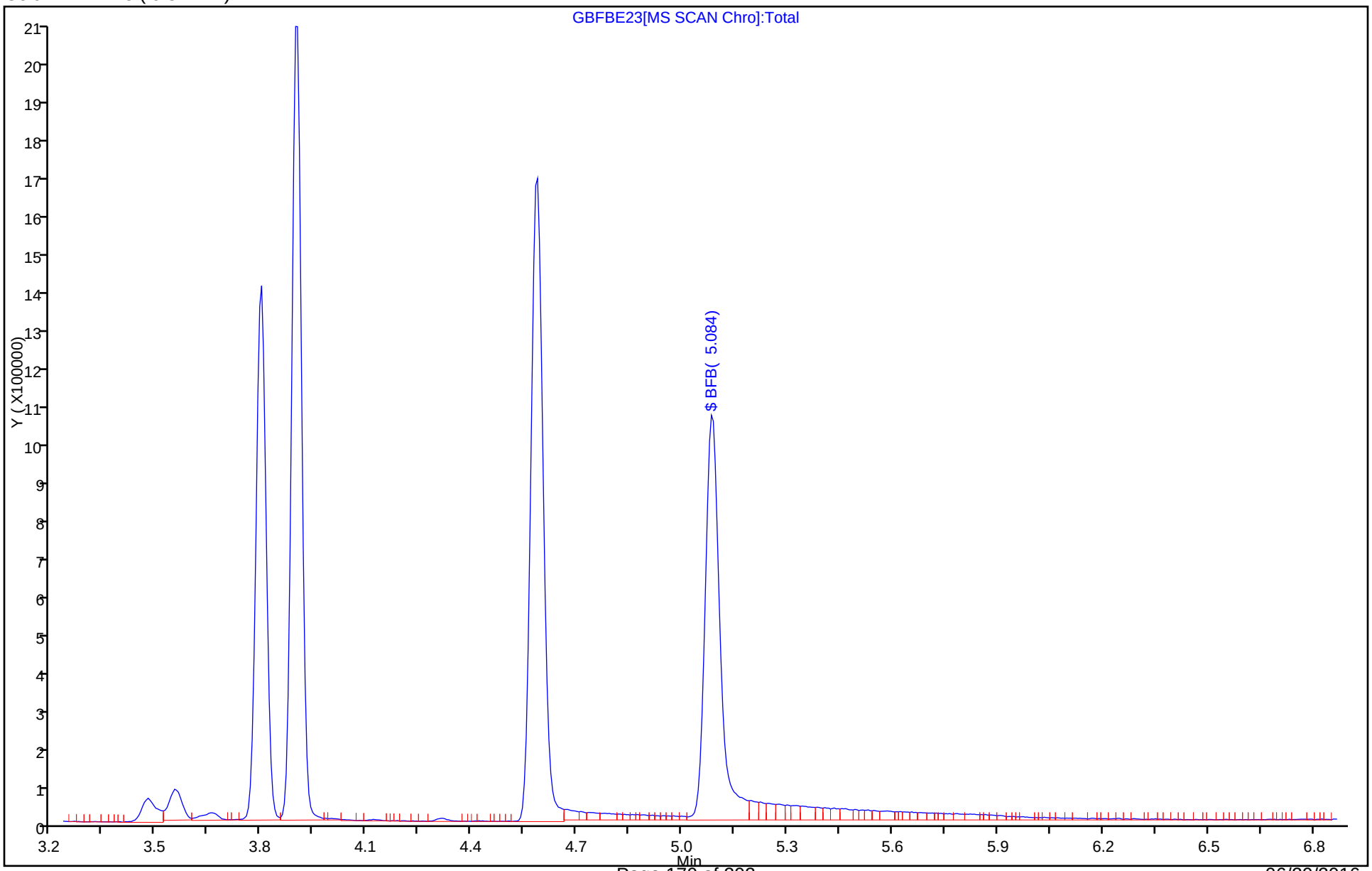
Report Date: 26-May-2016 14:55:42 Chrom Revision: 2.2 16-May-2016 16:09:38

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GBFBE23.D

Injection Date:	23-May-2016 13:11:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GBFBF08.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	08-Jun-2016 10:02:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	bfb,,3,,,				
Misc. Info.:	G060816,BFB,140-0002946-001				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jun-2016 08:05:48	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK009				
First Level Reviewer: tajh		Date:	09-Jun-2016 08:05:48		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	5.068	5.068	0.000	0	510662	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

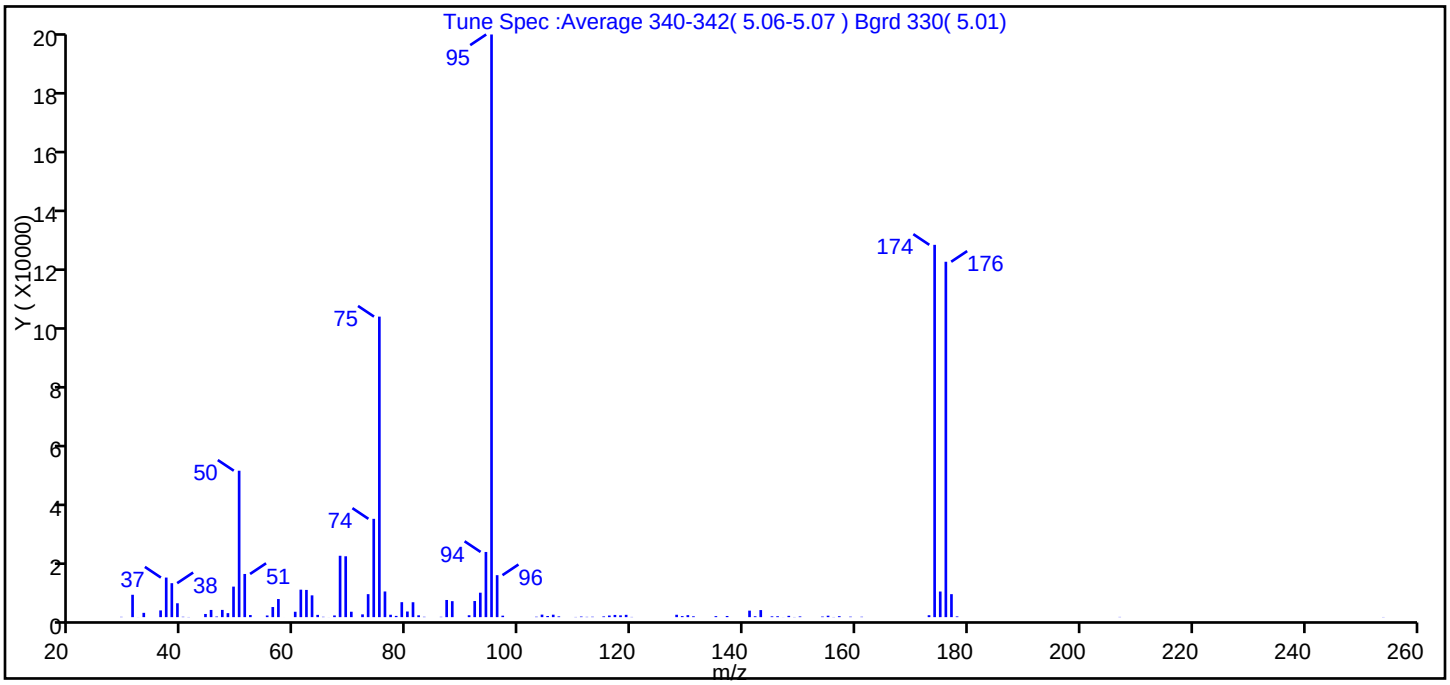
MAbfb1_00003 Amount Added: 40.00 Units: ml

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GBFBF08.D
Injection Date: 08-Jun-2016 10:02:30 Instrument ID: MG
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MG_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	25.1
75	30 to 60% of m/z 95	51.6
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.3 (0.5)
174	50 to 120% of m/z 95	63.9
175	5 to 9% of m/z 174	4.4 (6.9)
176	Greater than 95% but less than 101% of m/z 174	61.0 (95.5)
177	5 to 9% of m/z 176	3.9 (6.5)

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GBFBF08.D\MG_TO15.rslt\spectra.d
Injection Date: 08-Jun-2016 10:02:30
Spectrum: Tune Spec :Average 340-342(5.06-5.07) Bgrd 330(5.01)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 100

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	92	62.00	8879	92.00	5257	135.00	335
31.00	7298	63.00	7108	93.00	7976	137.00	377
32.00	17	64.00	737	94.00	21264	141.00	2123
33.00	1404	65.00	112	95.00	190080	142.00	299
36.00	2199	66.00	14	96.00	13693	143.00	2305
37.00	12913	67.00	552	97.00	477	145.00	265
38.00	11080	68.00	20024	103.00	137	146.00	296
39.00	4528	69.00	19856	104.00	825	147.00	18
40.00	119	70.00	1769	105.00	375	148.00	426
41.00	53	72.00	905	106.00	802	149.00	53
44.00	1037	73.00	7502	107.00	244	150.00	234
45.00	2350	74.00	32072	110.00	64	154.00	193
46.00	198	75.00	98040	111.00	198	155.00	469
47.00	2362	76.00	8375	112.00	95	156.00	52
48.00	1311	77.00	779	113.00	131	157.00	308
49.00	9961	78.00	410	115.00	243	159.00	153
50.00	47768	79.00	4885	116.00	533	161.00	123
51.00	14085	80.00	1840	117.00	720	173.00	627
52.00	682	81.00	4864	118.00	581	174.00	121456
55.00	542	82.00	599	119.00	753	175.00	8359
56.00	3297	83.00	114	120.00	69	176.00	115936
57.00	5907	86.00	108	128.00	778	177.00	7502
58.00	4	87.00	5598	129.00	339	178.00	238
60.00	1758	88.00	5213	130.00	648	207.00	72
61.00	8963	91.00	615	131.00	274	254.00	52

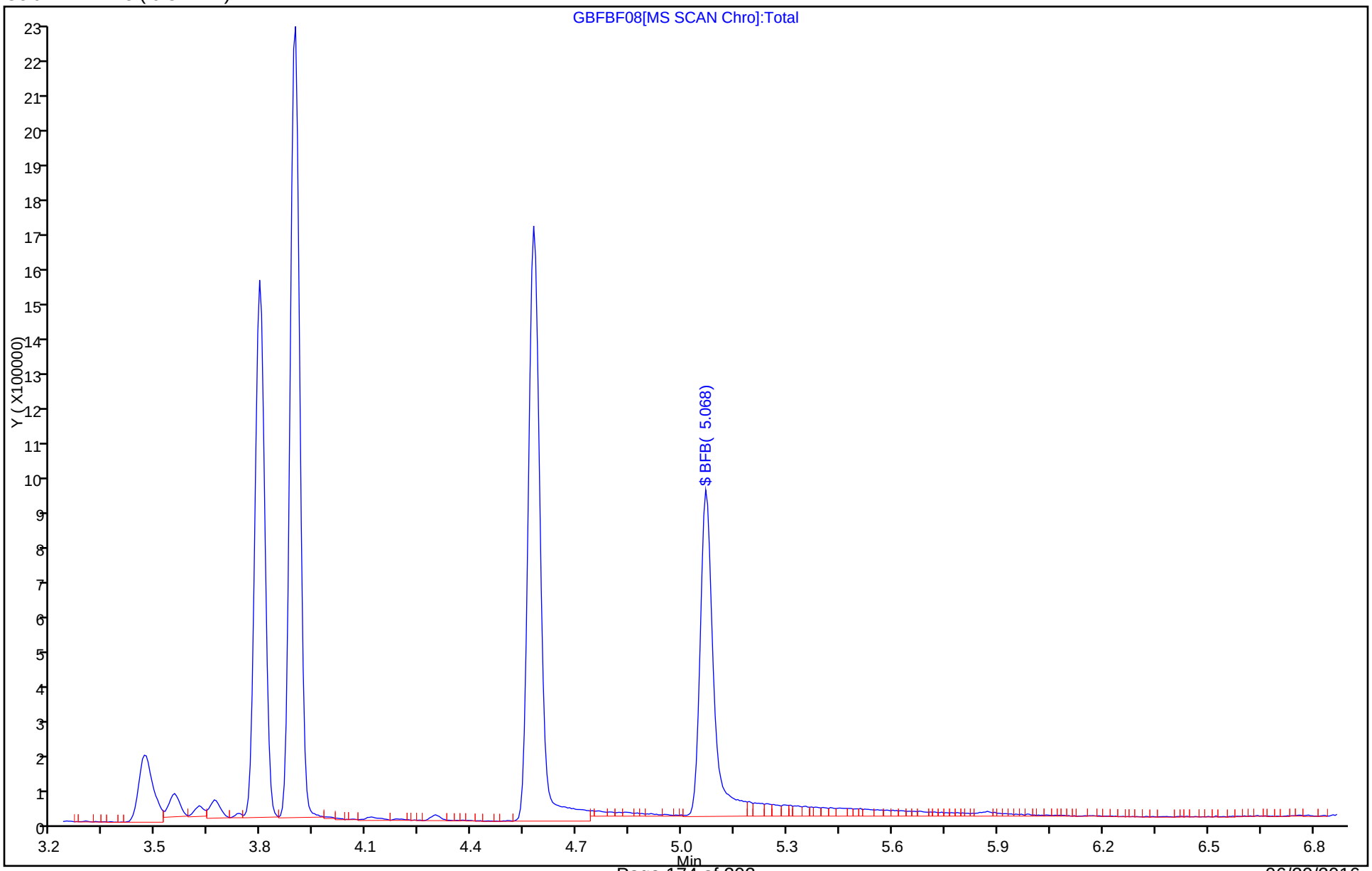
Report Date: 09-Jun-2016 08:05:49 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GBFBF08.D

Injection Date:	08-Jun-2016 10:02:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-5183/6

Matrix: Air Lab File ID: GMB500F08.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 06/08/2016 14:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-5183/6

Matrix: Air Lab File ID: GMB500F08.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 06/08/2016 14:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GMB500F08.D
Lims ID: mb
Client ID:
Sample Type: MB
Inject. Date: 08-Jun-2016 14:10:30 ALS Bottle#: 16 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: MB500
Misc. Info.: G060816,T15,140-0002946-006
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Jun-2016 08:10:21 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: tajh Date: 08-Jun-2016 14:46:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.535	8.551	-0.016	95	297759	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.703	10.714	-0.011	97	1456045	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.470	15.475	-0.005	93	1347180	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.125	17.131	-0.006	82	1022995	4.00	4.18	
25 Isopropyl alcohol	45	5.375	5.370	0.005	98	6666		0.0550	
55 Tert-amyl methyl ether	73	10.703	10.649	0.054	39	18610		0.0729	
65 4-Methyl-2-pentanone (MIBK	43	12.623	12.617	0.006	99	17265		0.0640	
T 128 Propane TIC	29	3.693	3.718	-0.032	36	32632		0.4384	
T 129 Methanol TIC	31	4.081	4.032	0.041	49	31662		0.4253	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

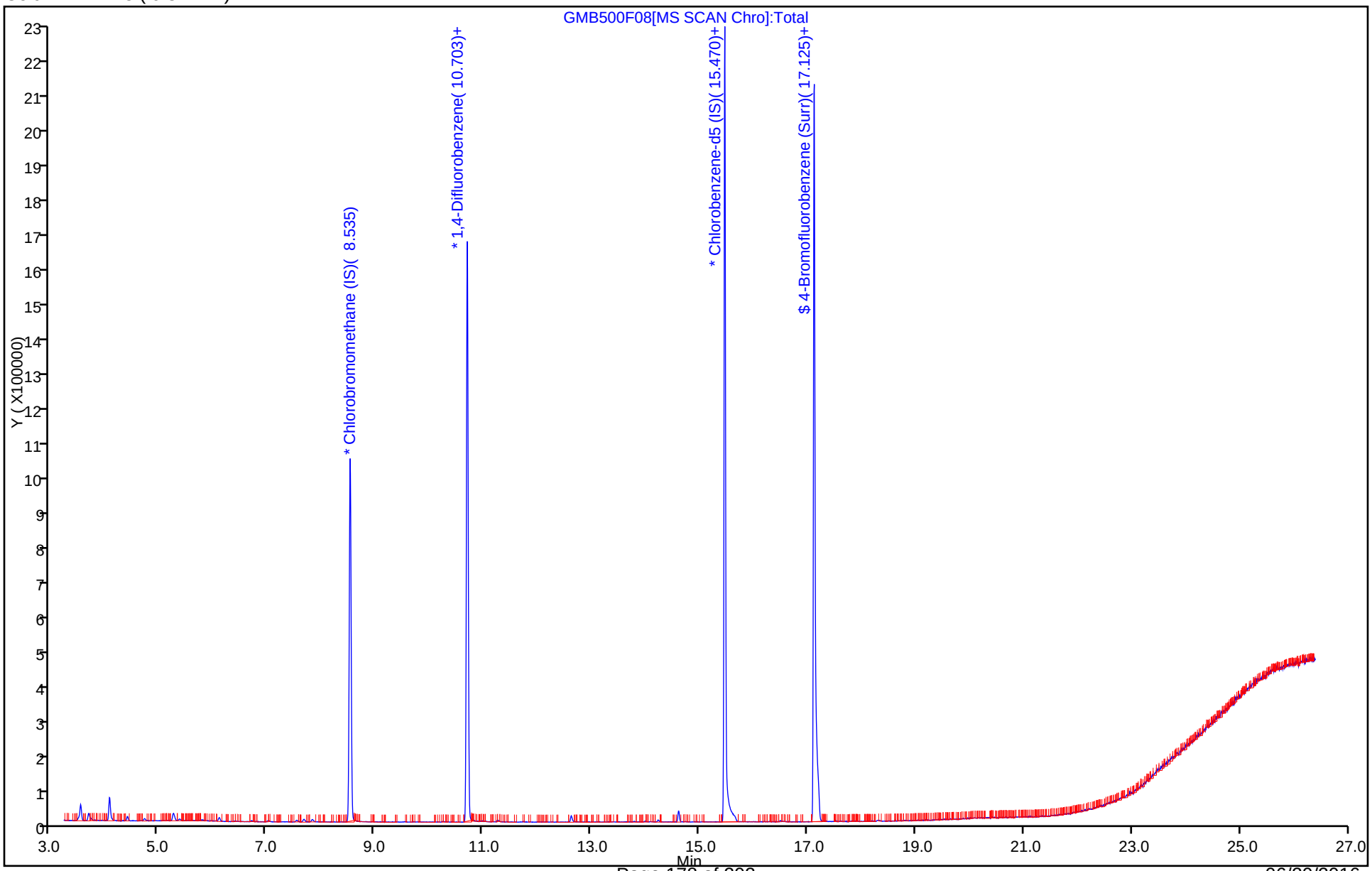
Report Date: 09-Jun-2016 08:10:33 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GMB500F08.D

Injection Date:	08-Jun-2016 14:10:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GMB500F08.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	08-Jun-2016 14:10:30	ALS Bottle#:	16	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	MB500				
Misc. Info.:	G060816,T15,140-0002946-006				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Jun-2016 08:10:21	Calib Date:	23-May-2016 19:26:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK009				

First Level Reviewer: tajh Date: 08-Jun-2016 14:46:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.18	104.57

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-5183/1002

Matrix: Air Lab File ID: GCCVF08-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 06/08/2016 10:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5183 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.25		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.50		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.24		0.080	0.015
67-66-3	Chloroform	119.38	2.19		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.16		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.45		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.24		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.23		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.46		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.18		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.23		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.13		0.40	0.068
91-20-3	Naphthalene	128.17	1.88		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.18		0.080	0.016
108-88-3	Toluene	92.14	2.07		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.12		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.43		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.22		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.23		0.080	0.021
79-01-6	Trichloroethene	131.39	2.32		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.19		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.18		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.13		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.43		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.59		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	108		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GCCVF08-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Jun-2016 10:36:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: P20
Misc. Info.: G060816,TO15,140-0002946-002
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Jun-2016 08:06:57 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: tajh Date: 09-Jun-2016 08:06:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.551	8.551	0.000	94	281217	4.00	4.00	
* 2 1,4-Difluorobenzene	114	10.714	10.714	0.000	97	1208815	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.475	15.475	0.000	93	1156942	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.131	17.131	0.000	82	910281	4.00	4.33	
6 Chlorodifluoromethane	67	3.714	3.714	0.000	98	54983	2.00	2.24	
7 Propene	41	3.720	3.720	0.000	97	239585	2.00	2.41	
8 Dichlorodifluoromethane	85	3.774	3.774	0.000	99	589920	2.00	2.45	
9 Chloromethane	52	3.941	3.941	0.000	98	75066	2.00	2.57	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.952	3.952	0.000	94	327386	2.00	2.18	
11 Acetaldehyde	44	4.081	4.081	0.000	86	400794	10.0	9.74	
12 Vinyl chloride	62	4.097	4.097	0.000	99	222416	2.00	2.43	
13 Butadiene	54	4.178	4.178	0.000	63	185143	2.00	2.33	
14 Butane	43	4.178	4.178	0.000	87	441796	2.00	2.56	
15 Bromomethane	94	4.475	4.475	0.000	98	187644	2.00	2.32	
16 Chloroethane	64	4.604	4.604	0.000	82	111349	2.00	2.30	
17 Ethanol	31	4.723	4.723	0.000	96	516483	10.0	11.4	
18 Vinyl bromide	106	4.885	4.885	0.000	99	170869	2.00	2.30	
19 2-Methylbutane	43	4.933	4.933	0.000	93	318059	2.00	2.60	
20 Trichlorofluoromethane	101	5.138	5.138	0.000	99	555066	2.00	2.43	
21 Acrolein	56	5.138	5.138	0.000	33	58015	2.00	2.17	
22 Acetonitrile	40	5.208	5.208	0.000	98	86419	2.00	2.11	
23 Acetone	58	5.246	5.246	0.000	99	231171	6.00	5.83	
24 Pentane	72	5.348	5.348	0.000	96	34049	2.00	2.46	
25 Isopropyl alcohol	45	5.370	5.370	0.000	96	939010	6.00	8.21	
26 Ethyl ether	31	5.499	5.499	0.000	85	266156	2.00	2.42	
27 1,1-Dichloroethene	96	5.796	5.796	0.000	94	168949	2.00	2.46	
28 Acrylonitrile	53	5.893	5.893	0.000	94	113894	2.00	2.34	
29 2-Methyl-2-propanol	59	5.931	5.931	0.000	95	297444	2.00	2.43	
30 1,1,2-Trichloro-1,2,2-trif	101	5.974	5.974	0.000	93	325486	2.00	2.36	
31 Methylene Chloride	84	6.119	6.119	0.000	94	178778	2.00	2.23	
32 3-Chloro-1-propene	39	6.136	6.136	0.000	94	267119	2.00	2.19	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.270	6.270	0.000	99	588962	2.00	2.25	
34 trans-1,2-Dichloroethene	96	6.890	6.890	0.000	96	187919	2.00	2.12	
35 2-Methylpentane	43	6.917	6.917	0.000	97	569638	2.00	2.28	
36 Methyl tert-butyl ether	73	7.009	7.009	0.000	95	498127	2.00	2.13	
37 1,1-Dichloroethane	63	7.290	7.290	0.000	99	413153	2.00	2.24	
38 Vinyl acetate	43	7.397	7.397	0.000	100	619506	2.00	2.13	
39 2-Butanone (MEK)	72	7.813	7.813	0.000	97	82809	2.00	1.86	
40 Hexane	56	7.856	7.856	0.000	91	179625	2.00	2.16	
41 Isopropyl ether	45	8.007	8.007	0.000	96	831550	2.00	2.29	
42 cis-1,2-Dichloroethene	96	8.233	8.233	0.000	98	197499	2.00	2.16	
43 Ethyl acetate	43	8.417	8.417	0.000	97	521702	2.00	2.13	
44 Chloroform	83	8.573	8.573	0.000	96	431523	2.00	2.19	
45 Tert-butyl ethyl ether	59	8.659	8.659	0.000	98	633664	2.00	2.24	
46 Tetrahydrofuran	42	8.945	8.945	0.000	92	272143	2.00	2.15	
47 1,1,1-Trichloroethane	97	9.565	9.565	0.000	96	458206	2.00	2.22	
48 1,2-Dichloroethane	62	9.662	9.662	0.000	97	293831	2.00	2.23	
49 Benzene	78	10.158	10.158	0.000	95	511094	2.00	2.25	
50 Cyclohexane	69	10.158	10.158	0.000	89	100727	2.00	2.61	
51 n-Butanol	31	10.180	10.180	0.000	69	104037	2.00	2.75	
52 Carbon tetrachloride	117	10.185	10.185	0.000	97	442826	2.00	2.50	
53 2,3-Dimethylpentane	71	10.298	10.298	0.000	91	140710	2.00	2.40	
54 Thiophene	84	10.433	10.433	0.000	96	314992	2.00	2.32	
55 Tert-amyl methyl ether	73	10.649	10.649	0.000	93	520676	2.00	2.46	
56 Isooctane	57	10.946	10.946	0.000	96	1124069	2.00	2.49	
57 n-Heptane	71	11.328	11.328	0.000	96	206882	2.00	2.37	
58 1,2-Dichloropropane	63	11.382	11.382	0.000	86	212995	2.00	2.23	
59 Trichloroethene	130	11.425	11.425	0.000	92	268409	2.00	2.32	
60 Dibromomethane	93	11.501	11.501	0.000	89	231821	2.00	2.46	
61 Dichlorobromomethane	83	11.652	11.652	0.000	97	435260	2.00	2.54	
62 1,4-Dioxane	88	11.668	11.668	0.000	92	71837	2.00	2.23	
63 Methyl methacrylate	41	11.765	11.765	0.000	92	325508	2.00	2.51	
64 Methylcyclohexane	83	12.202	12.202	0.000	87	447748	2.00	2.42	
65 4-Methyl-2-pentanone (MIBK	43	12.617	12.617	0.000	98	503439	2.00	2.25	
66 cis-1,3-Dichloropropene	75	12.666	12.666	0.000	97	314179	2.00	2.28	
67 trans-1,3-Dichloropropene	75	13.367	13.367	0.000	93	288781	2.00	2.19	
68 Toluene	91	13.496	13.496	0.000	93	565142	2.00	2.07	
69 1,1,2-Trichloroethane	83	13.566	13.566	0.000	98	180595	2.00	2.23	
70 2-Methylthiophene	97	13.647	13.647	0.000	99	476720	2.00	2.14	
71 3-Methylthiophene	97	13.847	13.847	0.000	98	468875	2.00	2.13	
72 2-Hexanone	58	13.965	13.965	0.000	89	202091	2.00	2.19	
73 n-Octane	85	14.213	14.213	0.000	98	231443	2.00	2.37	
74 Chlorodibromomethane	129	14.267	14.267	0.000	97	370806	2.00	2.40	
75 Ethylene Dibromide	107	14.553	14.553	0.000	98	318345	2.00	2.20	
76 Tetrachloroethene	129	14.645	14.645	0.000	90	230296	2.00	2.18	
77 Chlorobenzene	112	15.524	15.524	0.000	89	451646	2.00	2.10	
78 2,3-Dimethylheptane	43	15.567	15.567	0.000	93	852494	2.00	2.41	
79 Ethylbenzene	91	15.820	15.820	0.000	99	784547	2.00	2.18	
80 2-Ethylthiophene	97	15.923	15.923	0.000	99	587294	2.00	2.18	
81 m-Xylene & p-Xylene	91	15.987	15.987	0.000	98	1189359	4.00	4.40	
83 Bromoform	173	16.419	16.419	0.000	93	299322	2.00	2.17	
82 n-Nonane	57	16.430	16.430	0.000	94	492032	2.00	2.45	
84 Styrene	104	16.451	16.451	0.000	97	416069	2.00	2.32	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	16.510	16.510	0.000	98	645820	2.00	2.19	
86 1,1,2,2-Tetrachloroethane	83	16.834	16.834	0.000	99	477819	2.00	2.36	
87 1,2,3-Trichloropropane	110	16.990	16.990	0.000	95	134884	2.00	2.13	
88 Isopropylbenzene	105	17.104	17.104	0.000	98	819279	2.00	2.12	
89 N-Propylbenzene	120	17.654	17.654	0.000	98	229823	2.00	2.09	
90 2-Chlorotoluene	126	17.697	17.697	0.000	98	209180	2.00	2.07	
91 4-Ethyltoluene	105	17.810	17.810	0.000	98	838362	2.00	2.15	
92 1,3,5-Trimethylbenzene	120	17.891	17.891	0.000	91	393413	2.00	2.13	
93 Alpha Methyl Styrene	118	18.123	18.123	0.000	85	318330	2.00	2.22	
94 n-Decane	57	18.198	18.198	0.000	86	624837	2.00	2.37	
95 tert-Butylbenzene	119	18.317	18.317	0.000	89	746036	2.00	2.09	
96 1,2,4-Trimethylbenzene	105	18.333	18.333	0.000	97	718230	2.00	2.18	
97 sec-Butylbenzene	105	18.592	18.592	0.000	98	1021002	2.00	2.14	
98 1,3-Dichlorobenzene	146	18.603	18.603	0.000	98	421292	2.00	1.89	
99 Benzyl chloride	91	18.678	18.678	0.000	97	631733	2.00	2.21	
100 1,4-Dichlorobenzene	146	18.689	18.689	0.000	94	422688	2.00	1.93	
101 4-Isopropyltoluene	119	18.759	18.759	0.000	96	875362	2.00	2.13	
102 1,2,3-Trimethylbenzene	105	18.813	18.813	0.000	99	578263	2.00	2.19	
103 Butylcyclohexane	83	18.872	18.872	0.000	86	630472	2.00	2.28	
104 1,2-Dichlorobenzene	146	19.056	19.056	0.000	78	418344	2.00	1.92	
105 2,3-Dihydroindene	117	19.056	19.056	0.000	92	631864	2.00	2.11	
106 Indene	116	19.185	19.185	0.000	90	466622	2.00	2.16	
107 n-Butylbenzene	91	19.201	19.201	0.000	98	865169	2.00	2.25	
108 Undecane	57	19.530	19.530	0.000	91	657768	2.00	2.26	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.579	19.579	0.000	98	650794	2.00	2.10	
110 1,2-Dibromo-3-Chloropropan	157	19.660	19.660	0.000	86	170098	2.00	2.04	
111 1,2,4,5-Tetramethylbenzene	119	19.967	19.967	0.000	96	757307	2.00	2.03	
112 1,2,3,5-Tetramethylbenzene	119	20.021	20.021	0.000	94	471314	2.00	2.04	
113 1,2,3,4-Tetramethylbenzene	119	20.415	20.415	0.000	97	613671	2.00	1.99	
114 Dodecane	57	20.592	20.592	0.000	89	492537	2.00	1.93	
115 1,2,4-Trichlorobenzene	180	20.760	20.760	0.000	93	216748	2.00	1.43	
116 Naphthalene	128	20.894	20.894	0.000	99	608609	2.00	1.88	
117 Benzo(b)thiophene	134	20.997	20.997	0.000	99	282776	2.00	1.53	
118 Hexachlorobutadiene	225	21.116	21.116	0.000	93	293933	2.00	1.47	
119 1,2,3-Trichlorobenzene	180	21.175	21.175	0.000	93	204319	2.00	1.40	
120 2-Methylnaphthalene	142	21.957	21.957	0.000	99	131905	6.25	3.51	
121 1-Methylnaphthalene	142	22.135	22.135	0.000	99	128291	6.25	3.18	
A 124 Toluene Range	1	13.491	(13.456-13.526)		0	1473492	2.00	2.17	
A 125 C8 Range	1	14.207	(14.183-14.253)		0	2627337	2.00	2.51	
S 126 Xylenes, Total	100				0		6.00	6.58	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.28	

Reagents:

40CV101S_00011	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

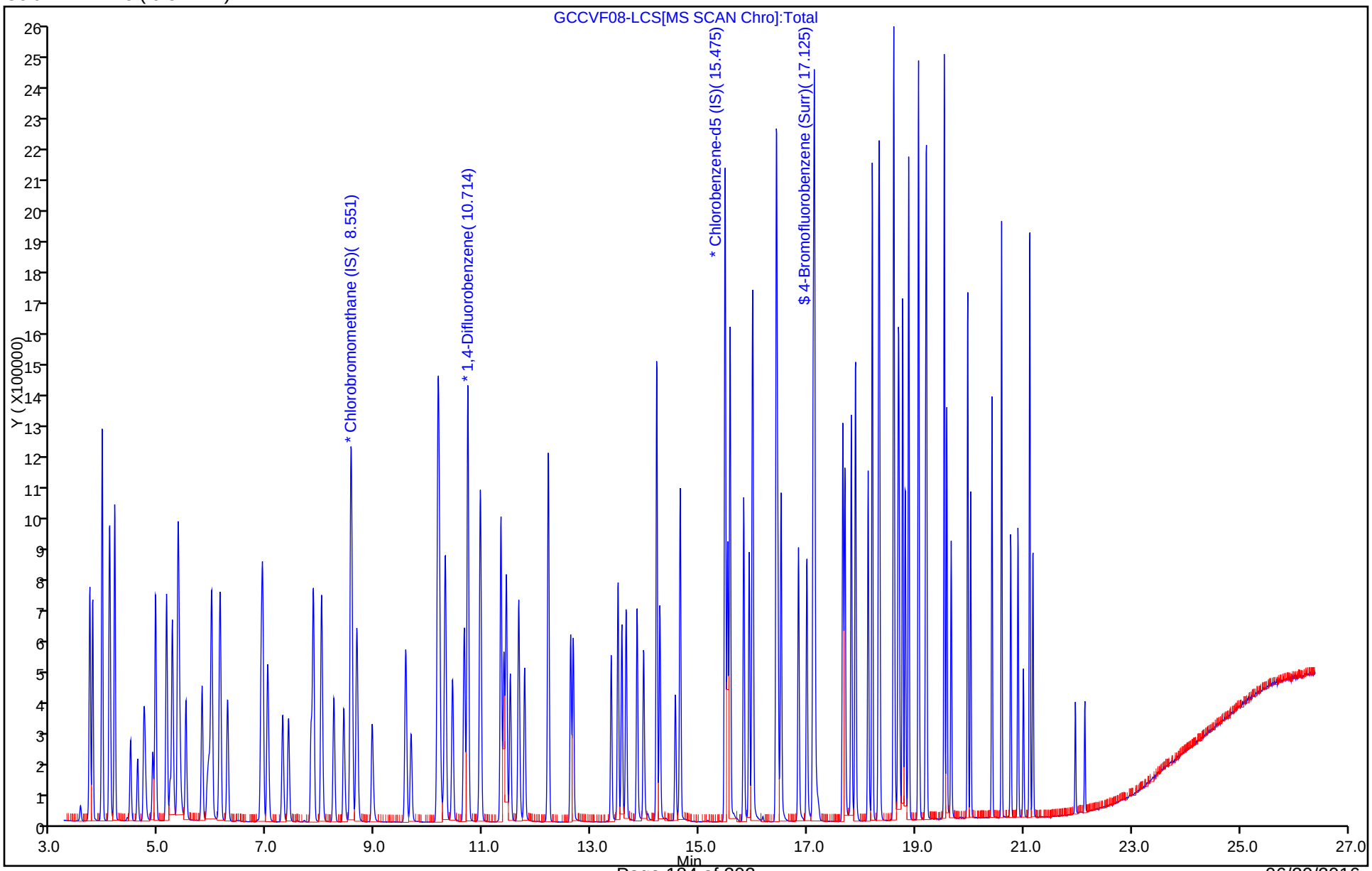
Report Date: 09-Jun-2016 08:07:01 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GCCVF08-LCS.d

Injection Date:	08-Jun-2016 10:36:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\GCCVF08-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Jun-2016 10:36:30 ALS Bottle#: 1 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: P20
Misc. Info.: G060816,TO15,140-0002946-002
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20160606-2946.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Jun-2016 08:06:57 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: tajh Date: 09-Jun-2016 08:06:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.33	108.35

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Instrument ID: MG Start Date: 05/23/2016 13:11

Analysis Batch Number: 5077 End Date: 05/23/2016 20:50

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5077/1		05/23/2016 13:11	1	GBFBE23.D	RTX-5 0.32(mm)
IC 140-5077/2		05/23/2016 13:43	1	GE23ICL1.D	RTX-5 0.32(mm)
IC 140-5077/3		05/23/2016 14:25	1	GE23ICL2.D	RTX-5 0.32(mm)
IC 140-5077/4		05/23/2016 15:07	1	GE23ICL3.D	RTX-5 0.32(mm)
IC 140-5077/5		05/23/2016 15:49	1	GE23ICL4.D	RTX-5 0.32(mm)
IC 140-5077/6		05/23/2016 16:34	1	GE23ICL5.D	RTX-5 0.32(mm)
ICIS 140-5077/7		05/23/2016 17:18	1	GE23ICL6.D	RTX-5 0.32(mm)
IC 140-5077/8		05/23/2016 18:01	1	GE23ICL7.D	RTX-5 0.32(mm)
IC 140-5077/9		05/23/2016 18:43	1	GE23ICL8.D	RTX-5 0.32(mm)
IC 140-5077/10		05/23/2016 19:26	1	GE23ICL9.D	RTX-5 0.32(mm)
ICV 140-5077/12		05/23/2016 20:50	1	GE19ICV.D	RTX-5 0.32(mm)

160523.zzz

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	33.1	5/23/2016	1:11:30 PM
ICAL01	7 - 101 mL	11.1	5/23/2016	1:43:45 PM
ICAL02	8 - 101 mL	26.8	5/23/2016	2:25:34 PM
ICAL03	8 - 201 mL	25.7	5/23/2016	3:07:36 PM
ICAL04	10 - 102 mL	27	5/23/2016	3:49:30 PM
ICAL05	10 - 201 mL	25.5	5/23/2016	4:34:08 PM
ICAL06	11 - 201 mL	26.5	5/23/2016	5:18:12 PM
ICAL07	12 - 201 mL	21.4	5/23/2016	6:01:40 PM
ICAL08	13 - 201 mL	19.9	5/23/2016	6:43:56 PM
ICAL09	14 - 201 mL	24.1	5/23/2016	7:26:57 PM
PRIME	15 - 21 mL	6.1	5/23/2016	8:08:40 PM
ICV	15 - 101 mL	5.8	5/23/2016	8:50:20 PM
DNU	16 - 21 mL	33	5/23/2016	9:30:30 PM
mb500	16 - 501 mL	31.5	5/23/2016	10:05:58 PM
MDL	7 - 51 mL	11.7	5/23/2016	10:48:09 PM
LCS	1 - 101 mL	6.1	5/23/2016	11:31:24 PM
DNU	16 - 21 mL	32.5	5/24/2016	12:11:49 AM
mb200	16 - 201 mL	30.7	5/24/2016	12:44:17 AM

MG WL 2910

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 16 & KNOX-MS-0023, Rev 2

Analysis Date:	5/23/16	Instrument:	MG	Chrom WL #:	2910	TALS Batch & Event #	TO14/15: 5077/555	AFCEE: 5076/554
							DOD: 5074/552	OHIO: 5075/553

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor => edit => MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DNH TPH as Hexane	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	—	—	—	Bromoform 39.4	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	—	—	—		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	—	—	—		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	✓	—	—	→		NA	—	—	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	—	—	→		NA	—	—	→
19. Is the intercept less than the RL for each curve? [F6]	NA	—	—	→		NA	—	—	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→				NA	→		
21. Is the second source analysis within limits? [F8 - icv]	✓	—	—	—		✓	✓	✓	✓
22. **Analyst/Date:** 5/24/16					**2nd Level Reviewer/Date:** AFB 5/26/16				
Comments: ICV → Acetaldehyde @ 32%. Acetone @ 31.6%. all others <30✓									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓								
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NA	—	—	→		NA	—	—	→
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>						✓			
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst:	**Date:** 5/26/16				**2nd Level Reviewer :** AFB			**Date:** 5/26/16	
Comments:					**Comments:**				

UR & acetone, Hexachlorobutadiene & Bromoform.

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5091-1

SDG No.:

Instrument ID: MG Start Date: 06/08/2016 10:02

Analysis Batch Number: 5183 End Date: 06/09/2016 02:49

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5183/1		06/08/2016 10:02	1	GBFBF08.D	RTX-5 0.32(mm)
CCVIS 140-5183/2		06/08/2016 10:36	1	GCCVF08.D	RTX-5 0.32(mm)
LCS 140-5183/1002		06/08/2016 10:36	1	GCCVF08-LCS.d	RTX-5 0.32(mm)
ZZZZZ		06/08/2016 12:17	1		RTX-5 0.32(mm)
MB 140-5183/6		06/08/2016 14:10	1	GMB500F08.D	RTX-5 0.32(mm)
140-5091-1		06/08/2016 20:25	1	GF08P109.D	RTX-5 0.32(mm)
140-5091-2		06/08/2016 21:06	1	GF08P110.D	RTX-5 0.32(mm)
140-5091-3		06/08/2016 21:48	1	GF08P111.D	RTX-5 0.32(mm)
ZZZZZ		06/08/2016 22:31	1		RTX-5 0.32(mm)
ZZZZZ		06/08/2016 23:12	1		RTX-5 0.32(mm)
ZZZZZ		06/08/2016 23:54	1		RTX-5 0.32(mm)
ZZZZZ		06/09/2016 00:35	1		RTX-5 0.32(mm)
ZZZZZ		06/09/2016 01:20	1		RTX-5 0.32(mm)
ZZZZZ		06/09/2016 02:06	1		RTX-5 0.32(mm)
ZZZZZ		06/09/2016 02:49	1		RTX-5 0.32(mm)

160608.ZZZ

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	23.2	6/8/2016	10:02:44 AM
CCV	8 - 102 mL	30.5	6/8/2016	10:36:52 AM
DNULEAK	16 - 21 mL	23.4	6/8/2016	11:44:05 AM
BLANK	16 - 201 mL	22.2	6/8/2016	12:17:21 PM
DNULEAK	16 - 21 mL	23.2	6/8/2016	1:34:13 PM
BLANK	16 - 501 mL	20	6/8/2016	2:10:49 PM
5100-01	1 - 11 mL	9.4	6/8/2016	2:51:50 PM
5099-01	2 - 26 mL	10.8	6/8/2016	3:33:15 PM
5099-02	3 - 26 mL	10.7	6/8/2016	4:14:33 PM
5099-03	4 - 26 mL	10.7	6/8/2016	4:58:22 PM
5099-04	5 - 26 mL	10.7	6/8/2016	5:41:05 PM
5099-05	6 - 26 mL	10.8	6/8/2016	6:22:13 PM
5099-06	7 - 26 mL	10.8	6/8/2016	7:03:32 PM
5099-07	2 - 26 mL	10.7	6/8/2016	7:44:40 PM
5091-01	9 - 11 mL	10.2	6/8/2016	8:25:45 PM
5091-02	10 - 101 mL	7.4	6/8/2016	9:06:51 PM
5091-03	11 - 101 mL	7.5	6/8/2016	9:48:37 PM
5091-03	11 - 101 mL	4	6/8/2016	10:31:01 PM
5058-21	12 - 81 mL	7.5	6/8/2016	11:12:21 PM
5058-22	13 - 81 mL	6.8	6/8/2016	11:54:14 PM
5058-23	14 - 81 mL	6.5	6/9/2016	12:35:39 AM
LOT5083	15 - 501 mL	20	6/9/2016	1:20:42 AM
LOT5085	8 - 501 mL	20.8	6/9/2016	2:06:45 AM
5100-01	1 - 51 mL	8.2	6/9/2016	2:49:17 AM

MG WL 2946

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MG 6/8/16		6/9/16 Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	2946	CCAL Batch #	~~5236~~-5783		5236	
ICAL Chrom WL #	2910	ICAL Batch # / Event #	5077 / 555	/	5074 / 552	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] 1-butanol [Chrom-F8] [TALS-Sample Results Tab]	✓	☑ CCV - %D - LCS criteria met (NCM# 4387) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		✓
7. Has the RT been updated to the method?			
Analyst:	**Date:** 6/9/16	**2nd Level Reviewer :**	**Date:** 06/9/16
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	N/A	□ ICAL – Range Exceeded; Minimum Dilution	N/A
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	N/A		N/A
18. Obvious non-TPH peaks excluded?			

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	N/A		N/A
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]			
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?			
22. Sample special instructions verified?			
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.		□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]			
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]			
26. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]			
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*			
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]		**500 mL blank ID:** 6 **200 mL blank ID:** 4	
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]			
31. Correct ICV linked to each MB? [QC Links]			
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]			
33. Runs set to 1st level review?		Runs set to 2nd level review?	
34. QC checker run and items addressed?			
35. Checklist & Entech report scanned, attached & assigned properly?			

Analyst:	**Date:** 6/9/16
Comments:	
Example Calculation: 5091-1 111TCA	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
2.7159 x 1/1mL x 1 = 123.45	

2nd Level Reviewer :	**Date:** 06/9/16
Comments:	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4875-1

SDG No.:

Client Sample ID: 10342 | Lab Sample ID: 140-4875-7

Matrix: Air | Lab File ID: LOT4875-7.D

Analysis Method: TO-15 | Date Collected: 05/05/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 05/06/2016 12:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4846 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4875-1

SDG No.:

Client Sample ID: 10342 | Lab Sample ID: 140-4875-7

Matrix: Air | Lab File ID: LOT4875-7.D

Analysis Method: TO-15 | Date Collected: 05/05/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 05/06/2016 12:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4846 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-4875-1

SDG No.:

Client Sample ID: 10342 | Lab Sample ID: 140-4875-7

Matrix: Air | Lab File ID: LOT4875-7.D

Analysis Method: TO-15 | Date Collected: 05/05/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 05/06/2016 12:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 4846 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-4875-1

SDG No.:

Client Sample ID: 10342 Lab Sample ID: 140-4875-7

Matrix: Air Lab File ID: LOT4875-7.D

Analysis Method: TO-15 Date Collected: 05/05/2016 09:50

Sample wt/vol: 200(mL) Date Analyzed: 05/06/2016 12:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 4846 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160505-2840.b\LOT4875-7.D				
Lims ID:	140-4875-A-7				
Client ID:	10342				
Sample Type:	Client				
Inject. Date:	06-May-2016 12:14:30	ALS Bottle#:	11	Worklist Smp#:	27
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10342				
Misc. Info.:	G040816,TO15,140-0002740-027				
Operator ID:	403648	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160505-2840.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-May-2016 15:29:43	Calib Date:	04-May-2016 19:11:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160504-2830.b\GE04ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK015				
First Level Reviewer: barlozhetskayaa		Date:	06-May-2016 13:01:52		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.535	8.541	-0.006	97	357768	4.00	
* 2 1,4-Difluorobenzene	114	10.708	10.719	-0.011	95	1644013	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.481	15.486	-0.005	87	1408550	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.136	17.142	-0.006	96	927578	3.94	
31 Methylene Chloride	84	6.092	6.098	-0.006	98	7800	0.0846	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

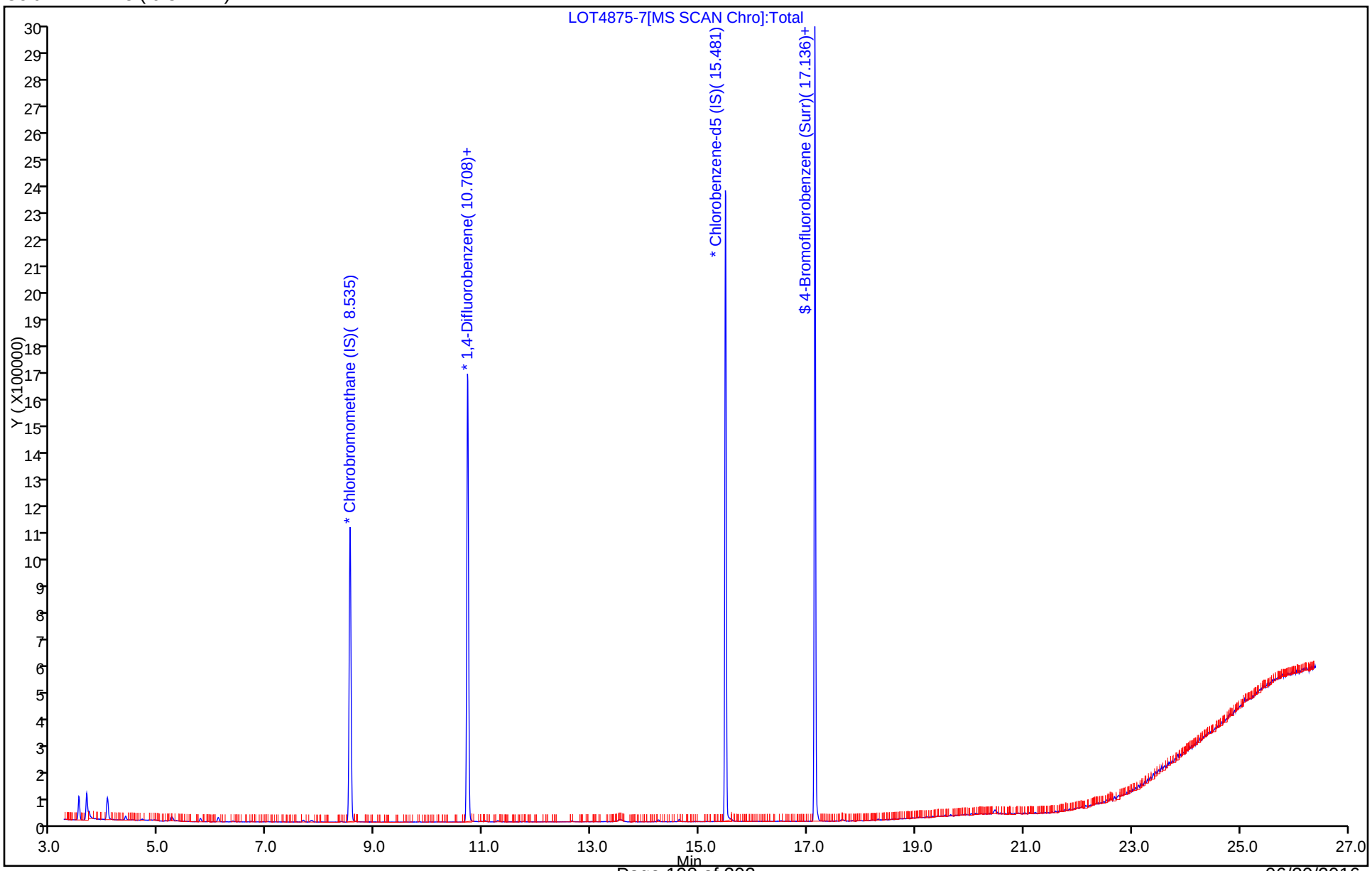
Report Date: 10-May-2016 15:32:05 Chrom Revision: 2.2 20-Apr-2016 13:59:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160505-2840.b\LOT4875-7.D

Injection Date:	06-May-2016 12:14:30	Instrument ID:	MG	Operator ID:	403648
Lims ID:	140-4875-A-7	Lab Sample ID:	140-4875-7	Worklist Smp#:	27
Client ID:	10342				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information
Company: TetraTech
Address: 51 Franklin St. Suite 400
City/State/Zip Annapolis, MD 21401
Phone: 410-990-4607
FAX: 410-990-4749
Project Name: SSD Oem
Site/location: LMC-MRC
PO # 117-0512124

Project Manager: Peter Rich
Phone: 410-990-4607
Site Contact: Dawn.Monico@tetratech.com
TAL Contact:

Sampled By: Dawn Monico

1 of 1 COCs

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
A-INFLUENT	6/2/16	1552	N/A	-29	0	74	11118	X											
A-MID-GAC	↓	1548	↓	-30	0	139	09738	X											
A-EFFLUENT	↓	1545	↓	-30	0	195	11276	X											

Sampled by :

Temperature (Fahrenheit)

	Interior	Ambient
Start		
Stop		

Pressure (inches of Hg)

	Interior	Ambient
Start		
Stop		

CUSTODY SEALS INTACT
RECEIVED AT AMBIENT TEMP RT 23.6/ CT 23.6
BKD 6-7-16
1 COOLER FED X # 809226637134

3 CANS/ 3 FLOWS (R)

Special Instructions/QC Requirements & Comments:

140-5091 Chain of Custody

Canisters Shipped by: [signature]	Date/Time: 6/3/16 @ 1600	Canisters Received by:
Samples Relinquished by:	Date/Time:	Received by: [signature] 6-7-16 09:30
Relinquished by:	Date/Time:	Received by:

14002921

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 6/7/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-5091-a-1	11118	4875	B	1	0	1855	
AFB	140-5091-a-2	09738	4875	B	1	+0.6	1856	
AFB	140-5091-a-3	11276	4875	B	1	0	1857	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 140-5091-1

Login Number: 5091
List Number: 1
Creator: Dameron, Bryan K

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	CHECKED IN LAB
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

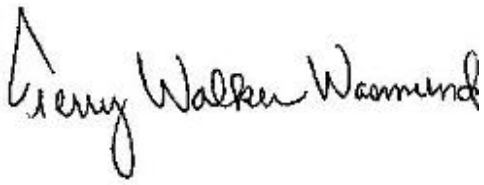
ANALYTICAL REPORT

Job Number: 140-5356-1

Job Description: SSD OEM LMC MRC

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
7/28/2016 12:09 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
07/28/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-5356-1

Receipt
The samples were received on 7/18/2016 at 10:00 AM. The samples arrived in good condition and properly preserved.

Receipt Exceptions
There was a discrepancy between the COC and canister label. The COC showed asset number 10347, but the canister label showed asset number 10341. The canister label was correct.

Air - GC/MS VOA
Method(s) TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL: The continuing calibration verification (CCV) associated with batch 140-5859 exhibited % difference of > 30% for 1,2,4-trichlorobenzene and/or hexachlorobutadiene, and 4-methyl-2-pentanone. However, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC

TestAmerica Job ID: 140-5356-1

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-5356-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	20		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	25		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.2		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	19		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	10		5.0	3.3	ppb v/v	1		TO 15 LL	Total/NA
Toluene	3.9		3.0	3.0	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	94		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	170		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	65		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	100		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	75		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	36		17	11	ug/m3	1		TO 15 LL	Total/NA
Toluene	15		11	11	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	510		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	940		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID GAC — Lab Sample ID: 140-5356-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.69		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.54		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	43		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.55		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.10	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	22		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	14		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.3		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.71		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	31		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.31		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.28	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.57	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.5		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.6		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	170		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	18		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.41	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	88		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	47		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.1		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.8		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	170		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.7		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-MID GAC (Continued) — Lab Sample ID: 140-5356-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	1.4	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.5	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-5356-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.34	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.66		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.23	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	18		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.63		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.9		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	30		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.14	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	11		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.7		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.36	J	0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	19		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	3.3		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.17	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.54	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.1	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.3		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.1	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	73		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.1		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	12		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.59	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	37		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.4		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.4	J	1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	18		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.5	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.44	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.3	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-INFLUENT — Lab Sample ID: 140-5356-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.5		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.19	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.48		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.64		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.55		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	2.8		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-INFLUENT (Continued) — Lab Sample ID: 140-5356-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethene	1.4		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.30	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.16	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.6		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	14	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.5		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.24	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.90		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.31	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.5		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.0		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	1.2	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	13		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.4		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.5		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	11		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	5.5		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.3	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.2		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.1	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	6.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	76	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	46		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.2	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	4.4		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	6.5		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-MID GAC — Lab Sample ID: 140-5356-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.9		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.087	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	2.8		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.29	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.86		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.55		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.81		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.67		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.8		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.21	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.0	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.32	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.12	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	9.3		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.55	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-MID GAC (Continued) — Lab Sample ID: 140-5356-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chlorodifluoromethane	9.9		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.4	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	3.4		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.7		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.3		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	2.7		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	6.3		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.4	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	11	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.6	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	0.52	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-EFFLUENT — Lab Sample ID: 140-5356-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.0		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.22	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.31	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.66		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	0.35	J	0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.25	J	0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.21	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	2.1		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	1.5		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.4	B	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.34	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.4		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.50		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.56	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	10		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	11		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.1	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	1.2	J	1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.4	J	1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.0	J	1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.90	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	7.4		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	5.8		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	13	B	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.7	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	6.7		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	2.4		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	2.4	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT

Lab Sample ID: 140-5356-1

Date Collected: 07/14/16 11:42

Matrix: Air

Date Received: 07/18/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**20**		2.0	0.58	ppb v/v			07/20/16 22:42	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			07/20/16 22:42	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			07/20/16 22:42	1
Chloroform	ND		2.0	0.38	ppb v/v			07/20/16 22:42	1
cis-1,2-Dichloroethene	**25**		2.0	0.60	ppb v/v			07/20/16 22:42	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			07/20/16 22:42	1
1,1-Dichloroethane	**4.2**		2.0	0.25	ppb v/v			07/20/16 22:42	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			07/20/16 22:42	1
1,1-Dichloroethene	**19**		2.0	0.35	ppb v/v			07/20/16 22:42	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			07/20/16 22:42	1
Methylene Chloride	**10**		5.0	3.3	ppb v/v			07/20/16 22:42	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			07/20/16 22:42	1
Naphthalene	ND		1.0	1.0	ppb v/v			07/20/16 22:42	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			07/20/16 22:42	1
Toluene	**3.9**		3.0	3.0	ppb v/v			07/20/16 22:42	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			07/20/16 22:42	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			07/20/16 22:42	1
1,1,1-Trichloroethane	**94**		2.0	0.30	ppb v/v			07/20/16 22:42	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			07/20/16 22:42	1
Trichloroethene	**170**		1.0	0.35	ppb v/v			07/20/16 22:42	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			07/20/16 22:42	1
1,2,4-Trimethylbenzene	ND		2.0	0.63	ppb v/v			07/20/16 22:42	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			07/20/16 22:42	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			07/20/16 22:42	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			07/20/16 22:42	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**65**		6.4	1.8	ug/m3			07/20/16 22:42	1
Carbon tetrachloride	ND		13	2.4	ug/m3			07/20/16 22:42	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			07/20/16 22:42	1
Chloroform	ND		9.8	1.8	ug/m3			07/20/16 22:42	1
cis-1,2-Dichloroethene	**100**		7.9	2.4	ug/m3			07/20/16 22:42	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			07/20/16 22:42	1
1,1-Dichloroethane	**17**		8.1	1.0	ug/m3			07/20/16 22:42	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			07/20/16 22:42	1
1,1-Dichloroethene	**75**		7.9	1.4	ug/m3			07/20/16 22:42	1
Ethylbenzene	ND		8.7	2.9	ug/m3			07/20/16 22:42	1
Methylene Chloride	**36**		17	11	ug/m3			07/20/16 22:42	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			07/20/16 22:42	1
Naphthalene	ND		5.2	5.2	ug/m3			07/20/16 22:42	1
Tetrachloroethene	ND		14	2.7	ug/m3			07/20/16 22:42	1
Toluene	**15**		11	11	ug/m3			07/20/16 22:42	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			07/20/16 22:42	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			07/20/16 22:42	1
1,1,1-Trichloroethane	**510**		11	1.6	ug/m3			07/20/16 22:42	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			07/20/16 22:42	1
Trichloroethene	**940**		5.4	1.9	ug/m3			07/20/16 22:42	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			07/20/16 22:42	1
1,2,4-Trimethylbenzene	ND		9.8	3.1	ug/m3			07/20/16 22:42	1

Client Sample ID: A-INFLUENT
Date Collected: 07/14/16 11:42
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-1
Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			07/20/16 22:42	1
Vinyl chloride	ND		2.6	1.9	ug/m3			07/20/16 22:42	1
Xylenes, Total	ND		17	2.6	ug/m3			07/20/16 22:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*60 - 140*		*07/20/16 22:42*	*1*

Client Sample ID: A-MID GAC

Date Collected: 07/14/16 11:40
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**		0.40	0.12	ppb v/v			07/20/16 23:36	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			07/20/16 23:36	1
Chlorodifluoromethane	**0.69**		0.40	0.075	ppb v/v			07/20/16 23:36	1
Chloroform	**0.54**		0.40	0.075	ppb v/v			07/20/16 23:36	1
cis-1,2-Dichloroethene	**43**		0.40	0.12	ppb v/v			07/20/16 23:36	1
Dichlorodifluoromethane	**0.55**		0.40	0.14	ppb v/v			07/20/16 23:36	1
1,1-Dichloroethane	**4.5**		0.40	0.050	ppb v/v			07/20/16 23:36	1
1,2-Dichloroethane	**0.10**	**J**	0.40	0.095	ppb v/v			07/20/16 23:36	1
1,1-Dichloroethene	**22**		0.40	0.070	ppb v/v			07/20/16 23:36	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			07/20/16 23:36	1
Methylene Chloride	**14**		1.0	0.65	ppb v/v			07/20/16 23:36	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			07/20/16 23:36	1
Naphthalene	ND		0.20	0.20	ppb v/v			07/20/16 23:36	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			07/20/16 23:36	1
Toluene	**1.3**		0.60	0.60	ppb v/v			07/20/16 23:36	1
trans-1,2-Dichloroethene	**0.71**		0.40	0.10	ppb v/v			07/20/16 23:36	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			07/20/16 23:36	1
1,1,1-Trichloroethane	**31**		0.40	0.060	ppb v/v			07/20/16 23:36	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			07/20/16 23:36	1
Trichloroethene	**0.31**		0.20	0.070	ppb v/v			07/20/16 23:36	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			07/20/16 23:36	1
1,2,4-Trimethylbenzene	**0.28**	**J**	0.40	0.13	ppb v/v			07/20/16 23:36	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			07/20/16 23:36	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			07/20/16 23:36	1
Xylenes, Total	**0.57**	**J**	0.80	0.12	ppb v/v			07/20/16 23:36	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.5**		1.3	0.37	ug/m3			07/20/16 23:36	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			07/20/16 23:36	1
Chlorodifluoromethane	**2.5**		1.4	0.27	ug/m3			07/20/16 23:36	1
Chloroform	**2.6**		2.0	0.37	ug/m3			07/20/16 23:36	1
cis-1,2-Dichloroethene	**170**		1.6	0.48	ug/m3			07/20/16 23:36	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			07/20/16 23:36	1
1,1-Dichloroethane	**18**		1.6	0.20	ug/m3			07/20/16 23:36	1
1,2-Dichloroethane	**0.41**	**J**	1.6	0.38	ug/m3			07/20/16 23:36	1
1,1-Dichloroethene	**88**		1.6	0.28	ug/m3			07/20/16 23:36	1
Ethylbenzene	ND		1.7	0.59	ug/m3			07/20/16 23:36	1
Methylene Chloride	**47**		3.5	2.3	ug/m3			07/20/16 23:36	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			07/20/16 23:36	1
Naphthalene	ND		1.0	1.0	ug/m3			07/20/16 23:36	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			07/20/16 23:36	1
Toluene	**5.1**		2.3	2.3	ug/m3			07/20/16 23:36	1
trans-1,2-Dichloroethene	**2.8**		1.6	0.40	ug/m3			07/20/16 23:36	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			07/20/16 23:36	1
1,1,1-Trichloroethane	**170**		2.2	0.33	ug/m3			07/20/16 23:36	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			07/20/16 23:36	1
Trichloroethene	**1.7**		1.1	0.38	ug/m3			07/20/16 23:36	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			07/20/16 23:36	1
1,2,4-Trimethylbenzene	**1.4**	**J**	2.0	0.61	ug/m3			07/20/16 23:36	1

Client Sample ID: A-MID GAC

Date Collected: 07/14/16 11:40
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-2

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			07/20/16 23:36	1
Vinyl chloride	ND		0.51	0.37	ug/m3			07/20/16 23:36	1
Xylenes, Total	**2.5**	**J**	3.5	0.52	ug/m3			07/20/16 23:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*07/20/16 23:36*	*1*

Client Sample ID: A-EFFLUENT

Lab Sample ID: 140-5356-3

Date Collected: 07/14/16 11:38

Matrix: Air

Date Received: 07/18/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.34**	**J**	0.40	0.12	ppb v/v			07/21/16 00:29	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			07/21/16 00:29	1
Chlorodifluoromethane	**0.66**		0.40	0.075	ppb v/v			07/21/16 00:29	1
Chloroform	**0.23**	**J**	0.40	0.075	ppb v/v			07/21/16 00:29	1
cis-1,2-Dichloroethene	**18**		0.40	0.12	ppb v/v			07/21/16 00:29	1
Dichlorodifluoromethane	**0.63**		0.40	0.14	ppb v/v			07/21/16 00:29	1
1,1-Dichloroethane	**2.9**		0.40	0.050	ppb v/v			07/21/16 00:29	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			07/21/16 00:29	1
1,1-Dichloroethene	**30**		0.40	0.070	ppb v/v			07/21/16 00:29	1
Ethylbenzene	**0.14**	**J**	0.40	0.14	ppb v/v			07/21/16 00:29	1
Methylene Chloride	**11**		1.0	0.65	ppb v/v			07/21/16 00:29	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			07/21/16 00:29	1
Naphthalene	ND		0.20	0.20	ppb v/v			07/21/16 00:29	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			07/21/16 00:29	1
Toluene	**1.7**		0.60	0.60	ppb v/v			07/21/16 00:29	1
trans-1,2-Dichloroethene	**0.36**	**J**	0.40	0.10	ppb v/v			07/21/16 00:29	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			07/21/16 00:29	1
1,1,1-Trichloroethane	**19**		0.40	0.060	ppb v/v			07/21/16 00:29	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			07/21/16 00:29	1
Trichloroethene	**3.3**		0.20	0.070	ppb v/v			07/21/16 00:29	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			07/21/16 00:29	1
1,2,4-Trimethylbenzene	**0.31**	**J**	0.40	0.13	ppb v/v			07/21/16 00:29	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			07/21/16 00:29	1
Vinyl chloride	**0.17**	**J**	0.20	0.15	ppb v/v			07/21/16 00:29	1
Xylenes, Total	**0.54**	**J**	0.80	0.12	ppb v/v			07/21/16 00:29	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.1**	**J**	1.3	0.37	ug/m3			07/21/16 00:29	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			07/21/16 00:29	1
Chlorodifluoromethane	**2.3**		1.4	0.27	ug/m3			07/21/16 00:29	1
Chloroform	**1.1**	**J**	2.0	0.37	ug/m3			07/21/16 00:29	1
cis-1,2-Dichloroethene	**73**		1.6	0.48	ug/m3			07/21/16 00:29	1
Dichlorodifluoromethane	**3.1**		2.0	0.67	ug/m3			07/21/16 00:29	1
1,1-Dichloroethane	**12**		1.6	0.20	ug/m3			07/21/16 00:29	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			07/21/16 00:29	1
1,1-Dichloroethene	**120**		1.6	0.28	ug/m3			07/21/16 00:29	1
Ethylbenzene	**0.59**	**J**	1.7	0.59	ug/m3			07/21/16 00:29	1
Methylene Chloride	**37**		3.5	2.3	ug/m3			07/21/16 00:29	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			07/21/16 00:29	1
Naphthalene	ND		1.0	1.0	ug/m3			07/21/16 00:29	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			07/21/16 00:29	1
Toluene	**6.4**		2.3	2.3	ug/m3			07/21/16 00:29	1
trans-1,2-Dichloroethene	**1.4**	**J**	1.6	0.40	ug/m3			07/21/16 00:29	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			07/21/16 00:29	1
1,1,1-Trichloroethane	**110**		2.2	0.33	ug/m3			07/21/16 00:29	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			07/21/16 00:29	1
Trichloroethene	**18**		1.1	0.38	ug/m3			07/21/16 00:29	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			07/21/16 00:29	1
1,2,4-Trimethylbenzene	**1.5**	**J**	2.0	0.61	ug/m3			07/21/16 00:29	1

Client Sample ID: A-EFFLUENT

Date Collected: 07/14/16 11:38
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-3

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			07/21/16 00:29	1
Vinyl chloride	**0.44**	**J**	0.51	0.37	ug/m3			07/21/16 00:29	1
Xylenes, Total	**2.3**	**J**	3.5	0.52	ug/m3			07/21/16 00:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*07/21/16 00:29*	*1*

Client Sample ID: C-INFLUENT

Lab Sample ID: 140-5356-4

Date Collected: 07/14/16 10:12

Matrix: Air

Date Received: 07/18/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.5**		0.40	0.12	ppb v/v			07/19/16 20:34	1
Carbon tetrachloride	**0.19**	**J**	0.40	0.075	ppb v/v			07/19/16 20:34	1
Chlorodifluoromethane	**3.5**		0.40	0.075	ppb v/v			07/19/16 20:34	1
Chloroform	**0.48**		0.40	0.075	ppb v/v			07/19/16 20:34	1
cis-1,2-Dichloroethene	**0.64**		0.40	0.12	ppb v/v			07/19/16 20:34	1
Dichlorodifluoromethane	**0.55**		0.40	0.14	ppb v/v			07/19/16 20:34	1
1,1-Dichloroethane	**2.8**		0.40	0.050	ppb v/v			07/19/16 20:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			07/19/16 20:34	1
1,1-Dichloroethene	**1.4**		0.40	0.070	ppb v/v			07/19/16 20:34	1
Ethylbenzene	**0.30**	**J**	0.40	0.14	ppb v/v			07/19/16 20:34	1
Methylene Chloride	**1.2**		1.0	0.65	ppb v/v			07/19/16 20:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			07/19/16 20:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			07/19/16 20:34	1
Tetrachloroethene	**0.16**	**J**	0.40	0.080	ppb v/v			07/19/16 20:34	1
Toluene	**1.6**		0.60	0.60	ppb v/v			07/19/16 20:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			07/19/16 20:34	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			07/19/16 20:34	1
1,1,1-Trichloroethane	**14**	**B**	0.40	0.060	ppb v/v			07/19/16 20:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			07/19/16 20:34	1
Trichloroethene	**8.5**		0.20	0.070	ppb v/v			07/19/16 20:34	1
1,2,3-Trimethylbenzene	**0.24**	**J**	0.40	0.17	ppb v/v			07/19/16 20:34	1
1,2,4-Trimethylbenzene	**0.90**		0.40	0.13	ppb v/v			07/19/16 20:34	1
1,3,5-Trimethylbenzene	**0.31**	**J**	0.40	0.13	ppb v/v			07/19/16 20:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			07/19/16 20:34	1
Xylenes, Total	**1.5**		0.80	0.12	ppb v/v			07/19/16 20:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.0**		1.3	0.37	ug/m3			07/19/16 20:34	1
Carbon tetrachloride	**1.2**	**J**	2.5	0.47	ug/m3			07/19/16 20:34	1
Chlorodifluoromethane	**13**		1.4	0.27	ug/m3			07/19/16 20:34	1
Chloroform	**2.4**		2.0	0.37	ug/m3			07/19/16 20:34	1
cis-1,2-Dichloroethene	**2.5**		1.6	0.48	ug/m3			07/19/16 20:34	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			07/19/16 20:34	1
1,1-Dichloroethane	**11**		1.6	0.20	ug/m3			07/19/16 20:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			07/19/16 20:34	1
1,1-Dichloroethene	**5.5**		1.6	0.28	ug/m3			07/19/16 20:34	1
Ethylbenzene	**1.3**	**J**	1.7	0.59	ug/m3			07/19/16 20:34	1
Methylene Chloride	**4.2**		3.5	2.3	ug/m3			07/19/16 20:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			07/19/16 20:34	1
Naphthalene	ND		1.0	1.0	ug/m3			07/19/16 20:34	1
Tetrachloroethene	**1.1**	**J**	2.7	0.54	ug/m3			07/19/16 20:34	1
Toluene	**6.2**		2.3	2.3	ug/m3			07/19/16 20:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			07/19/16 20:34	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			07/19/16 20:34	1
1,1,1-Trichloroethane	**76**	**B**	2.2	0.33	ug/m3			07/19/16 20:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			07/19/16 20:34	1
Trichloroethene	**46**		1.1	0.38	ug/m3			07/19/16 20:34	1
1,2,3-Trimethylbenzene	**1.2**	**J**	2.0	0.84	ug/m3			07/19/16 20:34	1
1,2,4-Trimethylbenzene	**4.4**		2.0	0.61	ug/m3			07/19/16 20:34	1

Client Sample ID: C-INFLUENT

Date Collected: 07/14/16 10:12
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-4

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.5**	**J**	2.0	0.64	ug/m3			07/19/16 20:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			07/19/16 20:34	1
Xylenes, Total	**6.5**		3.5	0.52	ug/m3			07/19/16 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*60 - 140*		*07/19/16 20:34*	*1*

Client Sample ID: C-MID GAC

Lab Sample ID: 140-5356-5

Date Collected: 07/14/16 10:08

Matrix: Air

Date Received: 07/18/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.9**		0.40	0.12	ppb v/v			07/19/16 21:19	1
Carbon tetrachloride	**0.087**	**J**	0.40	0.075	ppb v/v			07/19/16 21:19	1
Chlorodifluoromethane	**2.8**		0.40	0.075	ppb v/v			07/19/16 21:19	1
Chloroform	**0.29**	**J**	0.40	0.075	ppb v/v			07/19/16 21:19	1
cis-1,2-Dichloroethene	**0.86**		0.40	0.12	ppb v/v			07/19/16 21:19	1
Dichlorodifluoromethane	**0.55**		0.40	0.14	ppb v/v			07/19/16 21:19	1
1,1-Dichloroethane	**0.81**		0.40	0.050	ppb v/v			07/19/16 21:19	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			07/19/16 21:19	1
1,1-Dichloroethene	**0.67**		0.40	0.070	ppb v/v			07/19/16 21:19	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			07/19/16 21:19	1
Methylene Chloride	**1.8**		1.0	0.65	ppb v/v			07/19/16 21:19	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			07/19/16 21:19	1
Naphthalene	ND		0.20	0.20	ppb v/v			07/19/16 21:19	1
Tetrachloroethene	**0.21**	**J**	0.40	0.080	ppb v/v			07/19/16 21:19	1
Toluene	ND		0.60	0.60	ppb v/v			07/19/16 21:19	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			07/19/16 21:19	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			07/19/16 21:19	1
1,1,1-Trichloroethane	**2.0**	**B**	0.40	0.060	ppb v/v			07/19/16 21:19	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			07/19/16 21:19	1
Trichloroethene	ND		0.20	0.070	ppb v/v			07/19/16 21:19	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			07/19/16 21:19	1
1,2,4-Trimethylbenzene	**0.32**	**J**	0.40	0.13	ppb v/v			07/19/16 21:19	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			07/19/16 21:19	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			07/19/16 21:19	1
Xylenes, Total	**0.12**	**J**	0.80	0.12	ppb v/v			07/19/16 21:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**9.3**		1.3	0.37	ug/m3			07/19/16 21:19	1
Carbon tetrachloride	**0.55**	**J**	2.5	0.47	ug/m3			07/19/16 21:19	1
Chlorodifluoromethane	**9.9**		1.4	0.27	ug/m3			07/19/16 21:19	1
Chloroform	**1.4**	**J**	2.0	0.37	ug/m3			07/19/16 21:19	1
cis-1,2-Dichloroethene	**3.4**		1.6	0.48	ug/m3			07/19/16 21:19	1
Dichlorodifluoromethane	**2.7**		2.0	0.67	ug/m3			07/19/16 21:19	1
1,1-Dichloroethane	**3.3**		1.6	0.20	ug/m3			07/19/16 21:19	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			07/19/16 21:19	1
1,1-Dichloroethene	**2.7**		1.6	0.28	ug/m3			07/19/16 21:19	1
Ethylbenzene	ND		1.7	0.59	ug/m3			07/19/16 21:19	1
Methylene Chloride	**6.3**		3.5	2.3	ug/m3			07/19/16 21:19	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			07/19/16 21:19	1
Naphthalene	ND		1.0	1.0	ug/m3			07/19/16 21:19	1
Tetrachloroethene	**1.4**	**J**	2.7	0.54	ug/m3			07/19/16 21:19	1
Toluene	ND		2.3	2.3	ug/m3			07/19/16 21:19	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			07/19/16 21:19	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			07/19/16 21:19	1
1,1,1-Trichloroethane	**11**	**B**	2.2	0.33	ug/m3			07/19/16 21:19	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			07/19/16 21:19	1
Trichloroethene	ND		1.1	0.38	ug/m3			07/19/16 21:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			07/19/16 21:19	1
1,2,4-Trimethylbenzene	**1.6**	**J**	2.0	0.61	ug/m3			07/19/16 21:19	1

Client Sample ID: C-MID GAC

Date Collected: 07/14/16 10:08
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-5

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			07/19/16 21:19	1
Vinyl chloride	ND		0.51	0.37	ug/m3			07/19/16 21:19	1
Xylenes, Total	**0.52**	**J**	3.5	0.52	ug/m3			07/19/16 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*60 - 140*		*07/19/16 21:19*	*1*

Client Sample ID: C-EFFLUENT

Lab Sample ID: 140-5356-6

Date Collected: 07/14/16 10:06

Matrix: Air

Date Received: 07/18/16 10:00

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.3**		0.40	0.12	ppb v/v			07/19/16 22:05	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			07/19/16 22:05	1
Chlorodifluoromethane	**3.0**		0.40	0.075	ppb v/v			07/19/16 22:05	1
Chloroform	**0.22**	**J**	0.40	0.075	ppb v/v			07/19/16 22:05	1
cis-1,2-Dichloroethene	**0.31**	**J**	0.40	0.12	ppb v/v			07/19/16 22:05	1
Dichlorodifluoromethane	**0.66**		0.40	0.14	ppb v/v			07/19/16 22:05	1
1,1-Dichloroethane	**0.35**	**J**	0.40	0.050	ppb v/v			07/19/16 22:05	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			07/19/16 22:05	1
1,1-Dichloroethene	**0.25**	**J**	0.40	0.070	ppb v/v			07/19/16 22:05	1
Ethylbenzene	**0.21**	**J**	0.40	0.14	ppb v/v			07/19/16 22:05	1
Methylene Chloride	**2.1**		1.0	0.65	ppb v/v			07/19/16 22:05	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			07/19/16 22:05	1
Naphthalene	ND		0.20	0.20	ppb v/v			07/19/16 22:05	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			07/19/16 22:05	1
Toluene	**1.5**		0.60	0.60	ppb v/v			07/19/16 22:05	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			07/19/16 22:05	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			07/19/16 22:05	1
1,1,1-Trichloroethane	**2.4**	**B**	0.40	0.060	ppb v/v			07/19/16 22:05	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			07/19/16 22:05	1
Trichloroethene	ND		0.20	0.070	ppb v/v			07/19/16 22:05	1
1,2,3-Trimethylbenzene	**0.34**	**J**	0.40	0.17	ppb v/v			07/19/16 22:05	1
1,2,4-Trimethylbenzene	**1.4**		0.40	0.13	ppb v/v			07/19/16 22:05	1
1,3,5-Trimethylbenzene	**0.50**		0.40	0.13	ppb v/v			07/19/16 22:05	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			07/19/16 22:05	1
Xylenes, Total	**0.56**	**J**	0.80	0.12	ppb v/v			07/19/16 22:05	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**10**		1.3	0.37	ug/m3			07/19/16 22:05	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			07/19/16 22:05	1
Chlorodifluoromethane	**11**		1.4	0.27	ug/m3			07/19/16 22:05	1
Chloroform	**1.1**	**J**	2.0	0.37	ug/m3			07/19/16 22:05	1
cis-1,2-Dichloroethene	**1.2**	**J**	1.6	0.48	ug/m3			07/19/16 22:05	1
Dichlorodifluoromethane	**3.3**		2.0	0.67	ug/m3			07/19/16 22:05	1
1,1-Dichloroethane	**1.4**	**J**	1.6	0.20	ug/m3			07/19/16 22:05	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			07/19/16 22:05	1
1,1-Dichloroethene	**1.0**	**J**	1.6	0.28	ug/m3			07/19/16 22:05	1
Ethylbenzene	**0.90**	**J**	1.7	0.59	ug/m3			07/19/16 22:05	1
Methylene Chloride	**7.4**		3.5	2.3	ug/m3			07/19/16 22:05	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			07/19/16 22:05	1
Naphthalene	ND		1.0	1.0	ug/m3			07/19/16 22:05	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			07/19/16 22:05	1
Toluene	**5.8**		2.3	2.3	ug/m3			07/19/16 22:05	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			07/19/16 22:05	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			07/19/16 22:05	1
1,1,1-Trichloroethane	**13**	**B**	2.2	0.33	ug/m3			07/19/16 22:05	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			07/19/16 22:05	1
Trichloroethene	ND		1.1	0.38	ug/m3			07/19/16 22:05	1
1,2,3-Trimethylbenzene	**1.7**	**J**	2.0	0.84	ug/m3			07/19/16 22:05	1
1,2,4-Trimethylbenzene	**6.7**		2.0	0.61	ug/m3			07/19/16 22:05	1

Client Sample ID: C-EFFLUENT

Date Collected: 07/14/16 10:06
Date Received: 07/18/16 10:00
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5356-6

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**2.4**		2.0	0.64	ug/m3			07/19/16 22:05	1
Vinyl chloride	ND		0.51	0.37	ug/m3			07/19/16 22:05	1
Xylenes, Total	**2.4**	**J**	3.5	0.52	ug/m3			07/19/16 22:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*110*		*60 - 140*		*07/19/16 22:05*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC

TestAmerica Job ID: 140-5356-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC

TestAmerica Job ID: 140-5356-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-5356-1	A-INFLUENT	93
140-5356-2	A-MID GAC	100
140-5356-3	A-EFFLUENT	98
140-5356-4	C-INFLUENT	111
140-5356-5	C-MID GAC	111
140-5356-6	C-EFFLUENT	110
LCS 140-5859/1002	Lab Control Sample	103
LCS 140-5891/1002	Lab Control Sample	112
MB 140-5859/4	Method Blank	100
MB 140-5891/4	Method Blank	100

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-5859/4
Matrix: Air
Analysis Batch: 5859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			07/19/16 12:58	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			07/19/16 12:58	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			07/19/16 12:58	1
Chloroform	ND		0.080	0.015	ppb v/v			07/19/16 12:58	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			07/19/16 12:58	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			07/19/16 12:58	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			07/19/16 12:58	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			07/19/16 12:58	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			07/19/16 12:58	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			07/19/16 12:58	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			07/19/16 12:58	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			07/19/16 12:58	1
Naphthalene	ND		0.040	0.040	ppb v/v			07/19/16 12:58	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			07/19/16 12:58	1
Toluene	ND		0.12	0.12	ppb v/v			07/19/16 12:58	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			07/19/16 12:58	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			07/19/16 12:58	1
1,1,1-Trichloroethane	0.0233	J	0.080	0.012	ppb v/v			07/19/16 12:58	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			07/19/16 12:58	1
Trichloroethene	ND		0.040	0.014	ppb v/v			07/19/16 12:58	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			07/19/16 12:58	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			07/19/16 12:58	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			07/19/16 12:58	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			07/19/16 12:58	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			07/19/16 12:58	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			07/19/16 12:58	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			07/19/16 12:58	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			07/19/16 12:58	1
Chloroform	ND		0.39	0.073	ug/m3			07/19/16 12:58	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			07/19/16 12:58	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			07/19/16 12:58	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			07/19/16 12:58	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			07/19/16 12:58	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			07/19/16 12:58	1
Ethylbenzene	ND		0.35	0.12	ug/m3			07/19/16 12:58	1
Methylene Chloride	ND		0.69	0.45	ug/m3			07/19/16 12:58	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			07/19/16 12:58	1
Naphthalene	ND		0.21	0.21	ug/m3			07/19/16 12:58	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			07/19/16 12:58	1
Toluene	ND		0.45	0.45	ug/m3			07/19/16 12:58	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			07/19/16 12:58	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			07/19/16 12:58	1
1,1,1-Trichloroethane	0.127	J	0.44	0.065	ug/m3			07/19/16 12:58	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			07/19/16 12:58	1
Trichloroethene	ND		0.21	0.075	ug/m3			07/19/16 12:58	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			07/19/16 12:58	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-5859/4
Matrix: Air
Analysis Batch: 5859

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			07/19/16 12:58	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			07/19/16 12:58	1
Vinyl chloride	ND		0.10	0.074	ug/m3			07/19/16 12:58	1
Xylenes, Total	ND		0.69	0.10	ug/m3			07/19/16 12:58	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*07/19/16 12:58*	*1*

Lab Sample ID: LCS 140-5859/1002
Matrix: Air
Analysis Batch: 5859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.04		ppb v/v		102	70 - 130
Carbon tetrachloride	2.00	2.12		ppb v/v		106	70 - 130
Chlorodifluoromethane	2.00	1.98		ppb v/v		99	60 - 140
Chloroform	2.00	1.97		ppb v/v		98	70 - 130
cis-1,2-Dichloroethene	2.00	2.07		ppb v/v		104	70 - 130
Dichlorodifluoromethane	2.00	2.02		ppb v/v		101	60 - 140
1,1-Dichloroethane	2.00	1.89		ppb v/v		95	70 - 130
1,2-Dichloroethane	2.00	1.76		ppb v/v		88	70 - 130
1,1-Dichloroethene	2.00	2.51		ppb v/v		125	70 - 130
Ethylbenzene	2.00	1.94		ppb v/v		97	70 - 130
Methylene Chloride	2.00	2.07		ppb v/v		103	70 - 130
Methyl tert-butyl ether	2.00	1.68		ppb v/v		84	60 - 140
Naphthalene	2.00	1.78		ppb v/v		89	60 - 140
Tetrachloroethene	2.00	2.15		ppb v/v		107	70 - 130
Toluene	2.00	1.96		ppb v/v		98	70 - 130
trans-1,2-Dichloroethene	2.00	2.19		ppb v/v		110	70 - 130
1,2,4-Trichlorobenzene	2.00	1.24		ppb v/v		62	60 - 140
1,1,1-Trichloroethane	2.00	1.92		ppb v/v		96	70 - 130
1,1,2-Trichloroethane	2.00	2.00		ppb v/v		100	70 - 130
Trichloroethene	2.00	2.20		ppb v/v		110	70 - 130
1,2,3-Trimethylbenzene	2.00	1.86		ppb v/v		93	70 - 130
1,2,4-Trimethylbenzene	2.00	1.84		ppb v/v		92	70 - 130
1,3,5-Trimethylbenzene	2.00	1.87		ppb v/v		94	70 - 130
Vinyl chloride	2.00	2.31		ppb v/v		115	70 - 130
Xylenes, Total	6.00	5.64		ppb v/v		94	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.51		ug/m3		102	70 - 130
Carbon tetrachloride	13	13.3		ug/m3		106	70 - 130
Chlorodifluoromethane	7.1	6.99		ug/m3		99	60 - 140
Chloroform	9.8	9.59		ug/m3		98	70 - 130
cis-1,2-Dichloroethene	7.9	8.22		ug/m3		104	70 - 130
Dichlorodifluoromethane	9.9	10.0		ug/m3		101	60 - 140
1,1-Dichloroethane	8.1	7.66		ug/m3		95	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-5859/1002
Matrix: Air
Analysis Batch: 5859

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	7.11		ug/m3		88	70 - 130
1,1-Dichloroethene	7.9	9.95		ug/m3		125	70 - 130
Ethylbenzene	8.7	8.42		ug/m3		97	70 - 130
Methylene Chloride	7.0	7.19		ug/m3		103	70 - 130
Methyl tert-butyl ether	7.2	6.05		ug/m3		84	60 - 140
Naphthalene	10	9.32		ug/m3		89	60 - 140
Tetrachloroethene	14	14.6		ug/m3		107	70 - 130
Toluene	7.5	7.39		ug/m3		98	70 - 130
trans-1,2-Dichloroethene	7.9	8.69		ug/m3		110	70 - 130
1,2,4-Trichlorobenzene	15	9.20		ug/m3		62	60 - 140
1,1,1-Trichloroethane	11	10.5		ug/m3		96	70 - 130
1,1,2-Trichloroethane	11	10.9		ug/m3		100	70 - 130
Trichloroethene	11	11.8		ug/m3		110	70 - 130
1,2,3-Trimethylbenzene	9.8	9.12		ug/m3		93	70 - 130
1,2,4-Trimethylbenzene	9.8	9.03		ug/m3		92	70 - 130
1,3,5-Trimethylbenzene	9.8	9.21		ug/m3		94	70 - 130
Vinyl chloride	5.1	5.91		ug/m3		115	70 - 130
Xylenes, Total	26	24.5		ug/m3		94	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*

Lab Sample ID: MB 140-5891/4
Matrix: Air
Analysis Batch: 5891

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			07/20/16 12:51	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			07/20/16 12:51	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			07/20/16 12:51	1
Chloroform	ND		0.080	0.015	ppb v/v			07/20/16 12:51	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			07/20/16 12:51	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			07/20/16 12:51	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			07/20/16 12:51	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			07/20/16 12:51	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			07/20/16 12:51	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			07/20/16 12:51	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			07/20/16 12:51	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			07/20/16 12:51	1
Naphthalene	ND		0.040	0.040	ppb v/v			07/20/16 12:51	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			07/20/16 12:51	1
Toluene	ND		0.12	0.12	ppb v/v			07/20/16 12:51	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			07/20/16 12:51	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			07/20/16 12:51	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			07/20/16 12:51	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			07/20/16 12:51	1
Trichloroethene	ND		0.040	0.014	ppb v/v			07/20/16 12:51	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-5891/4
Matrix: Air
Analysis Batch: 5891

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			07/20/16 12:51	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			07/20/16 12:51	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			07/20/16 12:51	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			07/20/16 12:51	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			07/20/16 12:51	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			07/20/16 12:51	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			07/20/16 12:51	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			07/20/16 12:51	1
Chloroform	ND		0.39	0.073	ug/m3			07/20/16 12:51	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			07/20/16 12:51	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			07/20/16 12:51	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			07/20/16 12:51	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			07/20/16 12:51	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			07/20/16 12:51	1
Ethylbenzene	ND		0.35	0.12	ug/m3			07/20/16 12:51	1
Methylene Chloride	ND		0.69	0.45	ug/m3			07/20/16 12:51	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			07/20/16 12:51	1
Naphthalene	ND		0.21	0.21	ug/m3			07/20/16 12:51	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			07/20/16 12:51	1
Toluene	ND		0.45	0.45	ug/m3			07/20/16 12:51	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			07/20/16 12:51	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			07/20/16 12:51	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			07/20/16 12:51	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			07/20/16 12:51	1
Trichloroethene	ND		0.21	0.075	ug/m3			07/20/16 12:51	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			07/20/16 12:51	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			07/20/16 12:51	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			07/20/16 12:51	1
Vinyl chloride	ND		0.10	0.074	ug/m3			07/20/16 12:51	1
Xylenes, Total	ND		0.69	0.10	ug/m3			07/20/16 12:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*07/20/16 12:51*	*1*

Lab Sample ID: LCS 140-5891/1002
Matrix: Air
Analysis Batch: 5891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.79		ppb v/v		90	70 - 130
Carbon tetrachloride	2.00	2.37		ppb v/v		118	70 - 130
Chlorodifluoromethane	2.00	2.31		ppb v/v		115	60 - 140
Chloroform	2.00	2.01		ppb v/v		101	70 - 130
cis-1,2-Dichloroethene	2.00	1.88		ppb v/v		94	70 - 130
Dichlorodifluoromethane	2.00	2.40		ppb v/v		120	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-5891/1002
Matrix: Air
Analysis Batch: 5891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,2-Dichloroethane	2.00	2.08		ppb v/v		104	70 - 130
1,1-Dichloroethene	2.00	2.02		ppb v/v		101	70 - 130
Ethylbenzene	2.00	1.75		ppb v/v		87	70 - 130
Methylene Chloride	2.00	2.02		ppb v/v		101	70 - 130
Methyl tert-butyl ether	2.00	1.93		ppb v/v		96	60 - 140
Naphthalene	2.00	1.73		ppb v/v		86	60 - 140
Tetrachloroethene	2.00	1.71		ppb v/v		85	70 - 130
Toluene	2.00	1.65		ppb v/v		82	70 - 130
trans-1,2-Dichloroethene	2.00	2.06		ppb v/v		103	70 - 130
1,2,4-Trichlorobenzene	2.00	1.92		ppb v/v		96	60 - 140
1,1,1-Trichloroethane	2.00	2.15		ppb v/v		108	70 - 130
1,1,2-Trichloroethane	2.00	1.75		ppb v/v		87	70 - 130
Trichloroethene	2.00	1.73		ppb v/v		86	70 - 130
1,2,3-Trimethylbenzene	2.00	1.93		ppb v/v		96	70 - 130
1,2,4-Trimethylbenzene	2.00	1.96		ppb v/v		98	70 - 130
1,3,5-Trimethylbenzene	2.00	1.78		ppb v/v		89	70 - 130
Vinyl chloride	2.00	2.26		ppb v/v		113	70 - 130
Xylenes, Total	6.00	5.36		ppb v/v		89	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.72		ug/m3		90	70 - 130
Carbon tetrachloride	13	14.9		ug/m3		118	70 - 130
Chlorodifluoromethane	7.1	8.17		ug/m3		115	60 - 140
Chloroform	9.8	9.84		ug/m3		101	70 - 130
cis-1,2-Dichloroethene	7.9	7.46		ug/m3		94	70 - 130
Dichlorodifluoromethane	9.9	11.9		ug/m3		120	60 - 140
1,1-Dichloroethane	8.1	8.31		ug/m3		103	70 - 130
1,2-Dichloroethane	8.1	8.43		ug/m3		104	70 - 130
1,1-Dichloroethene	7.9	8.02		ug/m3		101	70 - 130
Ethylbenzene	8.7	7.58		ug/m3		87	70 - 130
Methylene Chloride	7.0	7.00		ug/m3		101	70 - 130
Methyl tert-butyl ether	7.2	6.95		ug/m3		96	60 - 140
Naphthalene	10	9.06		ug/m3		86	60 - 140
Tetrachloroethene	14	11.6		ug/m3		85	70 - 130
Toluene	7.5	6.22		ug/m3		82	70 - 130
trans-1,2-Dichloroethene	7.9	8.15		ug/m3		103	70 - 130
1,2,4-Trichlorobenzene	15	14.2		ug/m3		96	60 - 140
1,1,1-Trichloroethane	11	11.7		ug/m3		108	70 - 130
1,1,2-Trichloroethane	11	9.54		ug/m3		87	70 - 130
Trichloroethene	11	9.30		ug/m3		86	70 - 130
1,2,3-Trimethylbenzene	9.8	9.47		ug/m3		96	70 - 130
1,2,4-Trimethylbenzene	9.8	9.66		ug/m3		98	70 - 130
1,3,5-Trimethylbenzene	9.8	8.77		ug/m3		89	70 - 130
Vinyl chloride	5.1	5.77		ug/m3		113	70 - 130
Xylenes, Total	26	23.3		ug/m3		89	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-5891/1002
Matrix: Air
Analysis Batch: 5891

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*112*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC

TestAmerica Job ID: 140-5356-1

Air - GC/MS VOA

Analysis Batch: 5859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5356-4	C-INFLUENT	Total/NA	Air	TO 15 LL	
140-5356-5	C-MID GAC	Total/NA	Air	TO 15 LL	
140-5356-6	C-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-5859/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-5859/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 5891

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5356-1	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-5356-2	A-MID GAC	Total/NA	Air	TO 15 LL	
140-5356-3	A-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-5891/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-5891/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-5356-1
Date Collected: 07/14/16 11:42
Matrix: Air
Date Received: 07/18/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	5891	07/20/16 22:42	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: A-MID GAC
Lab Sample ID: 140-5356-2
Date Collected: 07/14/16 11:40
Matrix: Air
Date Received: 07/18/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5891	07/20/16 23:36	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-5356-3
Date Collected: 07/14/16 11:38
Matrix: Air
Date Received: 07/18/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5891	07/21/16 00:29	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-5356-4
Date Collected: 07/14/16 10:12
Matrix: Air
Date Received: 07/18/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5859	07/19/16 20:34	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-MID GAC
Lab Sample ID: 140-5356-5
Date Collected: 07/14/16 10:08
Matrix: Air
Date Received: 07/18/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5859	07/19/16 21:19	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-5356-6
Date Collected: 07/14/16 10:06
Matrix: Air
Date Received: 07/18/16 10:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	5859	07/19/16 22:05	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-5859/4

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	5859	07/19/16 12:58	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-5891/4

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	5891	07/20/16 12:51	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-5859/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	5859	07/19/16 10:10	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-5891/1002

Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	5891	07/20/16 11:23	HMT	TAL KNX
	Instrument ID: MJ									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC

TestAmerica Job ID: 140-5356-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: SSD OEM LMC MRC

TestAmerica Job ID: 140-5356-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5356-1	A-INFLUENT	Air	07/14/16 11:42	07/18/16 10:00
140-5356-2	A-MID GAC	Air	07/14/16 11:40	07/18/16 10:00
140-5356-3	A-EFFLUENT	Air	07/14/16 11:38	07/18/16 10:00
140-5356-4	C-INFLUENT	Air	07/14/16 10:12	07/18/16 10:00
140-5356-5	C-MID GAC	Air	07/14/16 10:08	07/18/16 10:00
140-5356-6	C-EFFLUENT	Air	07/14/16 10:06	07/18/16 10:00

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
A-INFLUENT	140-5356-1	93
A-MID GAC	140-5356-2	100
A-EFFLUENT	140-5356-3	98
C-INFLUENT	140-5356-4	111
C-MID GAC	140-5356-5	111
C-EFFLUENT	140-5356-6	110
	MB 140-5859/4	100
	MB 140-5891/4	100
	LCS 140-5859/1002	103
	LCS 140-5891/1002	112

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVG19A-LCS.d

Lab ID: LCS 140-5859/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.04	102	70-130	
Carbon tetrachloride	2.00	2.12	106	70-130	
Chlorodifluoromethane	2.00	1.98	99	60-140	
Chloroform	2.00	1.97	98	70-130	
cis-1,2-Dichloroethene	2.00	2.07	104	70-130	
Dichlorodifluoromethane	2.00	2.02	101	60-140	
1,1-Dichloroethane	2.00	1.89	95	70-130	
1,2-Dichloroethane	2.00	1.76	88	70-130	
1,1-Dichloroethene	2.00	2.51	125	70-130	
Ethylbenzene	2.00	1.94	97	70-130	
Methylene Chloride	2.00	2.07	103	70-130	
Methyl tert-butyl ether	2.00	1.68	84	60-140	
Naphthalene	2.00	1.78	89	60-140	
Tetrachloroethene	2.00	2.15	107	70-130	
Toluene	2.00	1.96	98	70-130	
trans-1,2-Dichloroethene	2.00	2.19	110	70-130	
1,2,4-Trichlorobenzene	2.00	1.24	62	60-140	
1,1,1-Trichloroethane	2.00	1.92	96	70-130	
1,1,2-Trichloroethane	2.00	2.00	100	70-130	
Trichloroethene	2.00	2.20	110	70-130	
1,2,3-Trimethylbenzene	2.00	1.86	93	70-130	
1,2,4-Trimethylbenzene	2.00	1.84	92	70-130	
1,3,5-Trimethylbenzene	2.00	1.87	94	70-130	
Vinyl chloride	2.00	2.31	115	70-130	
Xylenes, Total	6.00	5.64	94	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVG20-LCS.d

Lab ID: LCS 140-5891/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.79	90	70-130	
Carbon tetrachloride	2.00	2.37	118	70-130	
Chlorodifluoromethane	2.00	2.31	115	60-140	
Chloroform	2.00	2.01	101	70-130	
cis-1,2-Dichloroethene	2.00	1.88	94	70-130	
Dichlorodifluoromethane	2.00	2.40	120	60-140	
1,1-Dichloroethane	2.00	2.05	103	70-130	
1,2-Dichloroethane	2.00	2.08	104	70-130	
1,1-Dichloroethene	2.00	2.02	101	70-130	
Ethylbenzene	2.00	1.75	87	70-130	
Methylene Chloride	2.00	2.02	101	70-130	
Methyl tert-butyl ether	2.00	1.93	96	60-140	
Naphthalene	2.00	1.73	86	60-140	
Tetrachloroethene	2.00	1.71	85	70-130	
Toluene	2.00	1.65	82	70-130	
trans-1,2-Dichloroethene	2.00	2.06	103	70-130	
1,2,4-Trichlorobenzene	2.00	1.92	96	60-140	
1,1,1-Trichloroethane	2.00	2.15	108	70-130	
1,1,2-Trichloroethane	2.00	1.75	87	70-130	
Trichloroethene	2.00	1.73	86	70-130	
1,2,3-Trimethylbenzene	2.00	1.93	96	70-130	
1,2,4-Trimethylbenzene	2.00	1.96	98	70-130	
1,3,5-Trimethylbenzene	2.00	1.78	89	70-130	
Vinyl chloride	2.00	2.26	113	70-130	
Xylenes, Total	6.00	5.36	89	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab File ID: EMB500G19.D Lab Sample ID: MB 140-5859/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 07/19/2016 12:58

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-5859/1002	ECCVG19A-LCS.d	07/19/2016 10:10
C-INFLUENT	140-5356-4	EG19P110.D	07/19/2016 20:34
C-MID GAC	140-5356-5	EG19P111.D	07/19/2016 21:19
C-EFFLUENT	140-5356-6	EG19P112.D	07/19/2016 22:05

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab File ID: J500BG20.D Lab Sample ID: MB 140-5891/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 07/20/2016 12:51

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-5891/1002	JCCVG20-LCS.d	07/20/2016 11:23
A-INFLUENT	140-5356-1	JG20P108.D	07/20/2016 22:42
A-MID GAC	140-5356-2	JG20P109.D	07/20/2016 23:36
A-EFFLUENT	140-5356-3	JG20P110.D	07/21/2016 00:29

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab File ID: EBFBF28.D BFB Injection Date: 06/28/2016

Instrument ID: ME BFB Injection Time: 14:10

Analysis Batch No.: 5589

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.3	
75	30.0 - 60.0 % of mass 95	56.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.5	(0.5) 1
174	50.0 - 120.00 % of mass 95	100.9	
175	5.0 - 9.0 % of mass 174	7.4	(7.3) 1
176	95.0 - 101.0 % of mass 174	98.7	(97.9) 1
177	5.0 - 9.0 % of mass 176	6.8	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5589/2	EF28IC01.D	06/28/2016	14:43
	IC 140-5589/3	EF28IC02.D	06/28/2016	15:30
	IC 140-5589/4	EF28IC03.D	06/28/2016	16:17
	IC 140-5589/5	EF28IC04.D	06/28/2016	17:03
	IC 140-5589/6	EF28IC05.D	06/28/2016	17:50
	ICIS 140-5589/7	EF28IC06.D	06/28/2016	18:37
	IC 140-5589/8	EF28IC07.D	06/28/2016	19:23
	IC 140-5589/9	EF28IC08.D	06/28/2016	20:09
	IC 140-5589/10	EF28IC09.D	06/28/2016	20:55
	ICV 140-5589/12	EF28ICV.D	06/28/2016	22:26

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab File ID: EBFBG19A.D BFB Injection Date: 07/19/2016

Instrument ID: ME BFB Injection Time: 09:38

Analysis Batch No.: 5859

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.9	
75	30.0 - 60.0 % of mass 95	57.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.6	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	76.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.4) 1
176	95.0 - 101.0 % of mass 174	73.4	(96.5) 1
177	5.0 - 9.0 % of mass 176	5.4	(7.3) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-5859/2	ECCVG19A.D	07/19/2016	10:10
	LCS 140-5859/1002	ECCVG19A-LCS .d	07/19/2016	10:10
	MB 140-5859/4	EMB500G19.D	07/19/2016	12:58
C-INFLUENT	140-5356-4	EG19P110.D	07/19/2016	20:34
C-MID GAC	140-5356-5	EG19P111.D	07/19/2016	21:19
C-EFFLUENT	140-5356-6	EG19P112.D	07/19/2016	22:05

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab File ID: JBFBF22Z.D BFB Injection Date: 06/22/2016

Instrument ID: MJ BFB Injection Time: 15:21

Analysis Batch No.: 5523

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.9	
75	30.0 - 60.0 % of mass 95	52.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	114.8	
175	5.0 - 9.0 % of mass 174	9.0	(7.9) 1
176	95.0 - 101.0 % of mass 174	111.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5523/2	JF22IC01.D	06/22/2016	15:49
	IC 140-5523/3	JF22IC02.D	06/22/2016	16:44
	IC 140-5523/4	JF22IC03.D	06/22/2016	17:38
	IC 140-5523/5	JF22IC04.D	06/22/2016	18:32
	IC 140-5523/6	JF22IC05.D	06/22/2016	19:26
	ICIS 140-5523/7	JF22IC06.D	06/22/2016	20:20
	IC 140-5523/8	JF22IC07.D	06/22/2016	21:14
	IC 140-5523/9	JF22IC08.D	06/22/2016	22:07
	IC 140-5523/10	JF22IC09.D	06/22/2016	23:00
	ICV 140-5523/17	JF22ICVR.D	06/23/2016	09:52

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab File ID: JBFBG20.D BFB Injection Date: 07/20/2016

Instrument ID: MJ BFB Injection Time: 10:56

Analysis Batch No.: 5891

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.1	
75	30.0 - 60.0 % of mass 95	54.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	115.0	
175	5.0 - 9.0 % of mass 174	9.0	(7.8) 1
176	95.0 - 101.0 % of mass 174	112.8	(98.1) 1
177	5.0 - 9.0 % of mass 176	7.5	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-5891/2	JCCVG20.D	07/20/2016	11:23
	LCS 140-5891/1002	JCCVG20-LCS.d	07/20/2016	11:23
	MB 140-5891/4	J500BG20.D	07/20/2016	12:51
A-INFLUENT	140-5356-1	JG20P108.D	07/20/2016	22:42
A-MID GAC	140-5356-2	JG20P109.D	07/20/2016	23:36
A-EFFLUENT	140-5356-3	JG20P110.D	07/21/2016	00:29

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Sample No.: ICIS 140-5589/7 Date Analyzed: 06/28/2016 18:37

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): EF28IC06.D Heated Purge: (Y/N) N

Calibration ID: 649

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		275461	7.62	1220727	9.86	1219101	14.84
UPPER LIMIT		385645	7.95	1709018	10.19	1706741	15.17
LOWER LIMIT		165277	7.29	732436	9.53	731461	14.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5589/12		296423	7.62	1367541	9.85	1328894	14.84

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Sample No.: CCVIS 140-5859/2 Date Analyzed: 07/19/2016 10:10

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVG19A.D Heated Purge: (Y/N) N

Calibration ID: 649

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		575261	7.61	2439040	9.85	2438129	14.83
UPPER LIMIT		805365	7.94	3414656	10.18	3413381	15.16
LOWER LIMIT		345157	7.28	1463424	9.52	1462877	14.50
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-5859/1002		575261	7.61	2439040	9.85	2438129	14.83
MB 140-5859/4		576157	7.60	2663275	9.84	2502624	14.83
140-5356-4	C-INFLUENT	377310	7.61	1834925	9.84	1801990	14.83
140-5356-5	C-MID GAC	426545	7.61	2040704	9.85	1968535	14.83
140-5356-6	C-EFFLUENT	384342	7.61	1807041	9.84	1849701	14.83

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Sample No.: ICIS 140-5523/7 Date Analyzed: 06/22/2016 20:20

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JF22IC06.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		295193	9.39	1295936	11.55	1130543	16.23
UPPER LIMIT		413270	9.72	1814310	11.88	1582760	16.56
LOWER LIMIT		177116	9.06	777562	11.22	678326	15.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5523/17		332894	9.39	1464991	11.55	1301938	16.23

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Sample No.: CCVIS 140-5891/2 Date Analyzed: 07/20/2016 11:23

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVG20.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		211762	9.37	932413	11.54	833058	16.22
UPPER LIMIT		296467	9.70	1305378	11.87	1166281	16.55
LOWER LIMIT		127057	9.04	559448	11.21	499835	15.89
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-5891/1002		211762	9.37	932413	11.54	833058	16.22
MB 140-5891/4		271260	9.37	1167996	11.53	956164	16.21
140-5356-1	A-INFLUENT	232468	9.37	1049120	11.53	893706	16.21
140-5356-2	A-MID GAC	235404	9.37	1051672	11.53	970020	16.22
140-5356-3	A-EFFLUENT	217952	9.37	976970	11.54	902457	16.22

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-5356-1

Matrix: Air | Lab File ID: JG20P108.D

Analysis Method: TO 15 LL | Date Collected: 07/14/2016 11:42

Sample wt/vol: 20(mL) | Date Analyzed: 07/20/2016 22:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5891 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	20		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	25		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.2		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	19		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	10		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	3.9		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	94		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	170		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-5356-1

Matrix: Air Lab File ID: JG20P108.D

Analysis Method: TO 15 LL Date Collected: 07/14/2016 11:42

Sample wt/vol: 20(mL) Date Analyzed: 07/20/2016 22:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5891 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	65		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	100		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	17		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	75		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	36		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	15		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	510		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	940		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	93		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Lims ID:	140-5356-A-1				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	20-Jul-2016 22:42:30	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-014				
Misc. Info.:	140-5356-a-1				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:47:50	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: tajh		Date:	21-Jul-2016 09:41:59		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.367	9.373	-0.006	92	232468	4.00	
* 2 1,4-Difluorobenzene	114	11.530	11.535	-0.005	96	1049120	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.210	16.216	-0.006	88	893706	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.840	17.835	0.005	89	489023	3.71	
27 1,1-Dichloroethene	96	6.355	6.355	0.000	92	51948	0.7553	
31 Methylene Chloride	84	6.721	6.726	-0.005	98	26132	0.4090	
37 1,1-Dichloroethane	63	8.006	8.007	-0.001	99	23819	0.1696	
42 cis-1,2-Dichloroethene	96	9.023	9.023	0.000	98	69918	1.02	
47 1,1,1-Trichloroethane	97	10.422	10.427	-0.005	96	676478	3.76	
51 Benzene	78	11.008	11.008	0.000	98	148446	0.8105	
59 Trichloroethene	130	12.235	12.235	0.000	95	645632	6.99	
68 Toluene	91	14.257	14.257	0.000	92	29368	0.1543	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

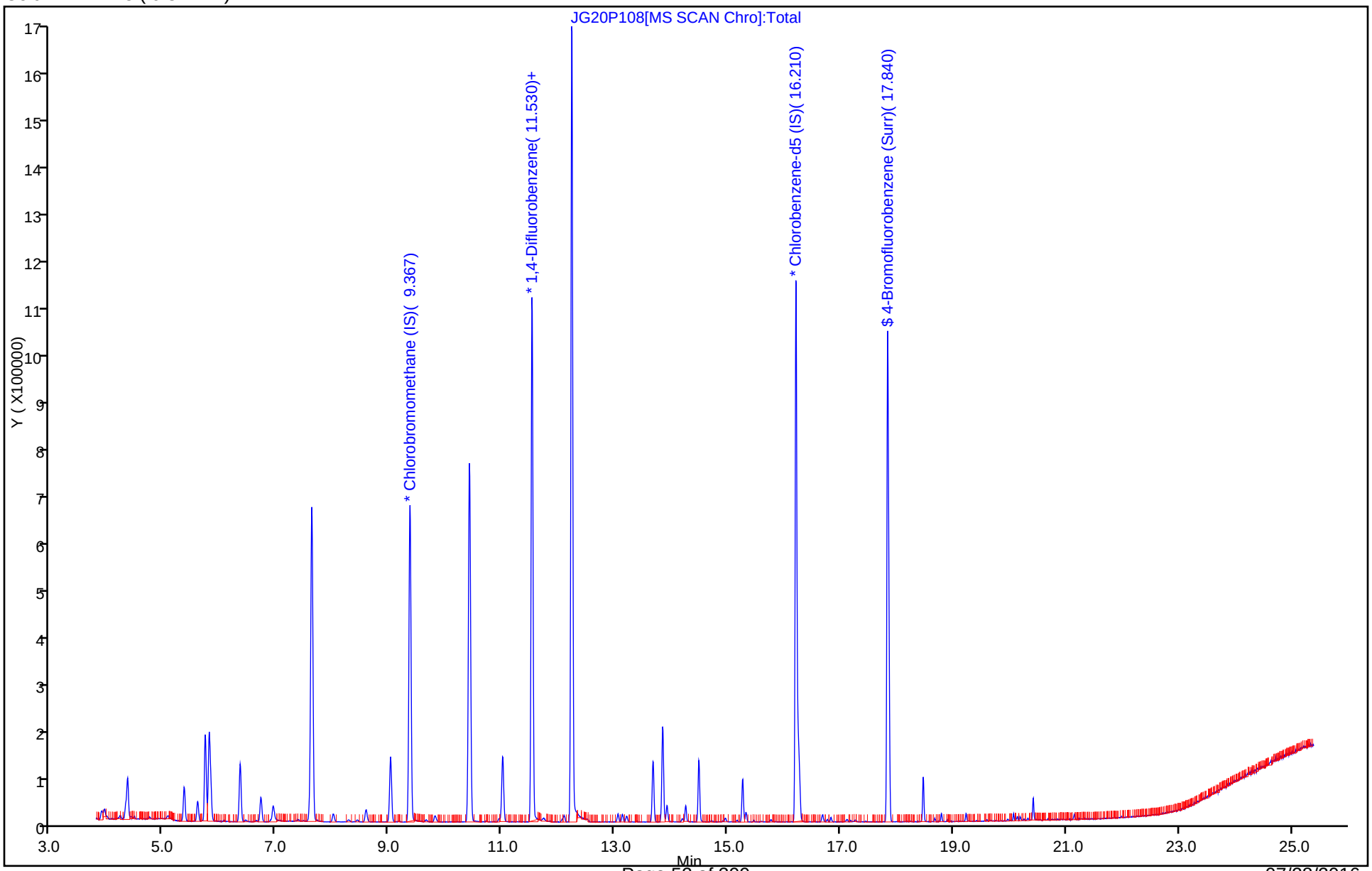
Report Date: 21-Jul-2016 09:59:28 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D

Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1	Worklist Smp#:	14
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Lims ID:	140-5356-A-1				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	20-Jul-2016 22:42:30	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-014				
Misc. Info.:	140-5356-a-1				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:47:50	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				

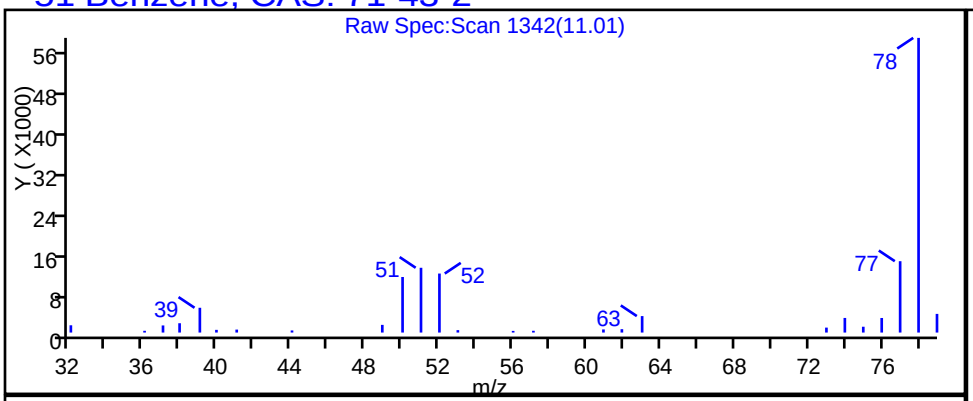
First Level Reviewer: tajh Date: 21-Jul-2016 09:41:59

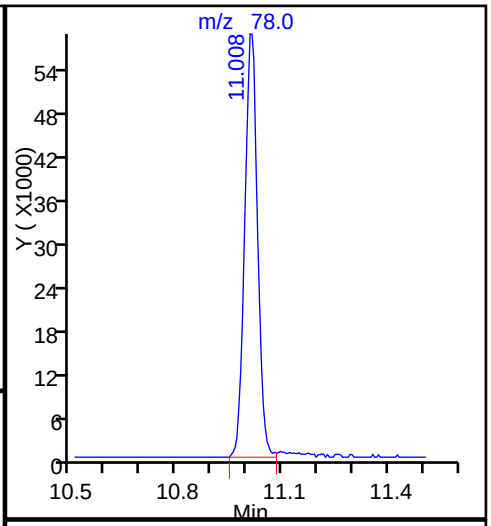
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.71	92.65

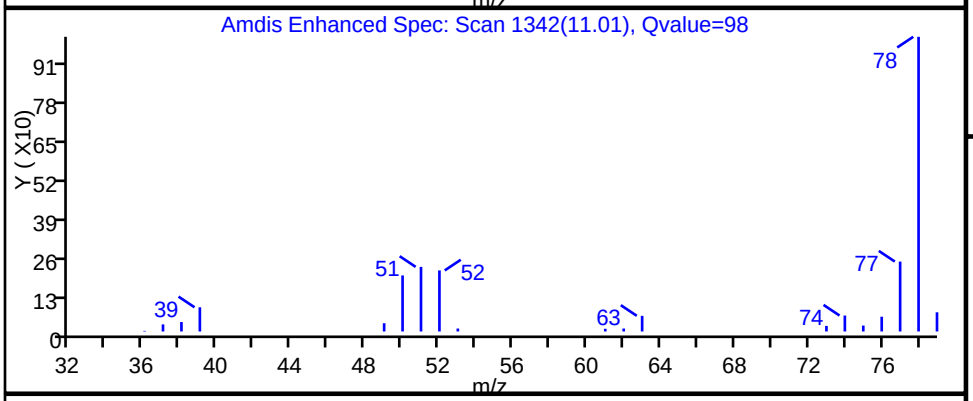
TestAmerica Knoxville

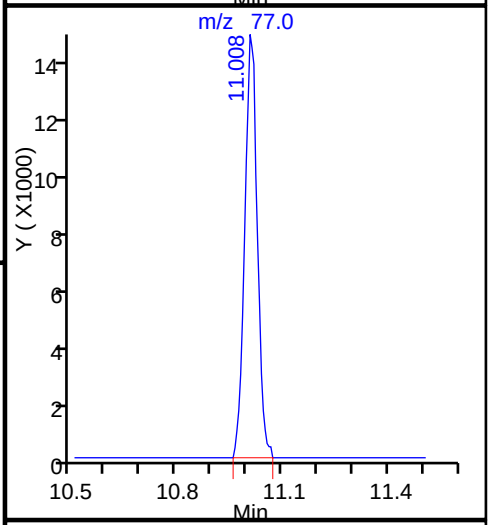
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

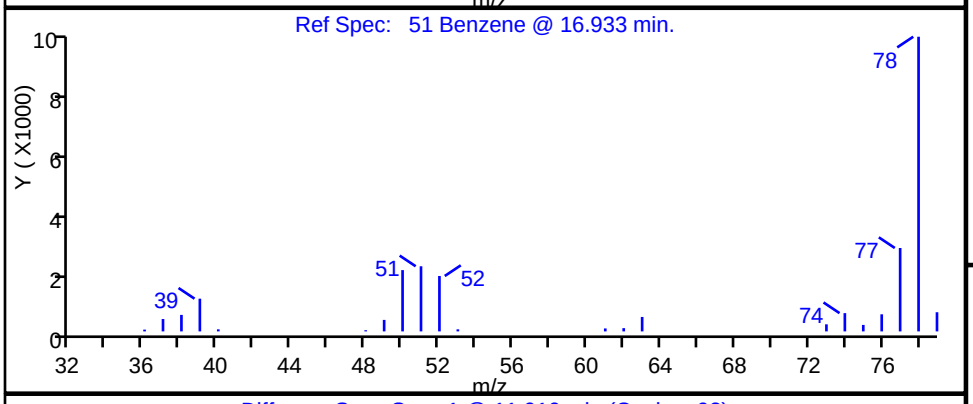
51 Benzene, CAS: 71-43-2

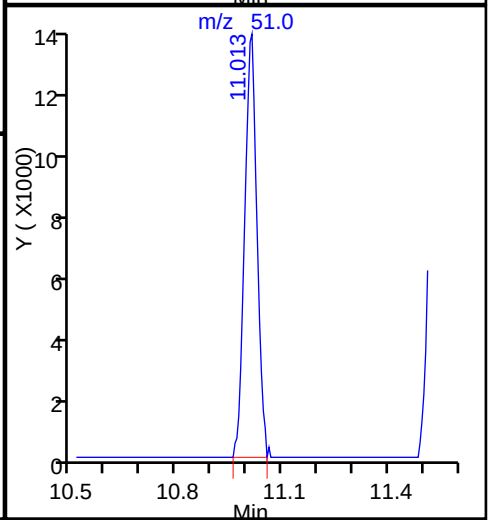


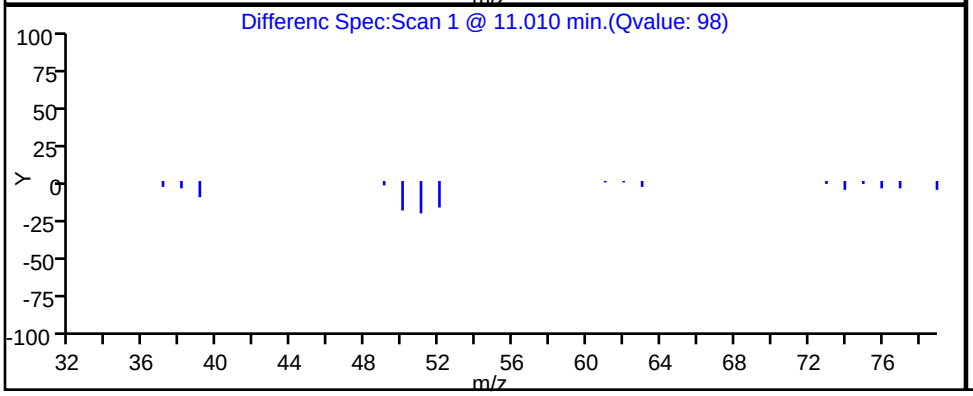








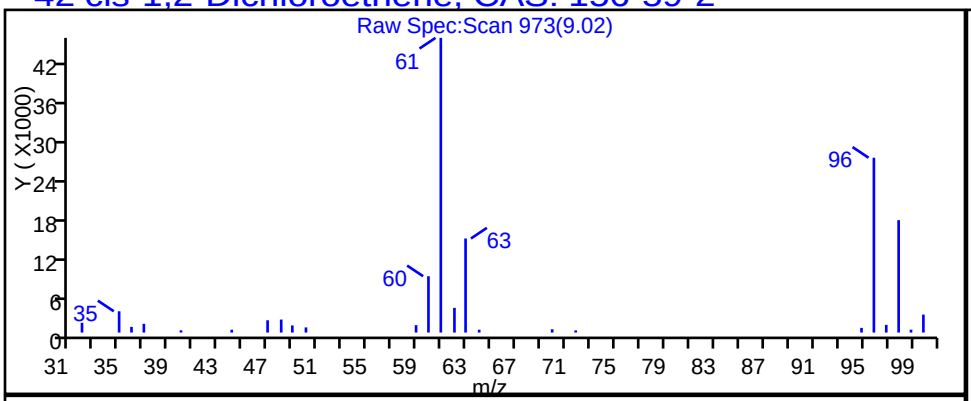


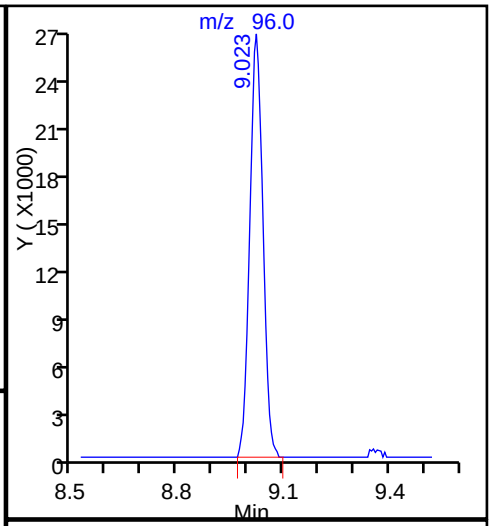


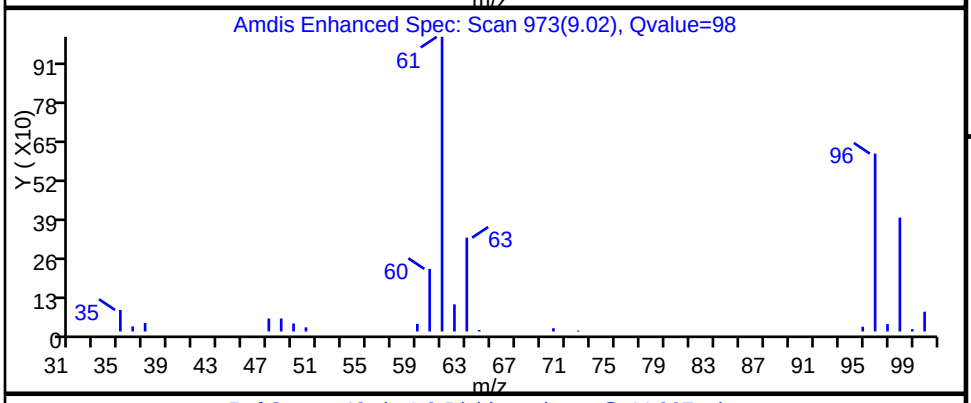
TestAmerica Knoxville

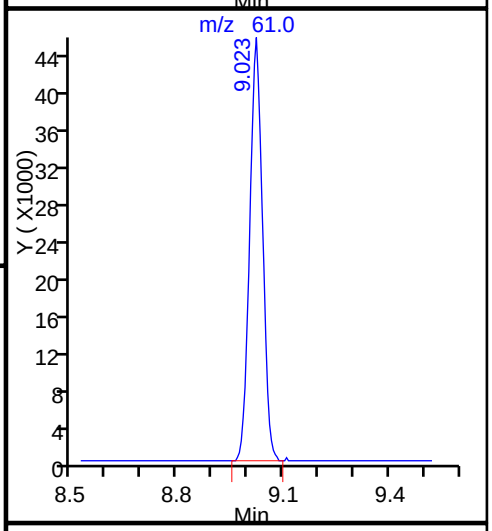
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

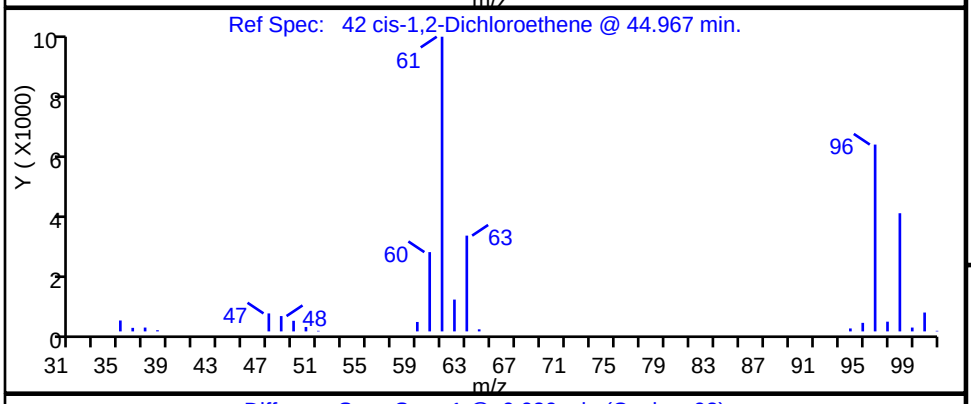
42 cis-1,2-Dichloroethene, CAS: 156-59-2

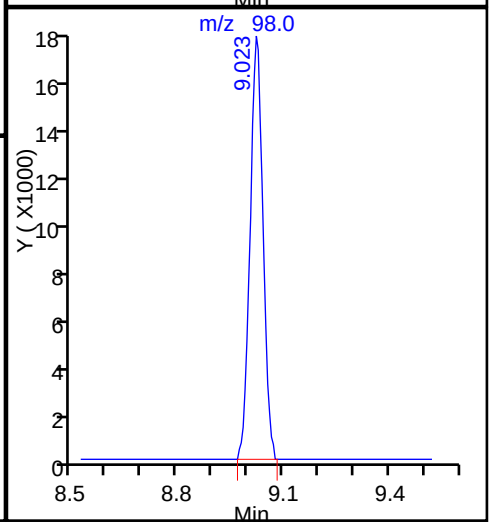


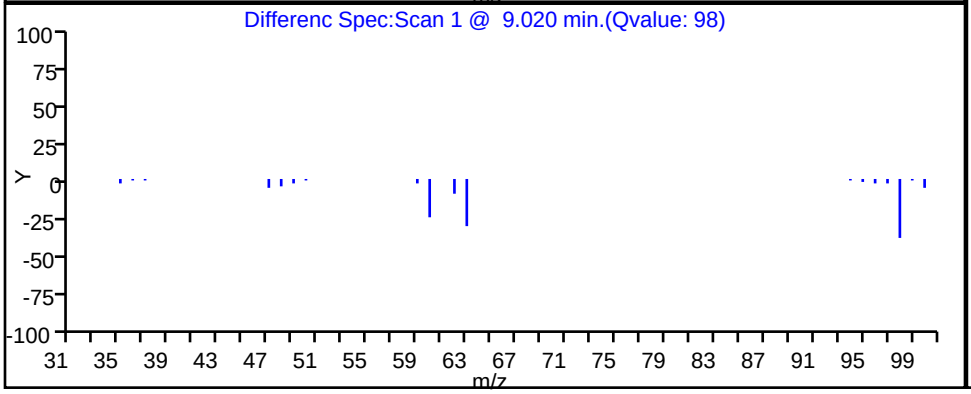








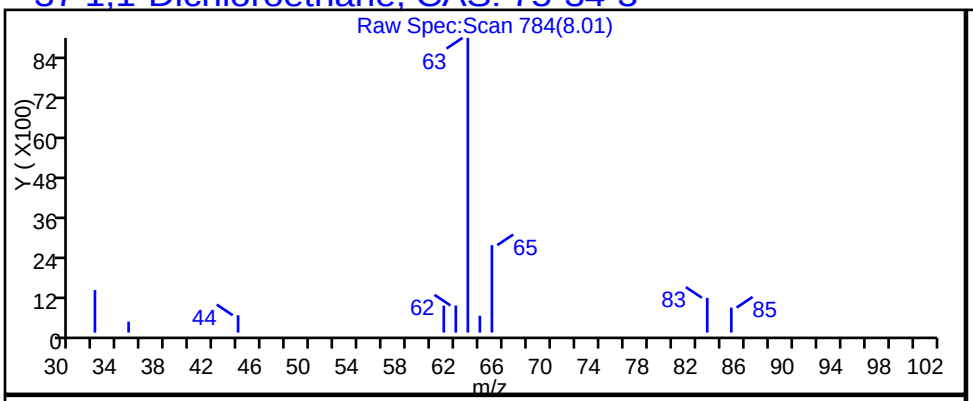


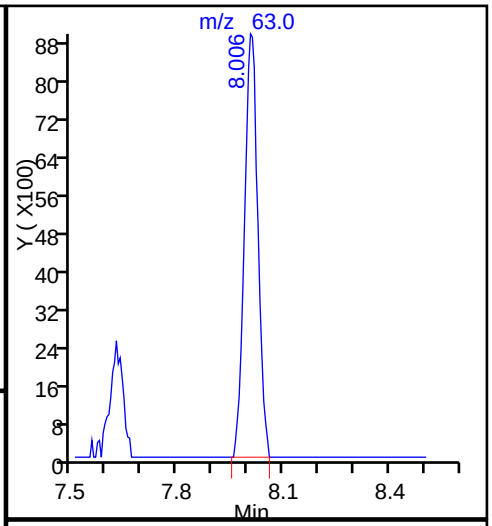


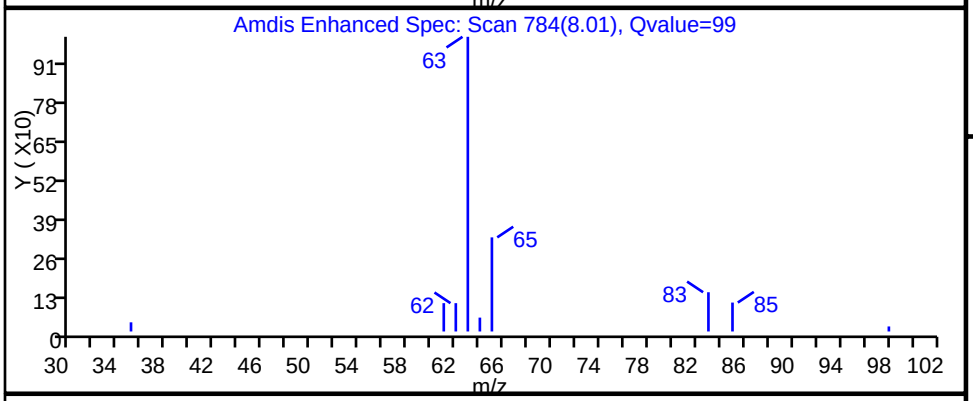
TestAmerica Knoxville

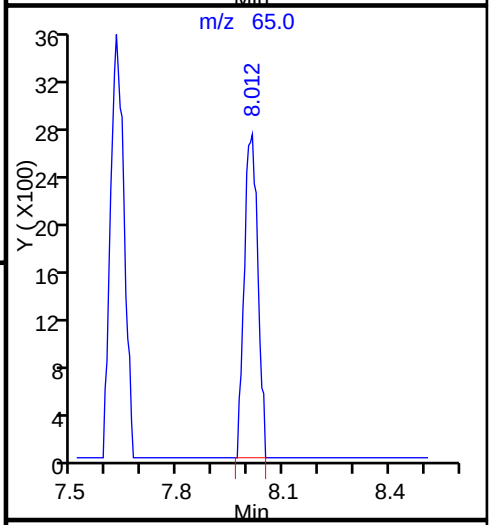
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

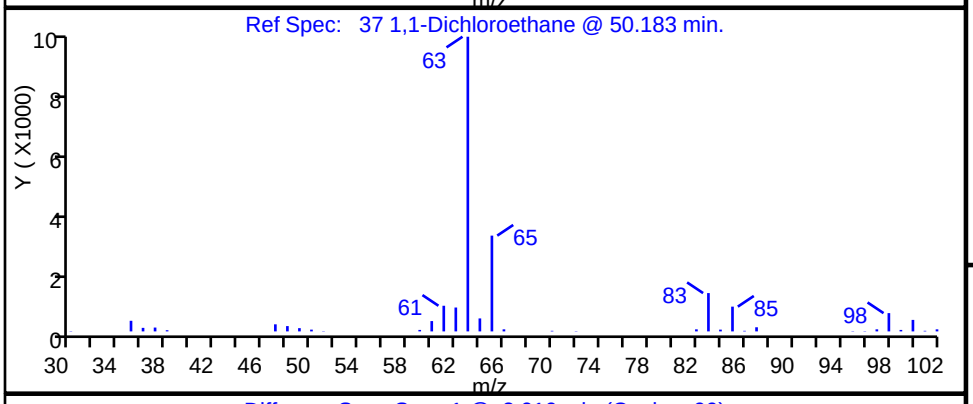
37 1,1-Dichloroethane, CAS: 75-34-3

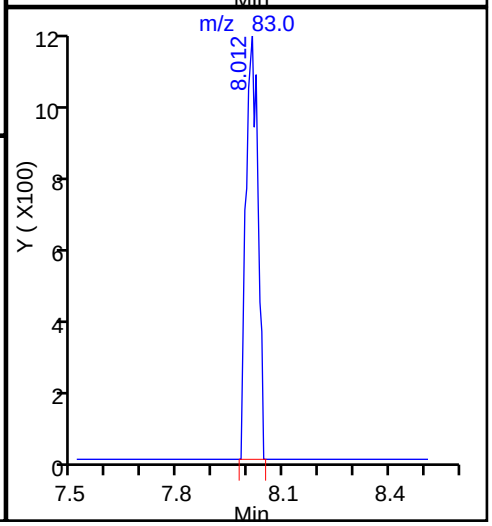


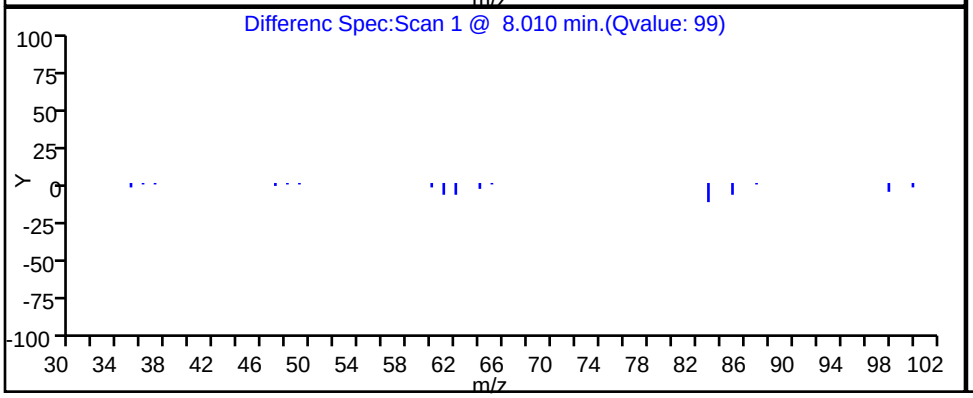








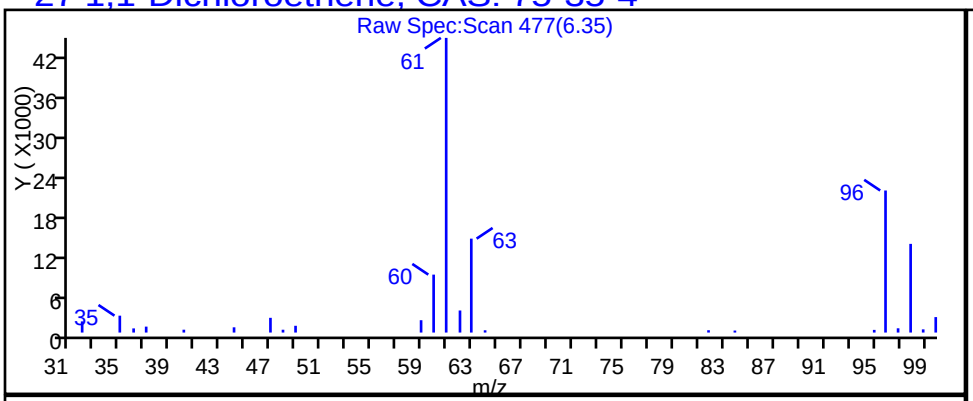


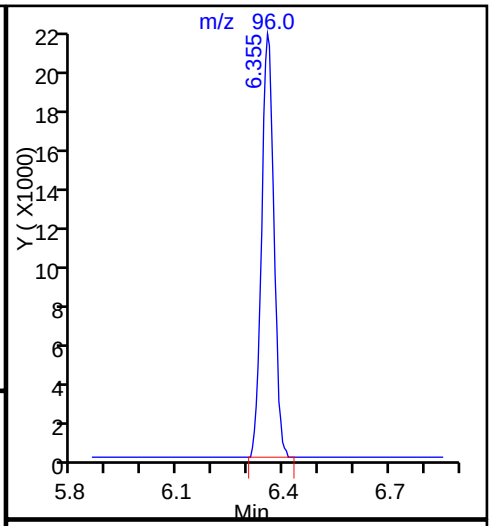


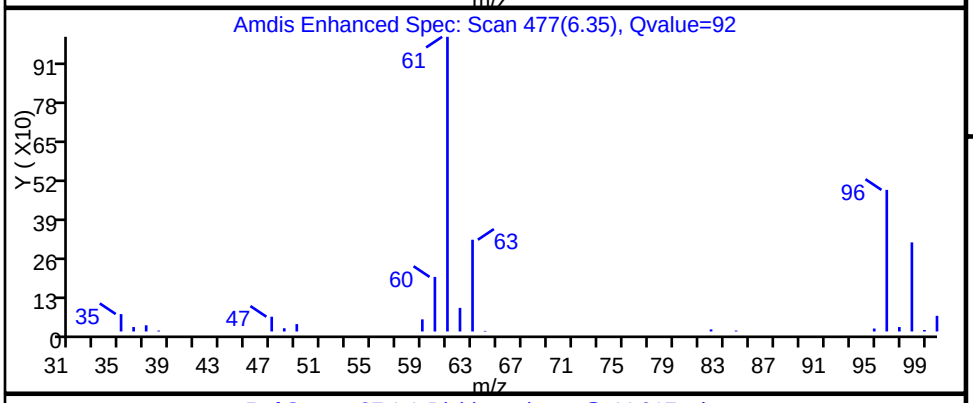
TestAmerica Knoxville

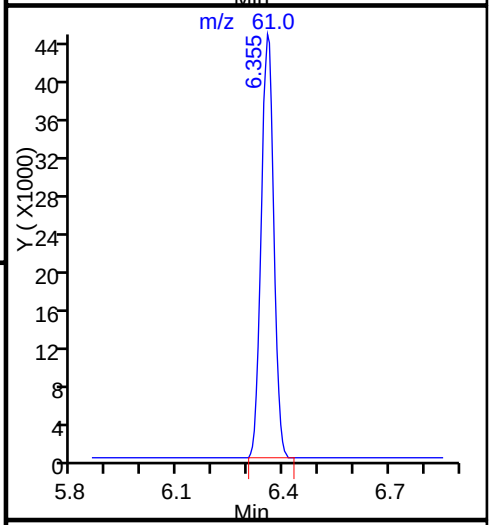
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

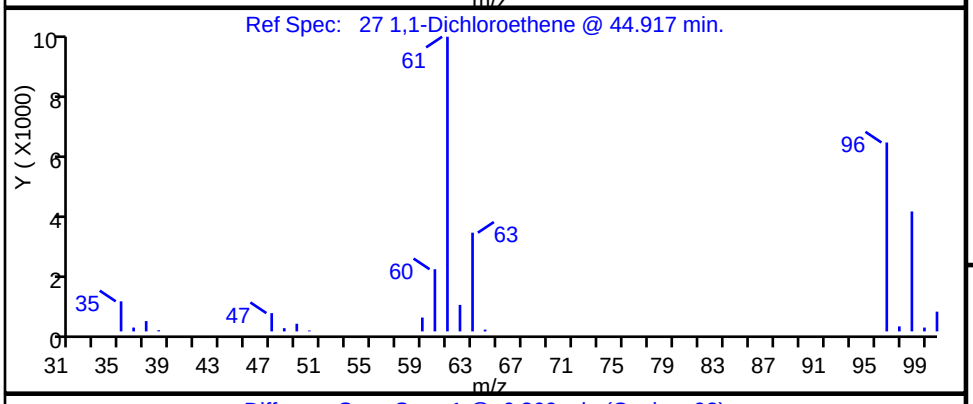
27 1,1-Dichloroethene, CAS: 75-35-4

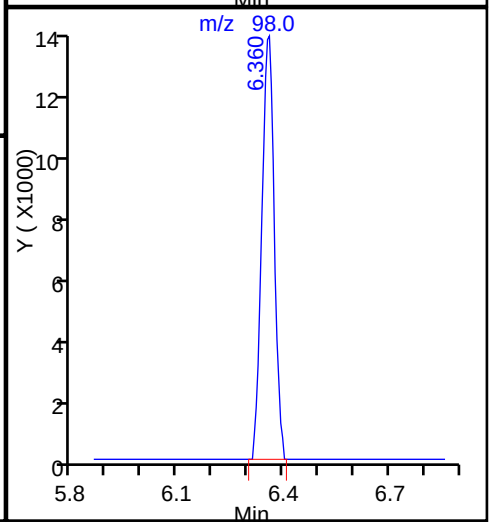


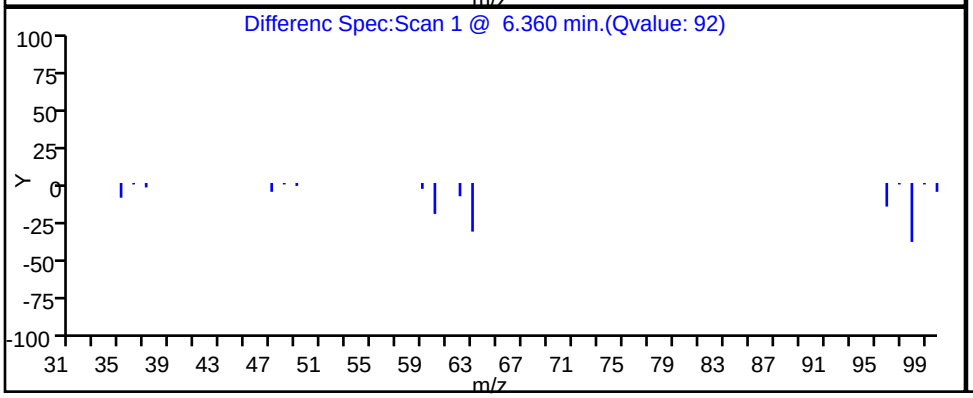






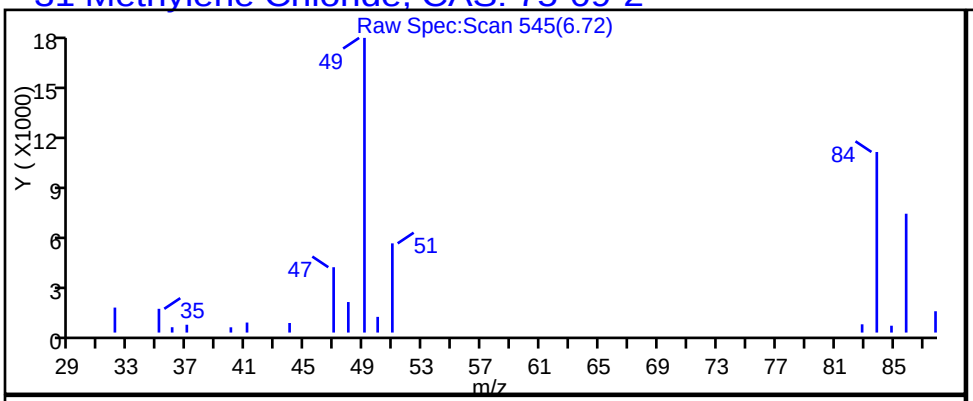


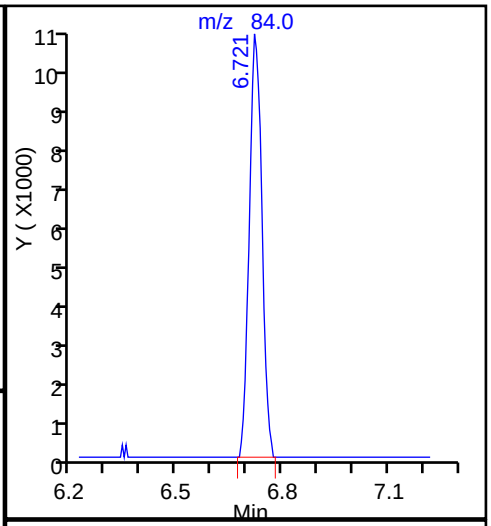


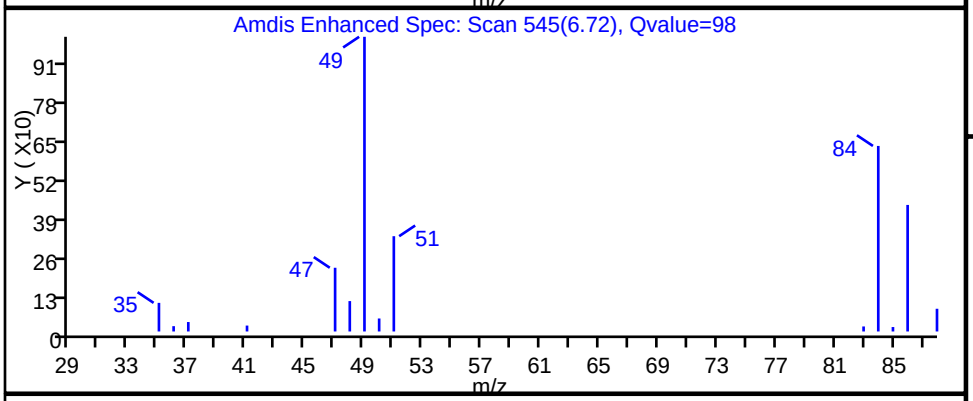


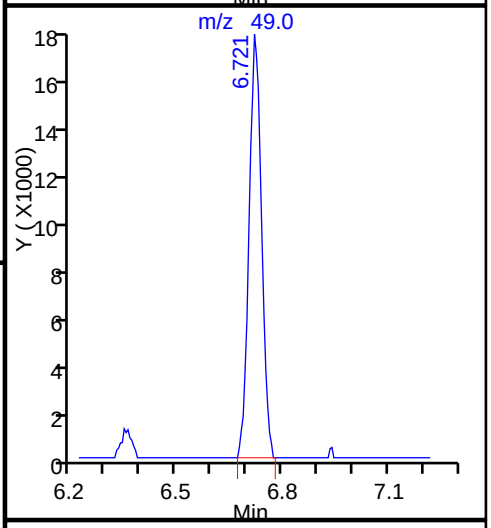
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D
Injection Date: 20-Jul-2016 22:42:30 Instrument ID: MJ
Lims ID: 140-5356-A-1 Lab Sample ID: 140-5356-1
Client ID: A-INFLUENT
Operator ID: 7126 ALS Bottle#: 8 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

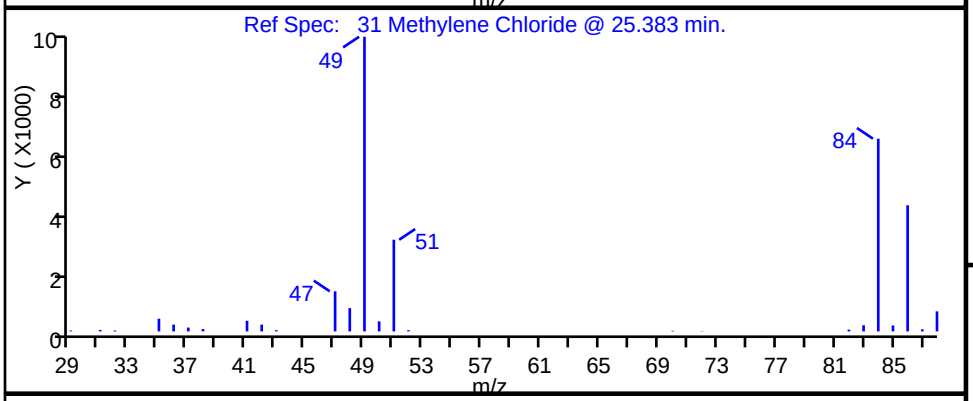
31 Methylene Chloride, CAS: 75-09-2

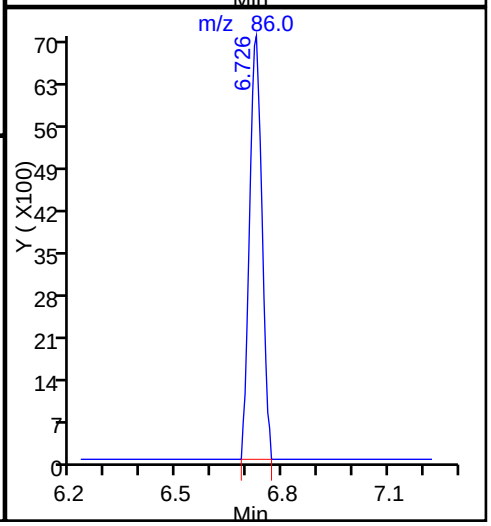


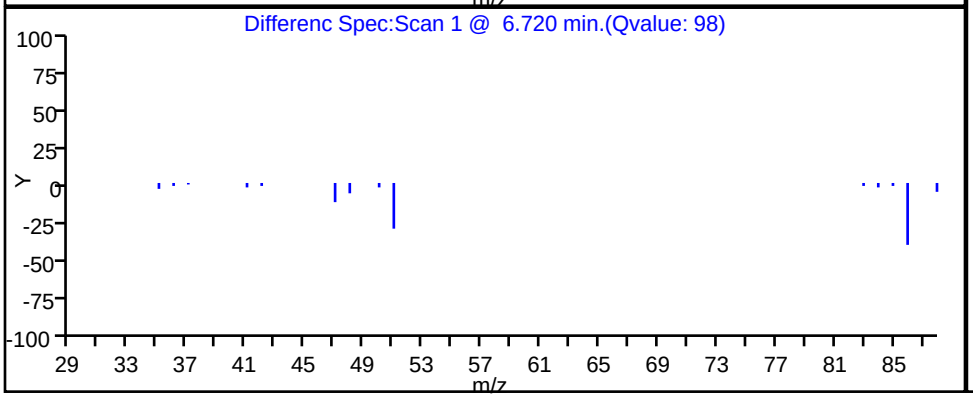








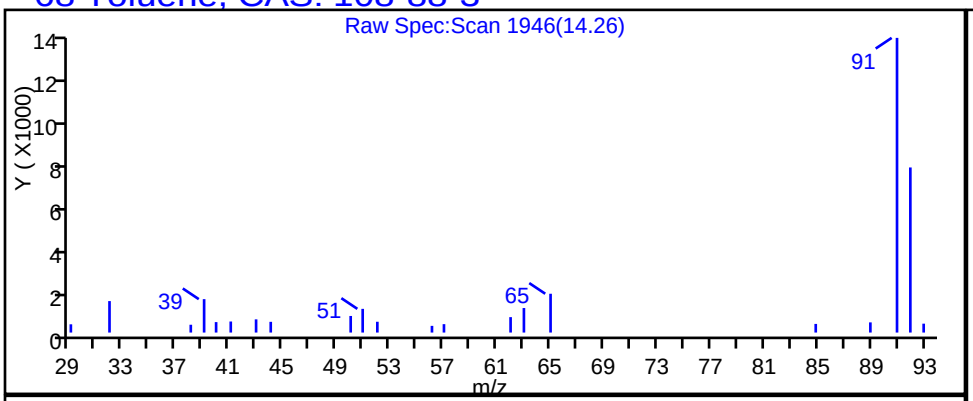


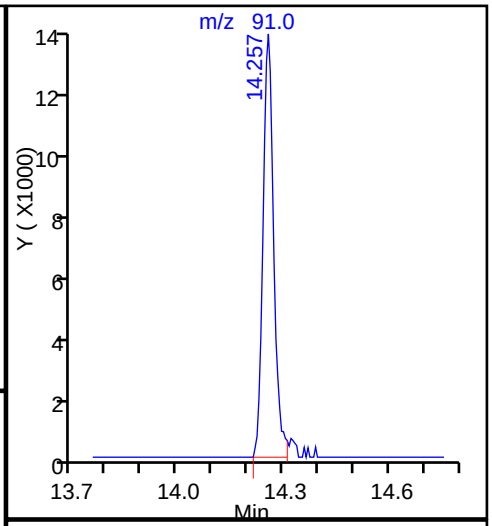


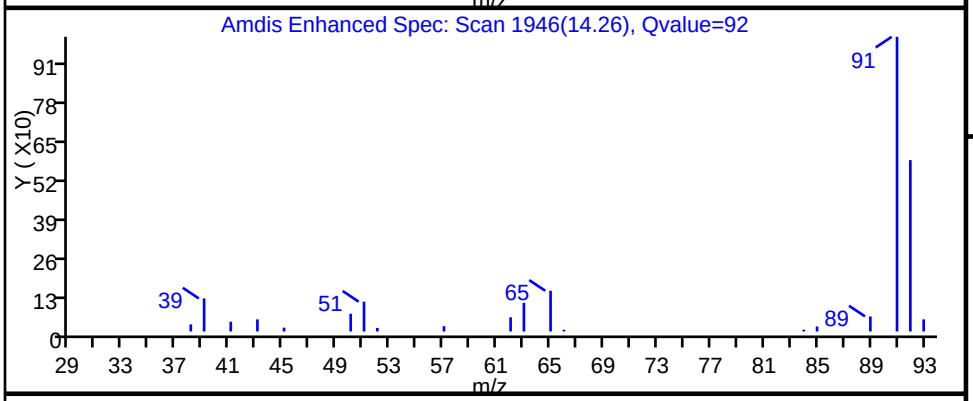
TestAmerica Knoxville

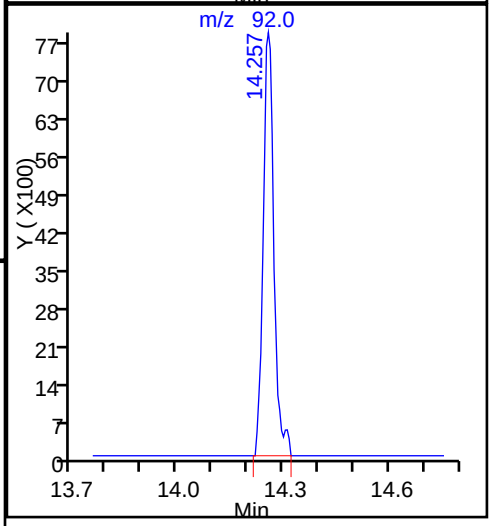
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

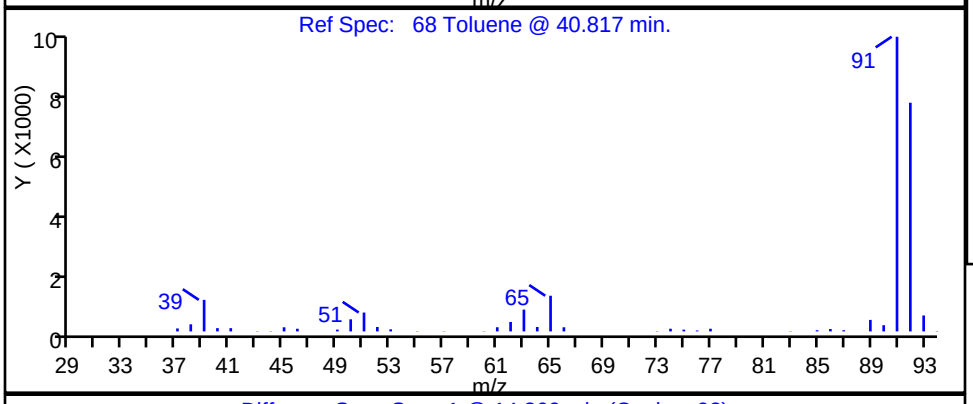
68 Toluene, CAS: 108-88-3

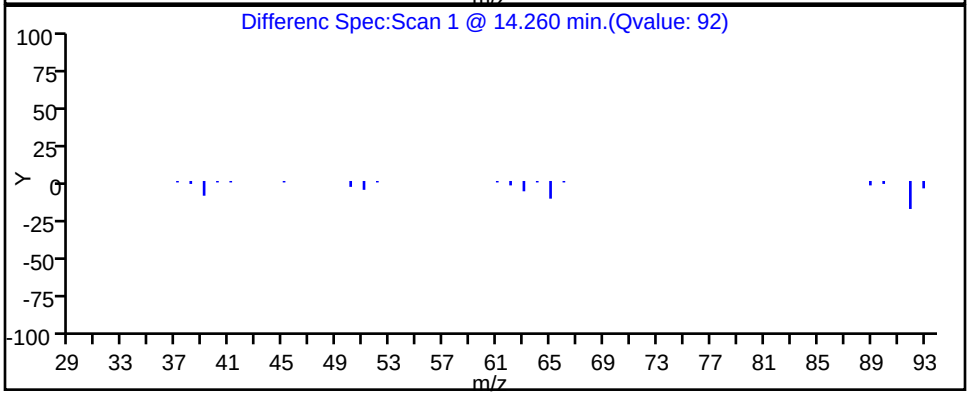










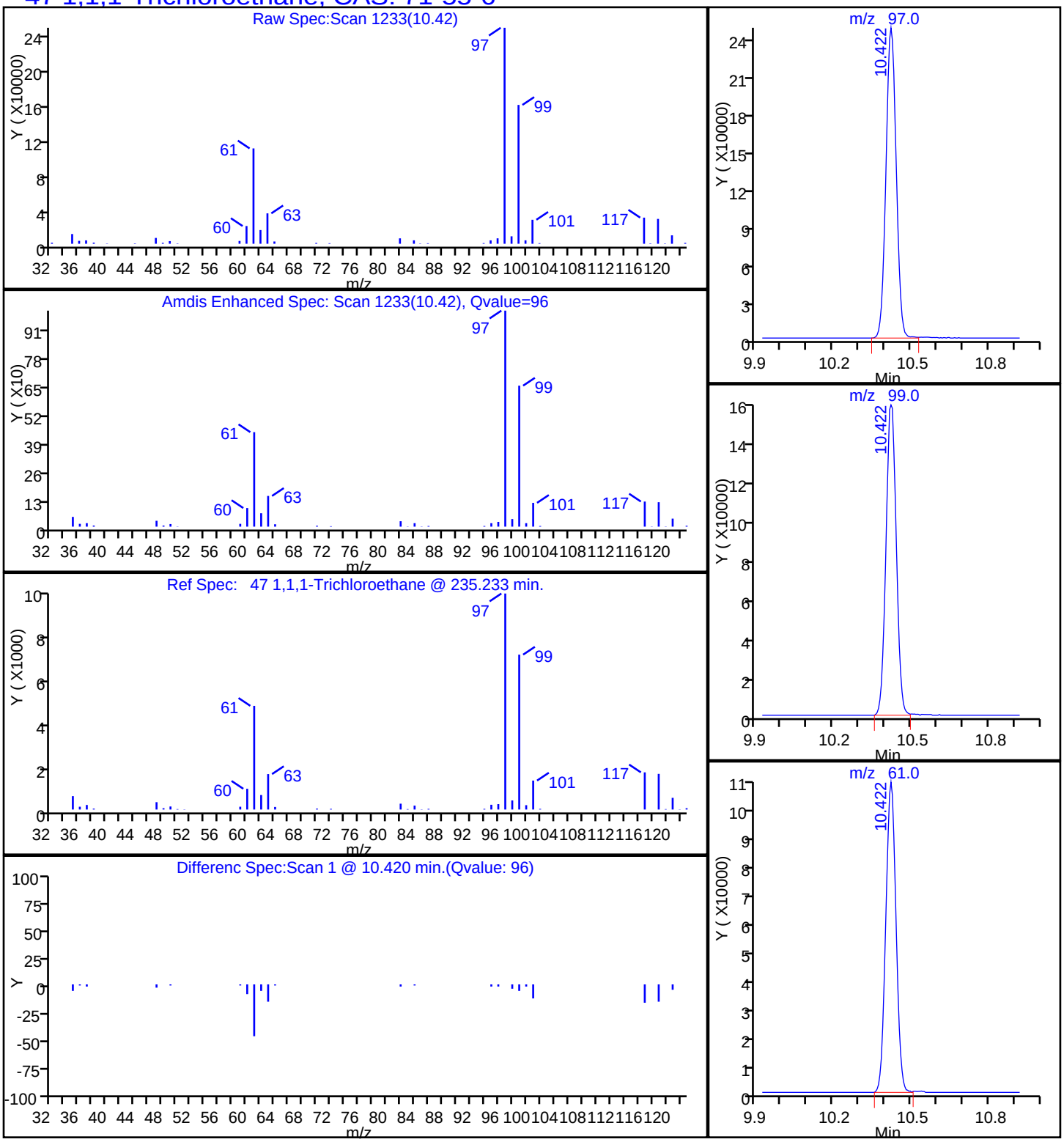


Report Date: 21-Jul-2016 09:59:28 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

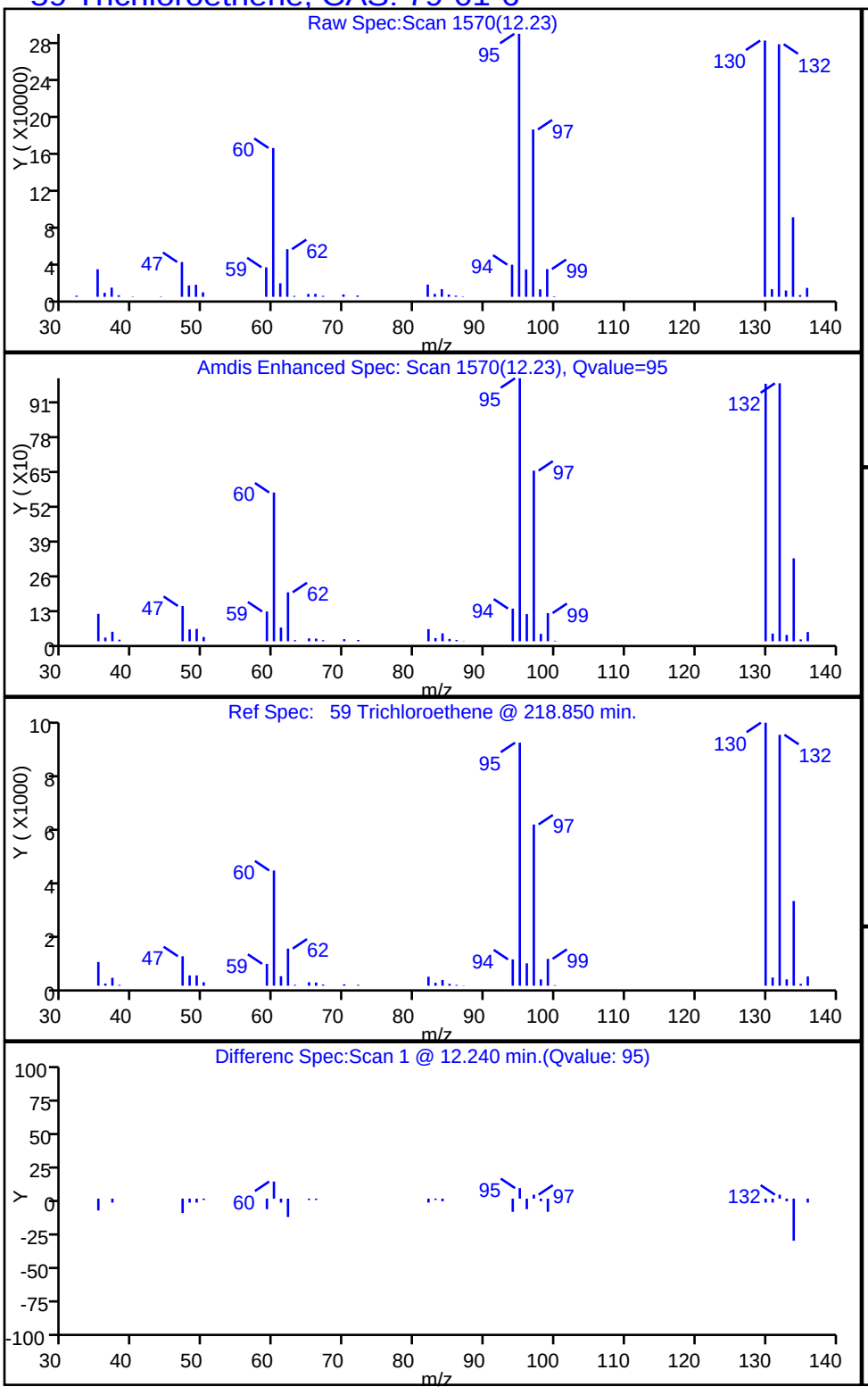
47 1,1,1-Trichloroethane, CAS: 71-55-6

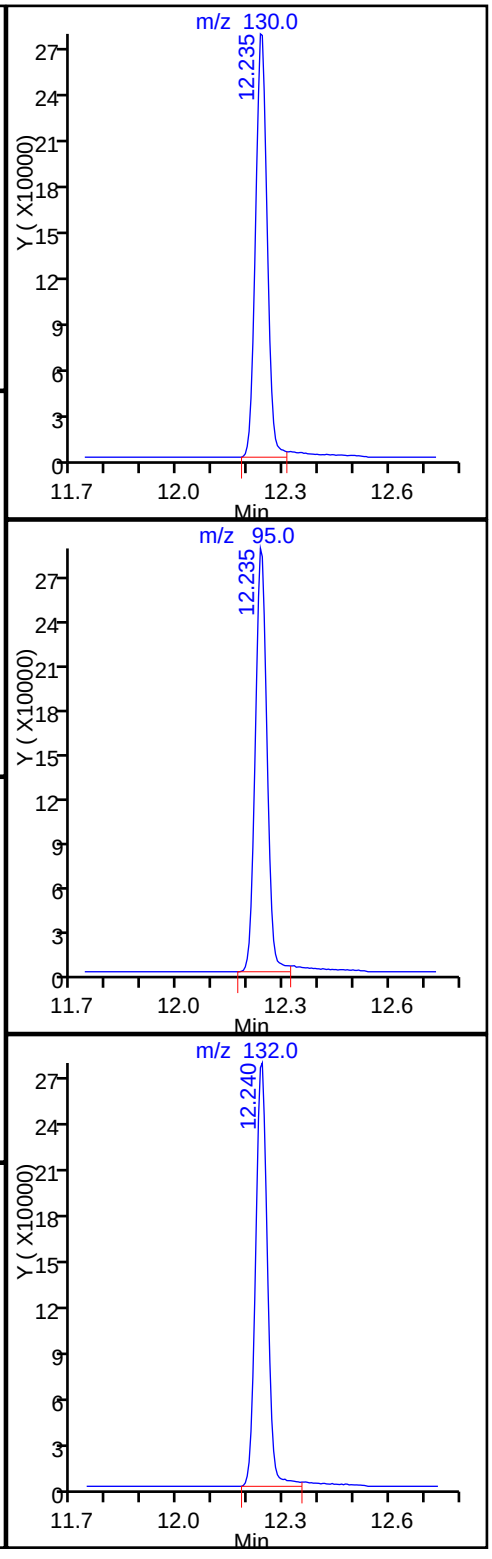


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P108.D				
Injection Date:	20-Jul-2016 22:42:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-1	Lab Sample ID:	140-5356-1		
Client ID:	A-INFLUENT				
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: A-MID GAC Lab Sample ID: 140-5356-2

Matrix: Air Lab File ID: JG20P109.D

Analysis Method: TO 15 LL Date Collected: 07/14/2016 11:40

Sample wt/vol: 100(mL) Date Analyzed: 07/20/2016 23:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5891 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.69		0.40	0.075
67-66-3	Chloroform	119.38	0.54		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	43		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	4.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.10	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	22		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	14		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.3		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.71		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	31		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.31		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.28	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.57	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: A-MID GAC Lab Sample ID: 140-5356-2

Matrix: Air Lab File ID: JG20P109.D

Analysis Method: TO 15 LL Date Collected: 07/14/2016 11:40

Sample wt/vol: 100(mL) Date Analyzed: 07/20/2016 23:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5891 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.5		1.4	0.27
67-66-3	Chloroform	119.38	2.6		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	170		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	18		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.41	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	88		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	47		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.1		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.8		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	170		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.7		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.5	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D
Lims ID: 140-5356-A-2
Client ID: A-MID GAC
Sample Type: Client
Inject. Date: 20-Jul-2016 23:36:30 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003196-015
Misc. Info.: 140-5356-a-2
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Jul-2016 09:47:50 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: tajh Date: 21-Jul-2016 09:42:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.367	9.373	-0.006	92	235404	4.00	
* 2 1,4-Difluorobenzene	114	11.530	11.535	-0.005	96	1051672	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.215	16.216	-0.001	89	970020	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.840	17.835	0.005	93	573938	4.01	
6 Chlorodifluoromethane	67	3.918	3.924	-0.006	95	4055	0.1388	
8 Dichlorodifluoromethane	85	3.993	3.993	0.000	99	28250	0.1092	
27 1,1-Dichloroethene	96	6.355	6.355	0.000	93	308059	4.42	
31 Methylene Chloride	84	6.721	6.726	-0.006	98	174872	2.70	
34 trans-1,2-Dichloroethene	96	7.565	7.571	-0.006	78	9924	0.1420	
37 1,1-Dichloroethane	63	8.012	8.007	0.005	99	127709	0.8979	
42 cis-1,2-Dichloroethene	96	9.023	9.023	0.000	99	603593	8.67	
44 Chloroform	83	9.373	9.378	-0.005	36	16898	0.1072	
47 1,1,1-Trichloroethane	97	10.422	10.427	-0.005	96	1125997	6.18	
48 1,2-Dichloroethane	62	10.529	10.535	-0.006	68	2315	0.0202	
51 Benzene	78	11.008	11.008	0.000	99	40351	0.2198	
59 Trichloroethene	130	12.240	12.235	0.005	94	5795	0.0626	
68 Toluene	91	14.257	14.257	0.000	93	55376	0.2681	
81 m-Xylene & p-Xylene	91	16.694	16.700	-0.006	98	14584	0.0798	
85 o-Xylene	91	17.221	17.227	-0.006	93	6838	0.0348	
96 1,2,4-Trimethylbenzene	105	18.959	18.959	0.000	98	10527	0.0559	
S 126 Xylenes, Total	100				0		0.1146	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

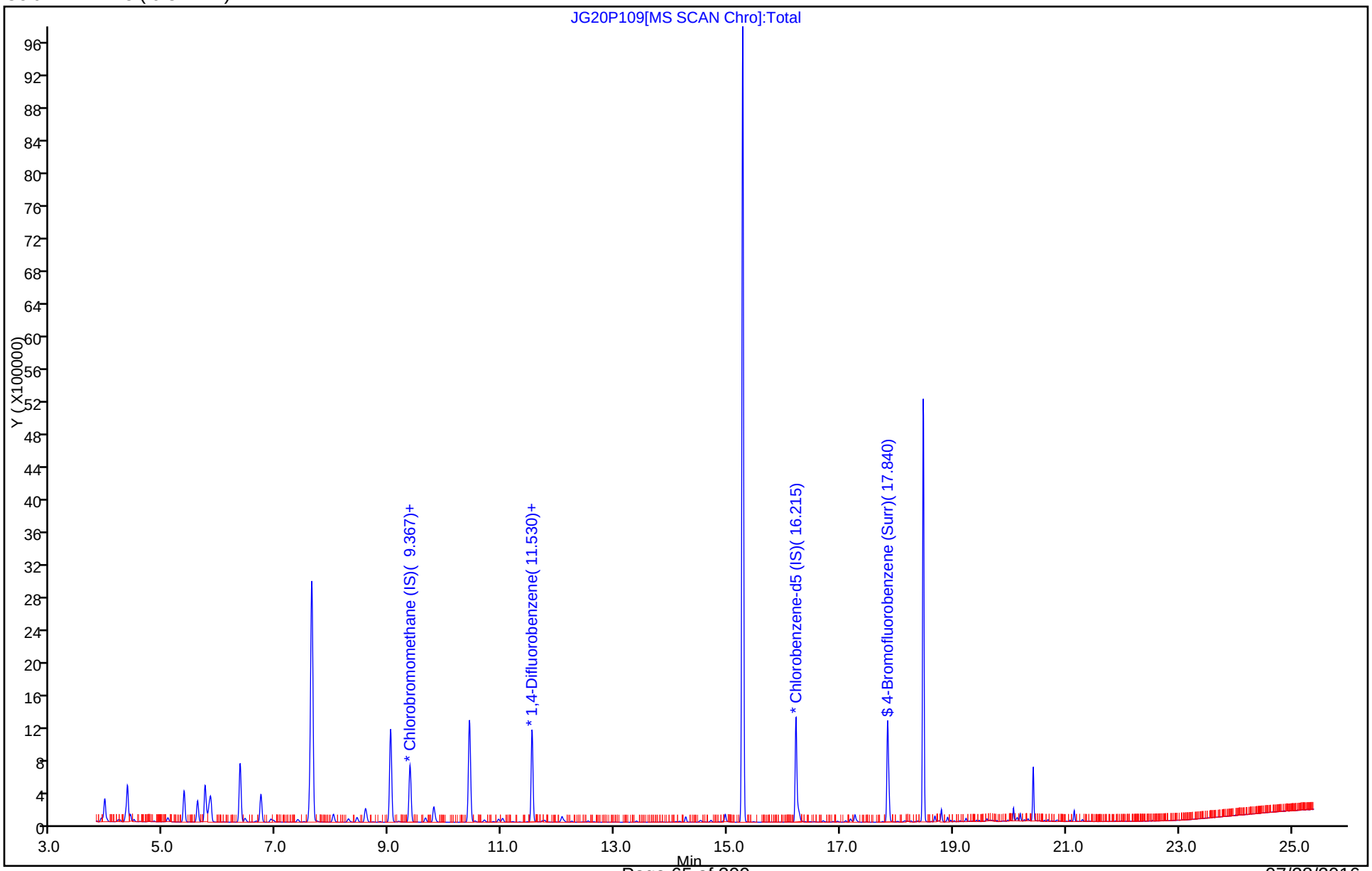
Report Date: 21-Jul-2016 09:59:31 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D

Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2	Worklist Smp#:	15
Client ID:	A-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Lims ID:	140-5356-A-2				
Client ID:	A-MID GAC				
Sample Type:	Client				
Inject. Date:	20-Jul-2016 23:36:30	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-015				
Misc. Info.:	140-5356-a-2				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:47:50	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				

First Level Reviewer: tajh Date: 21-Jul-2016 09:42:28

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.01	100.18

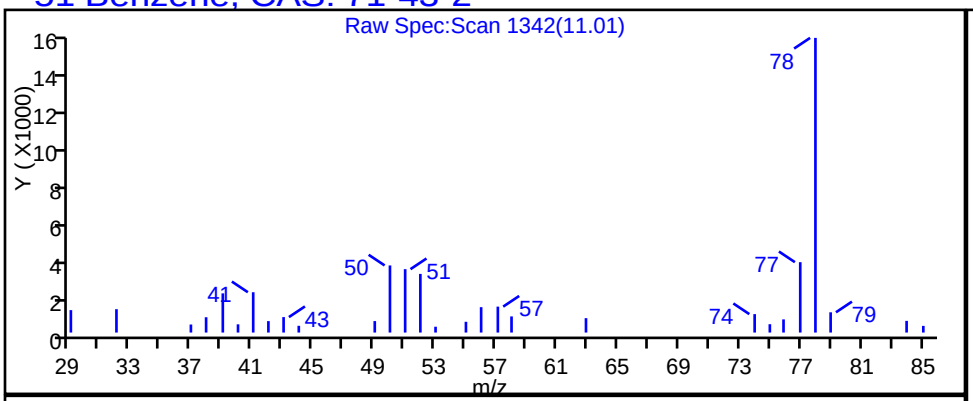
Report Date: 21-Jul-2016 09:59:32 Chrom Revision: 2.2 18-Jul-2016 15:30:42

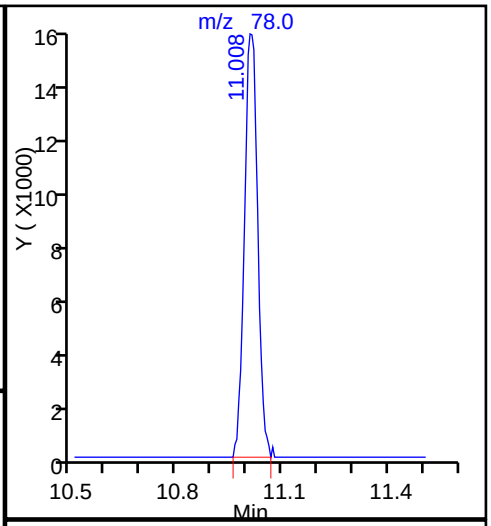
TestAmerica Knoxville

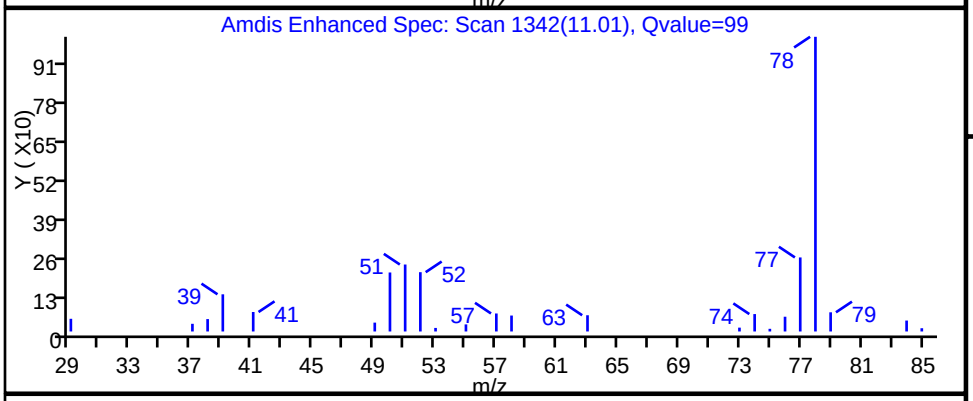
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D

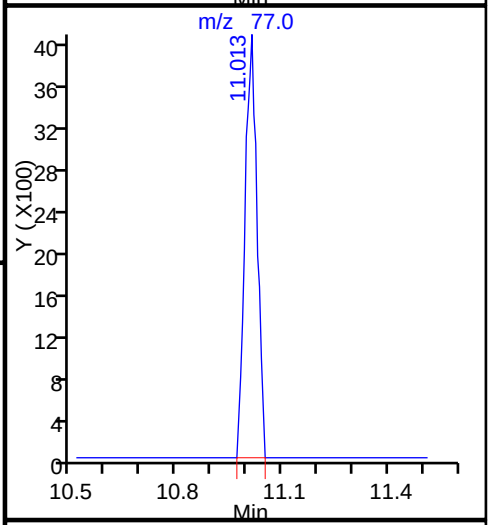
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2
Client ID:	A-MID GAC		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

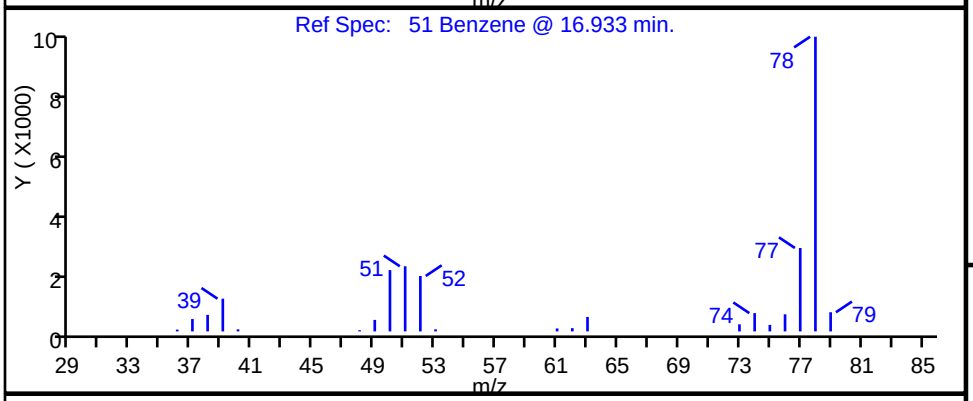
51 Benzene, CAS: 71-43-2

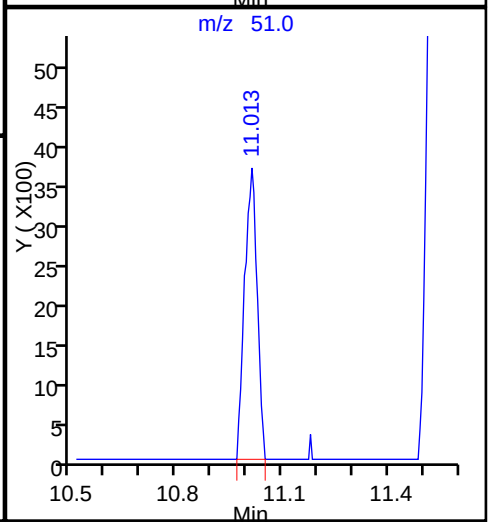


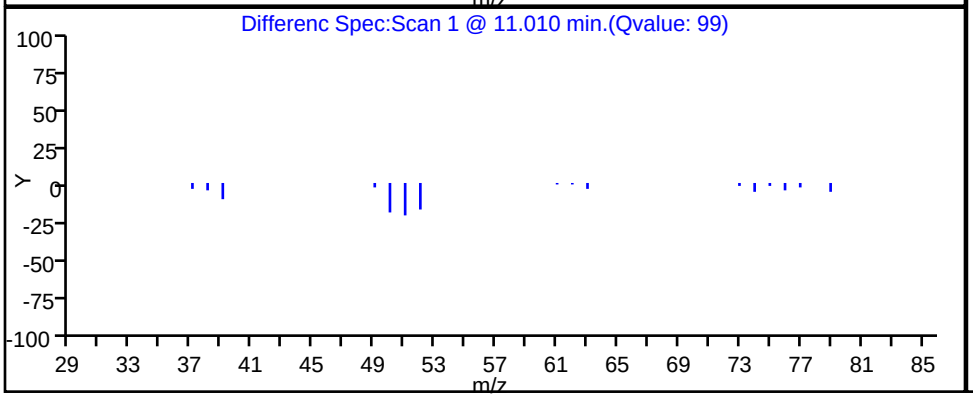










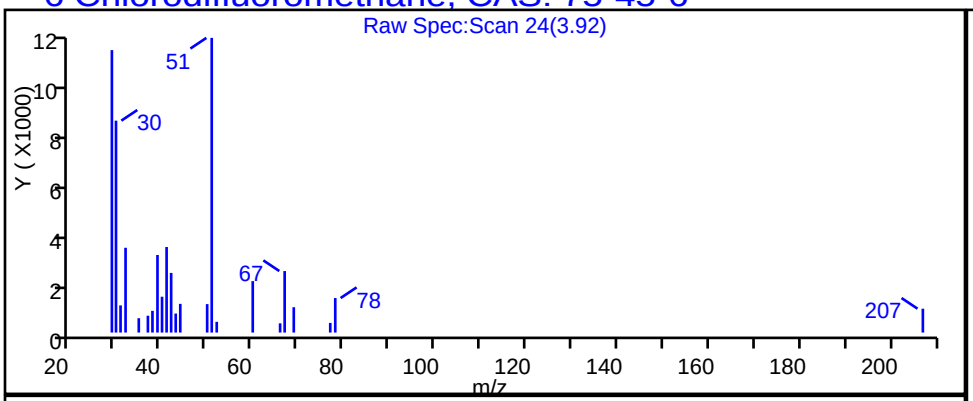


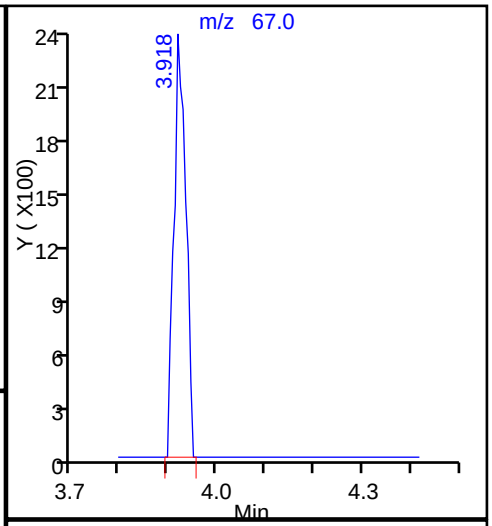
TestAmerica Knoxville

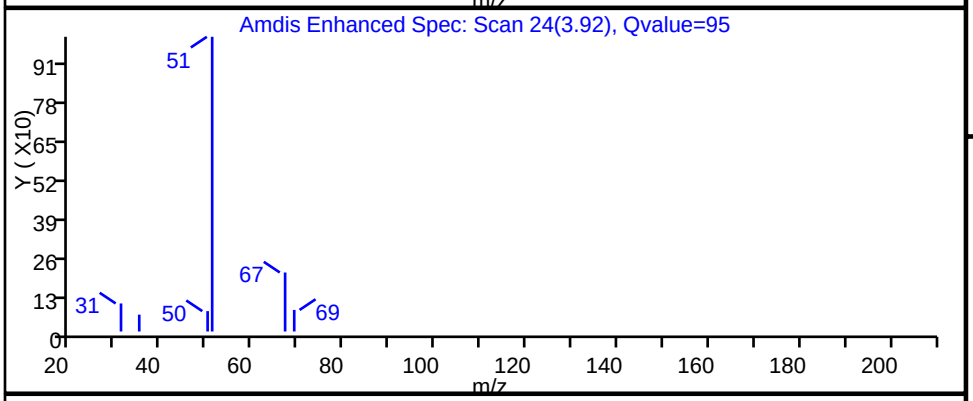
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D

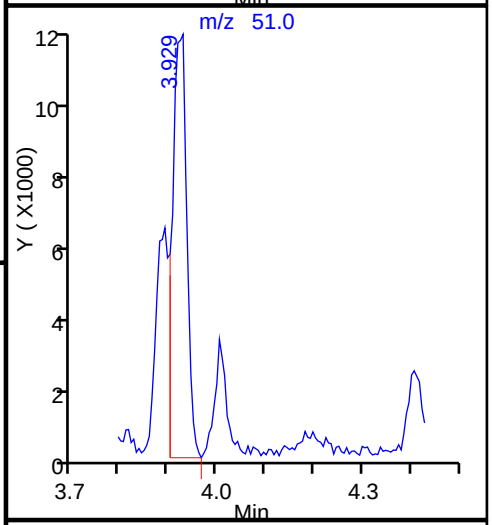
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

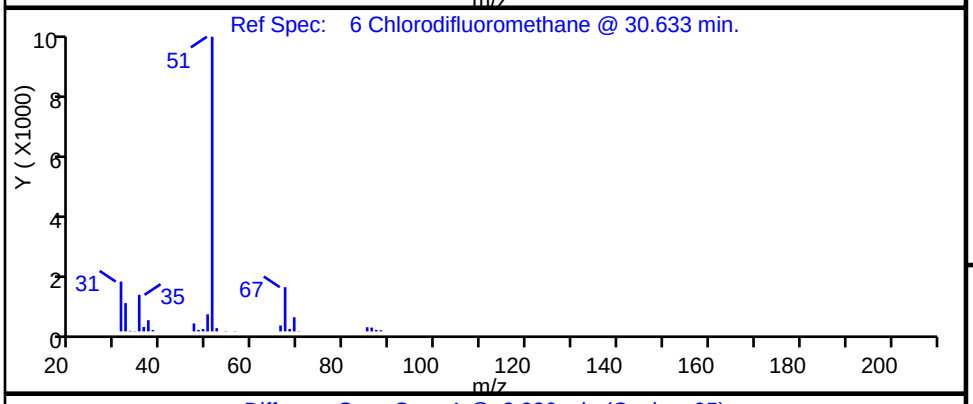
6 Chlorodifluoromethane, CAS: 75-45-6

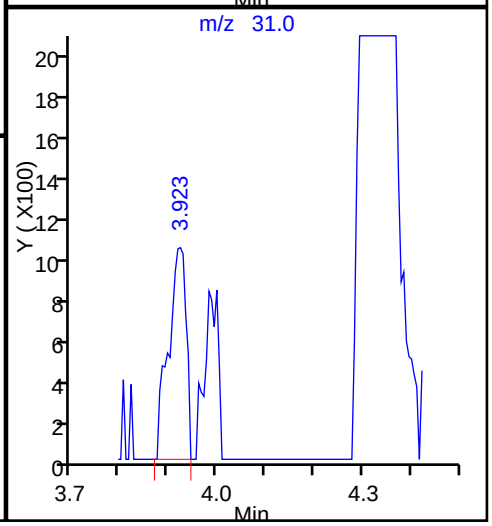


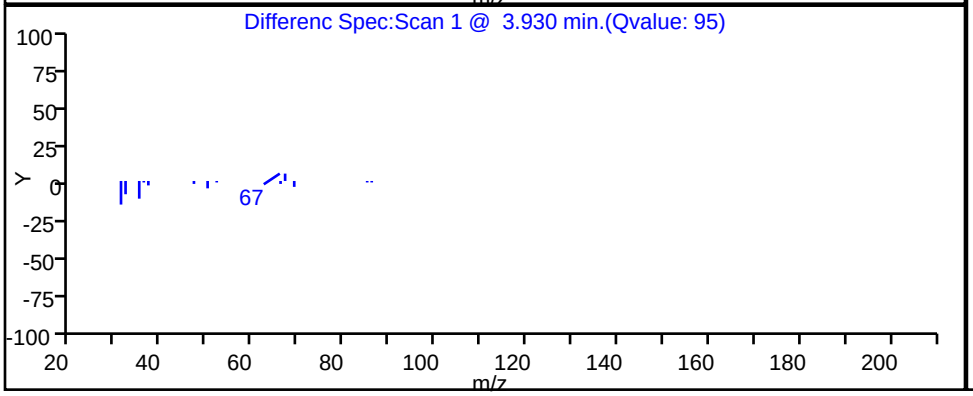






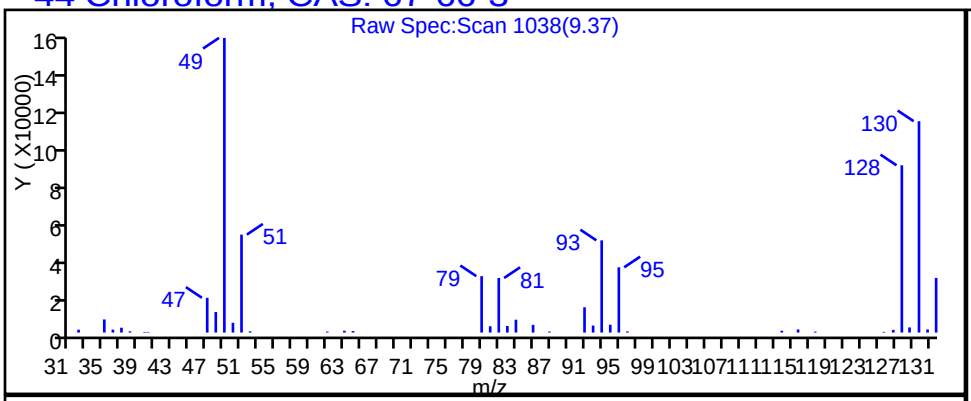


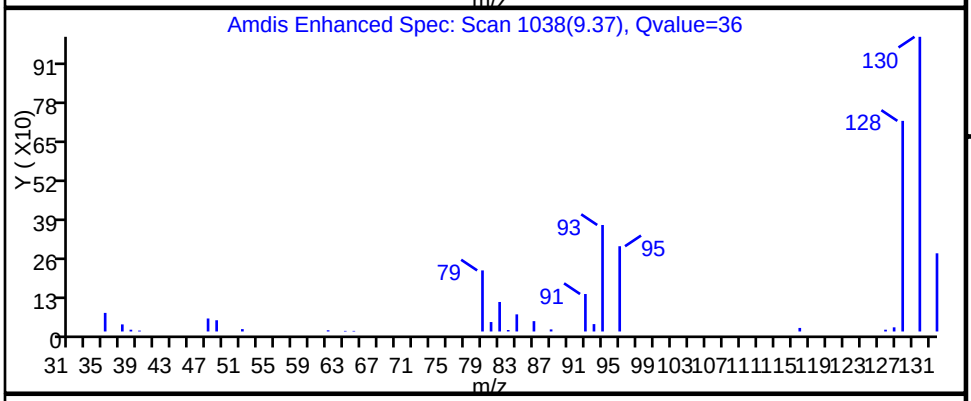


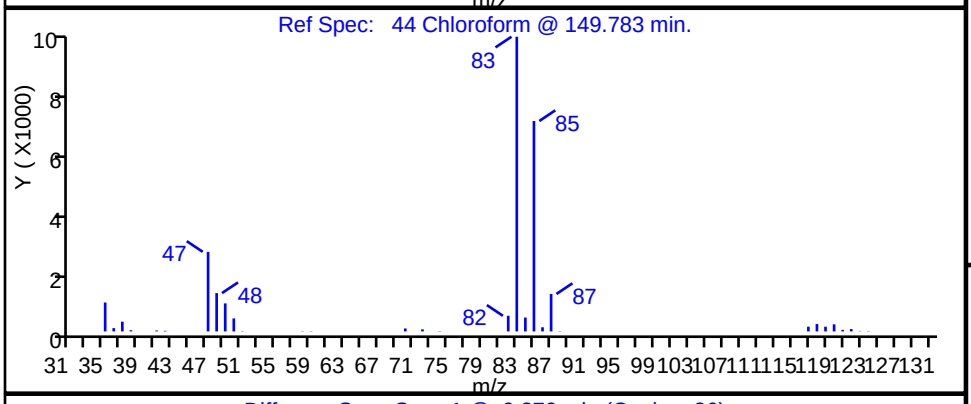


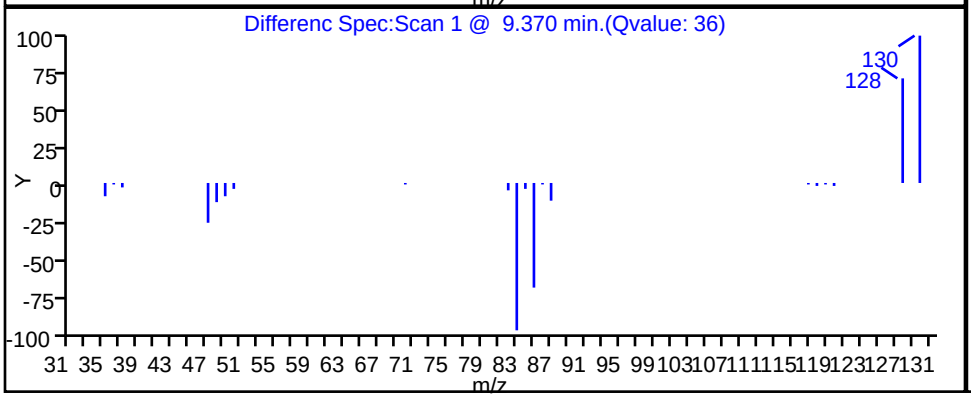
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D
Injection Date: 20-Jul-2016 23:36:30 Instrument ID: MJ
Lims ID: 140-5356-A-2 Lab Sample ID: 140-5356-2
Client ID: A-MID GAC
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

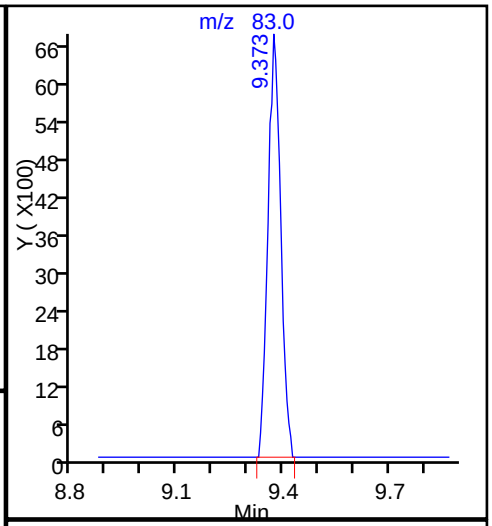
44 Chloroform, CAS: 67-66-3

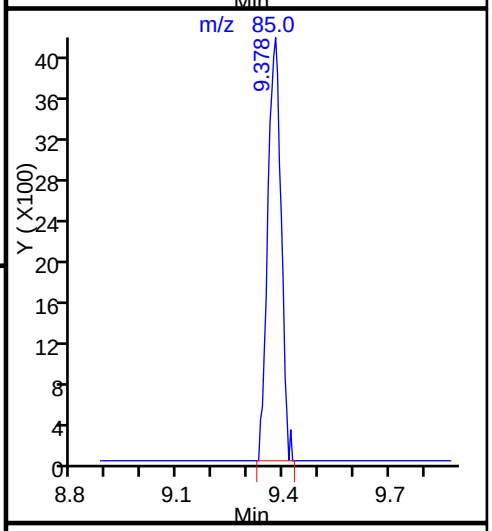


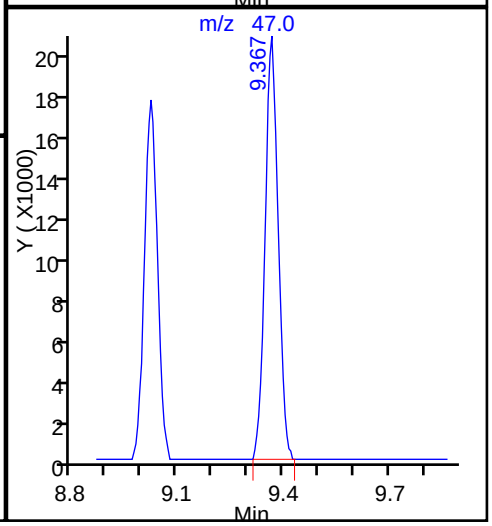








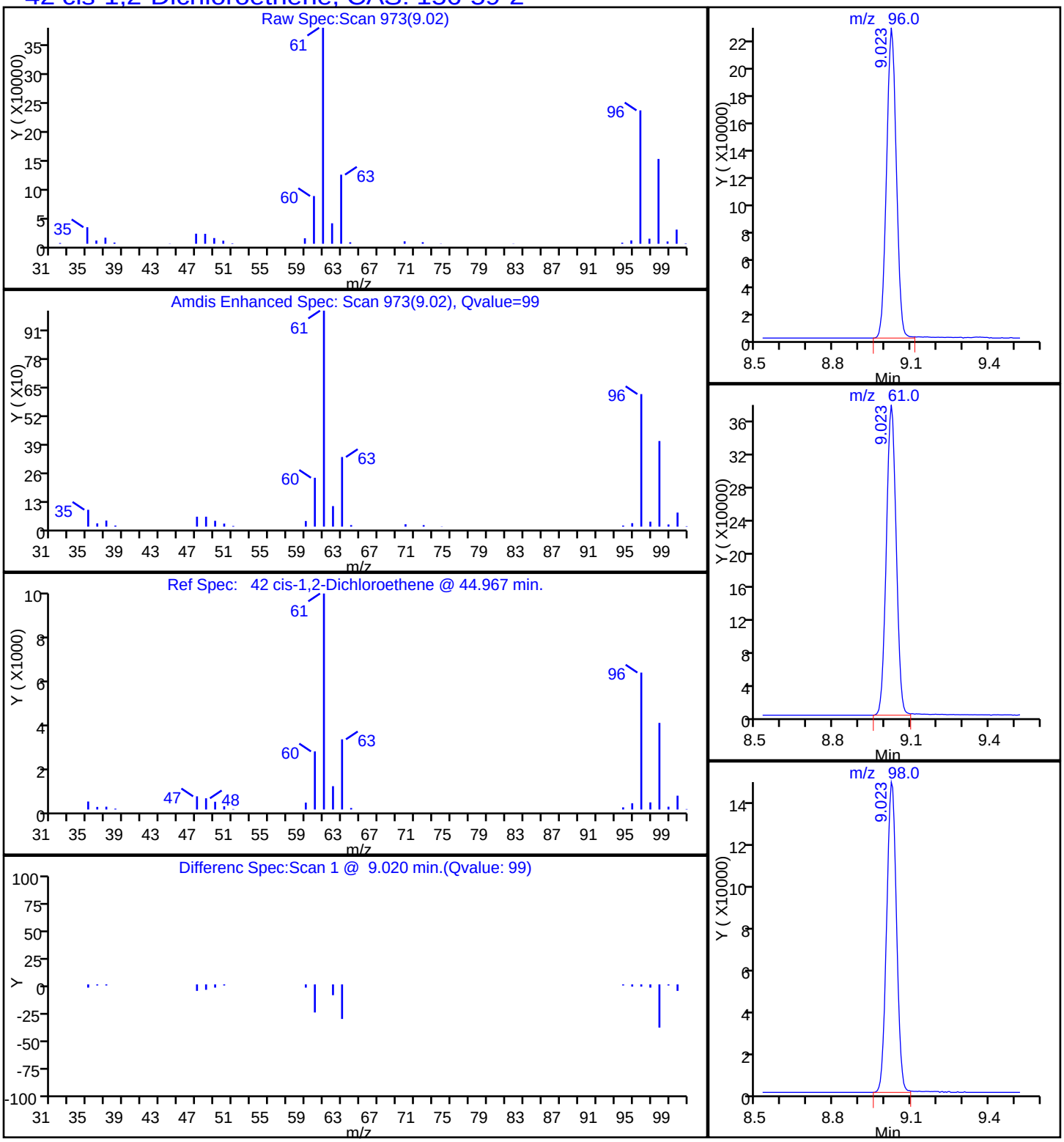




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

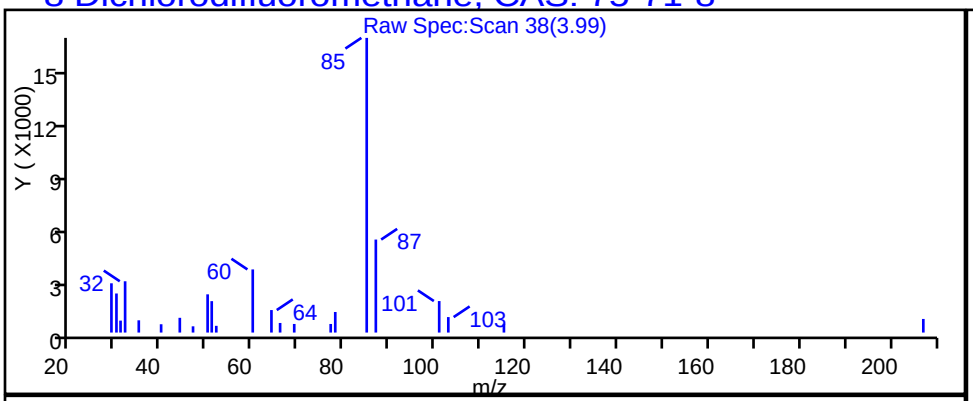
42 cis-1,2-Dichloroethene, CAS: 156-59-2

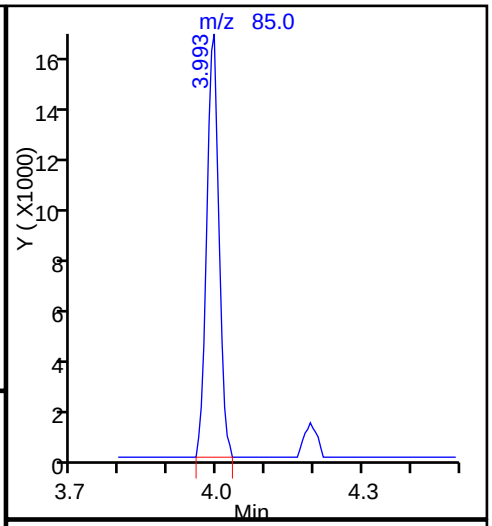


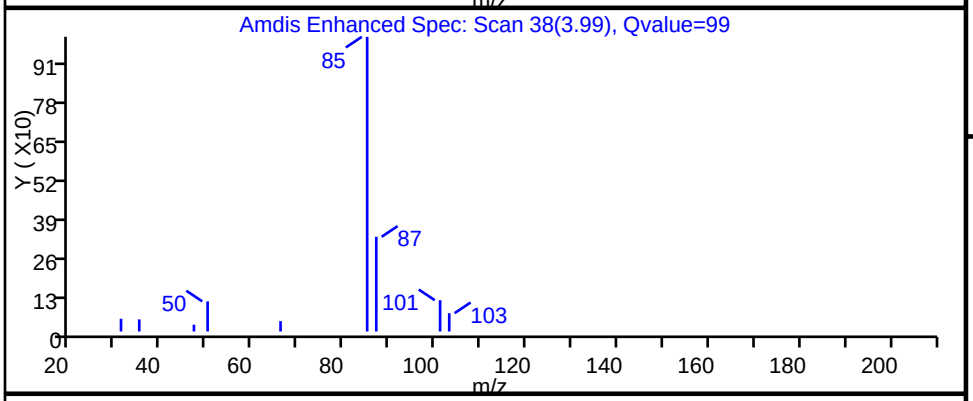
TestAmerica Knoxville

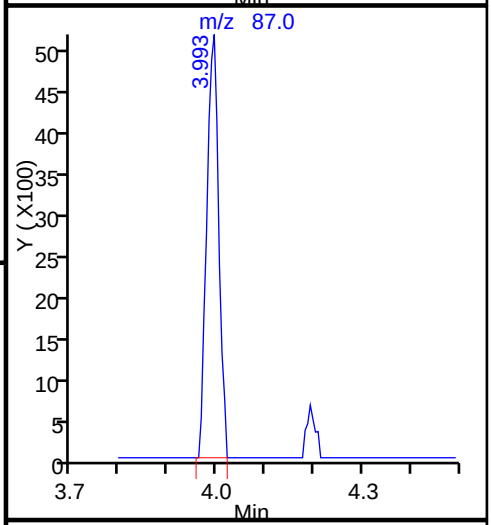
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

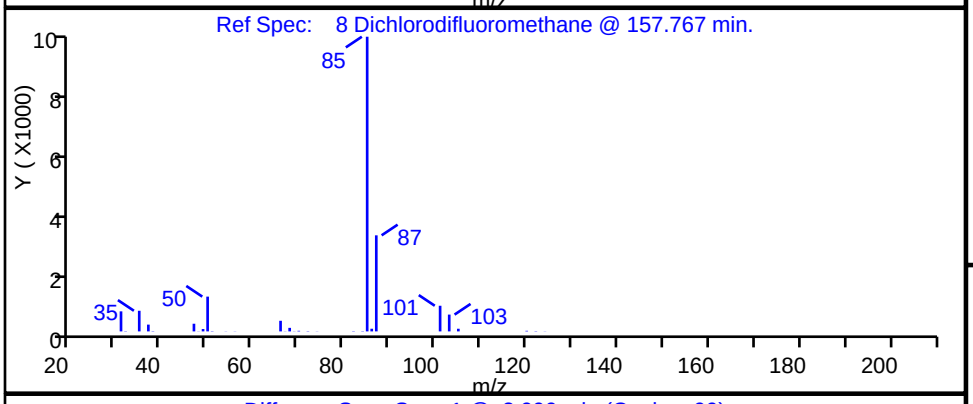
8 Dichlorodifluoromethane, CAS: 75-71-8

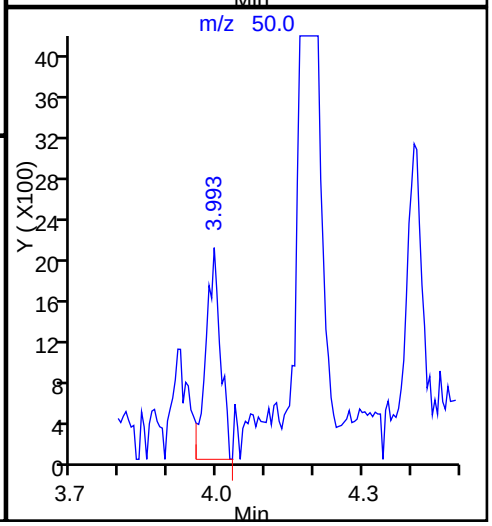


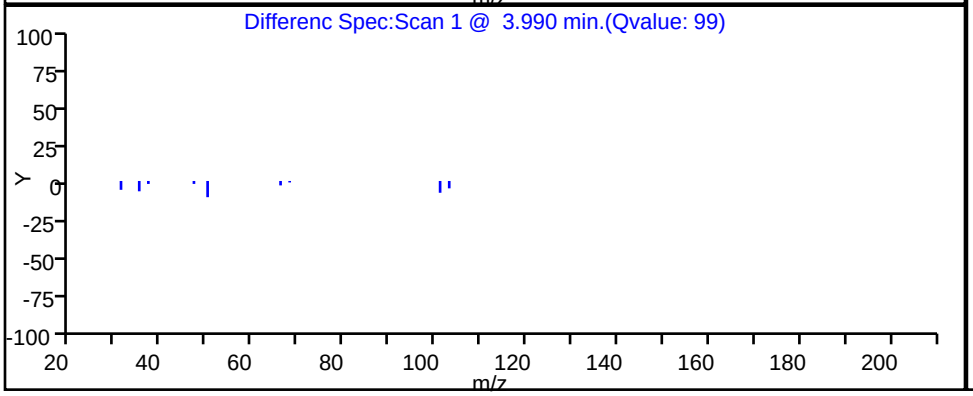








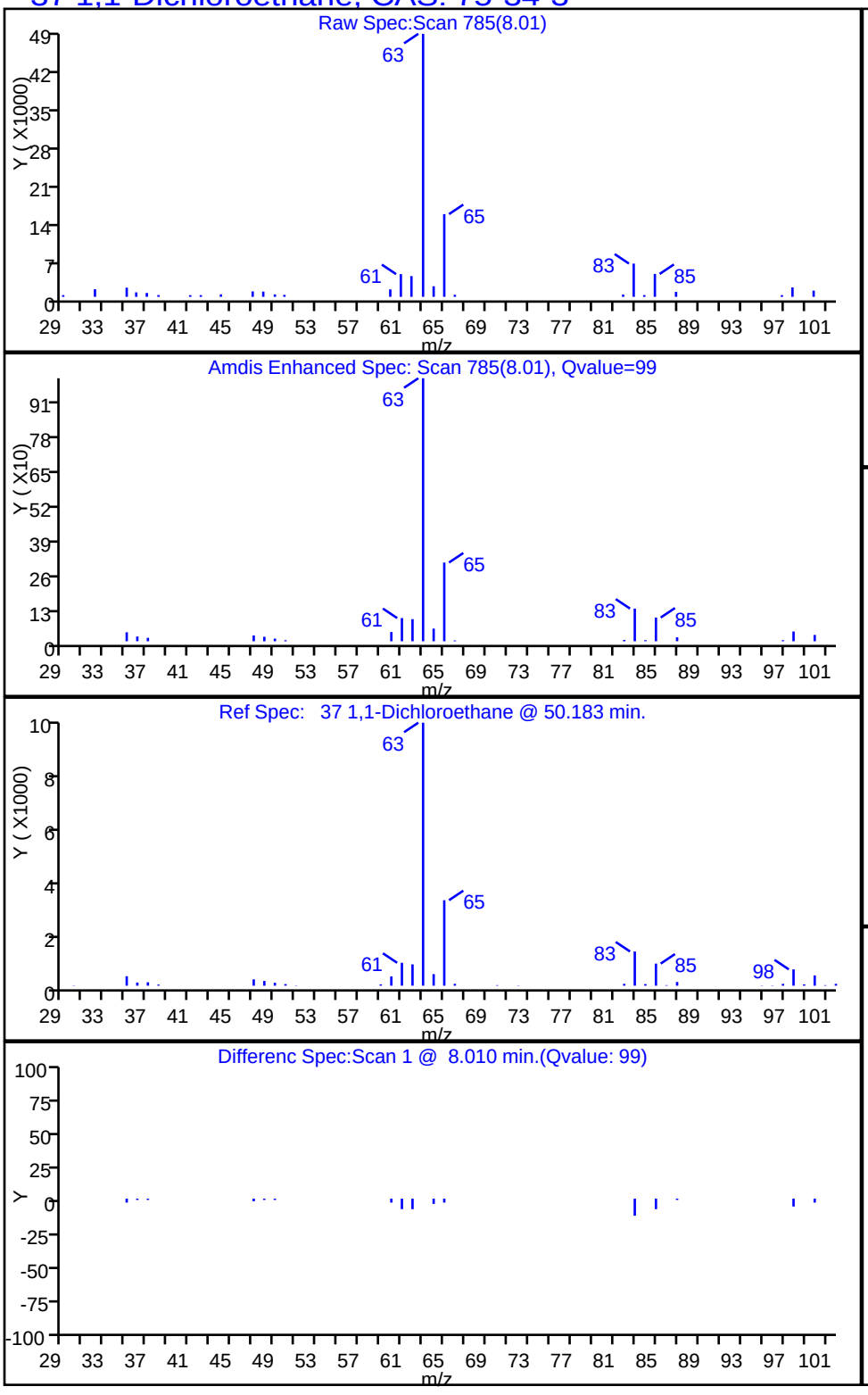


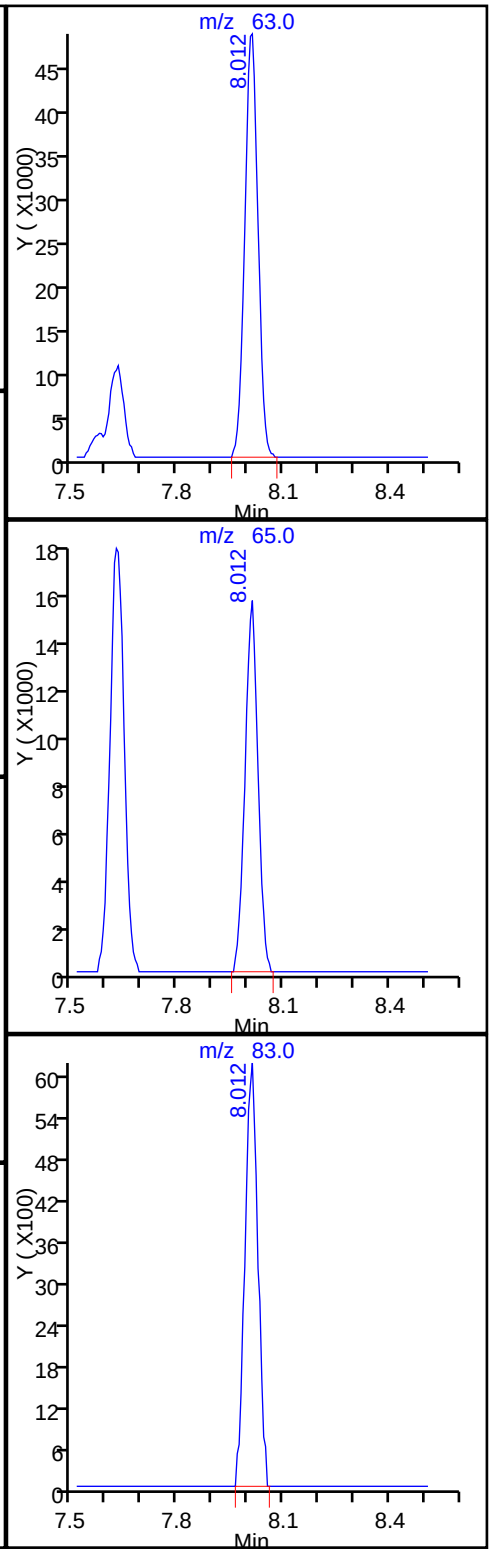


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D		
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2
Client ID:	A-MID GAC		
Operator ID:	7126	ALS Bottle#:	9 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

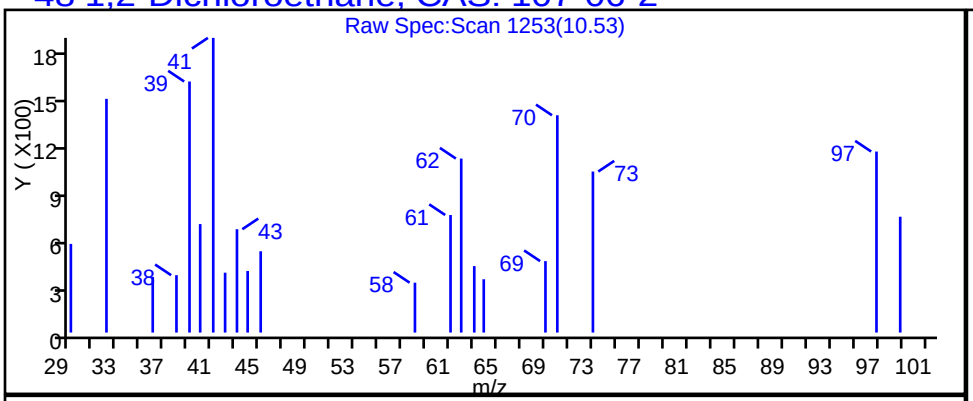


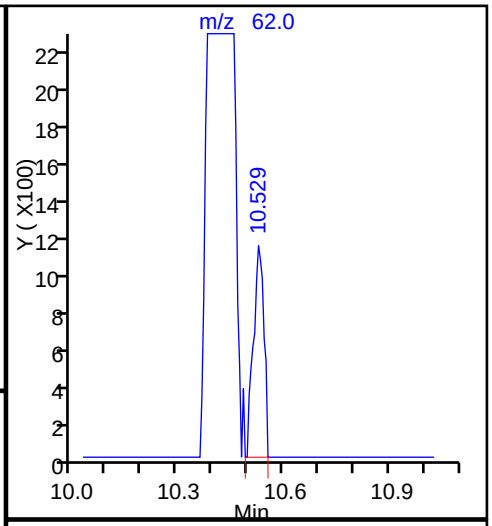


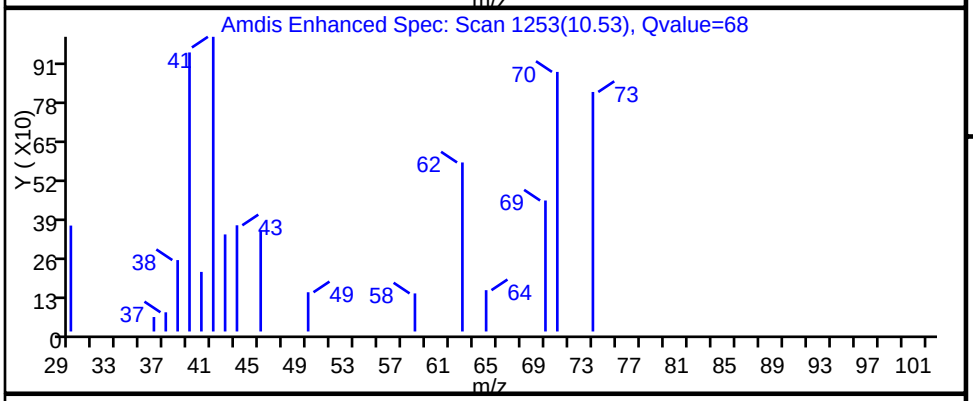
TestAmerica Knoxville

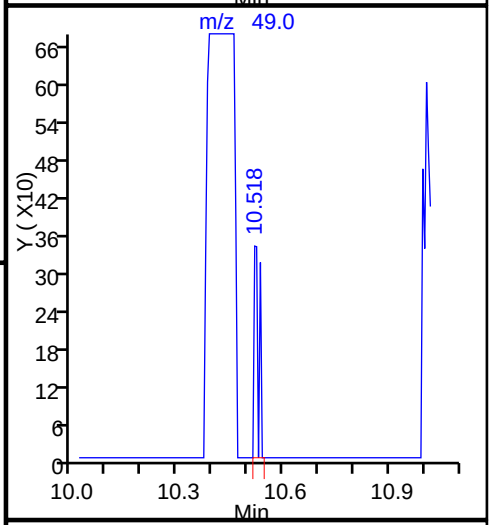
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

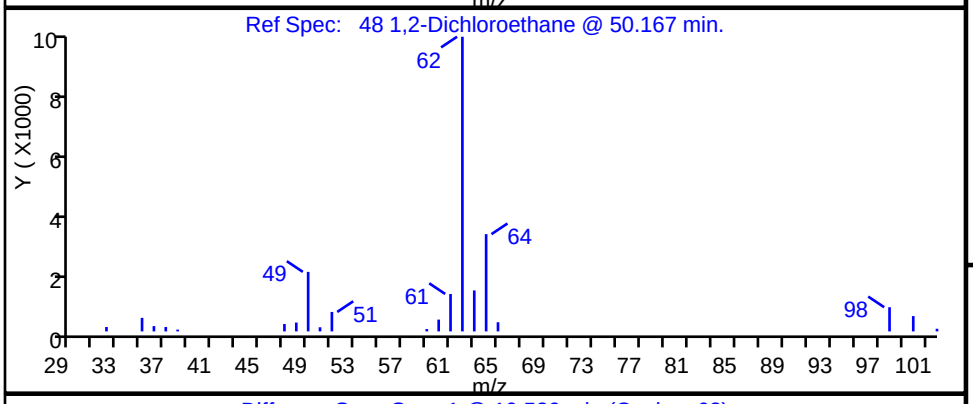
48 1,2-Dichloroethane, CAS: 107-06-2

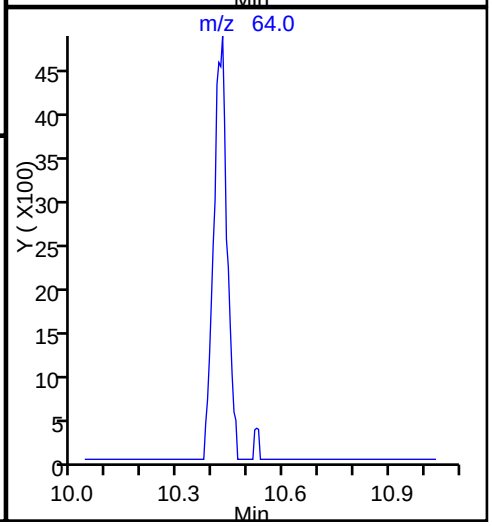


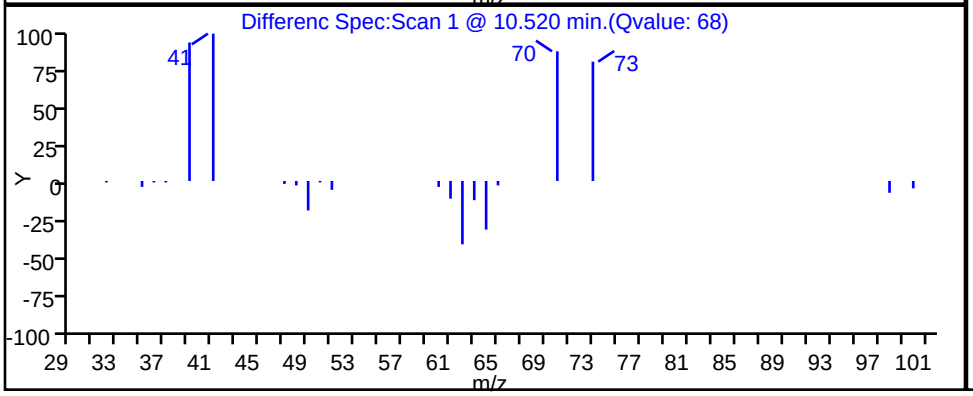








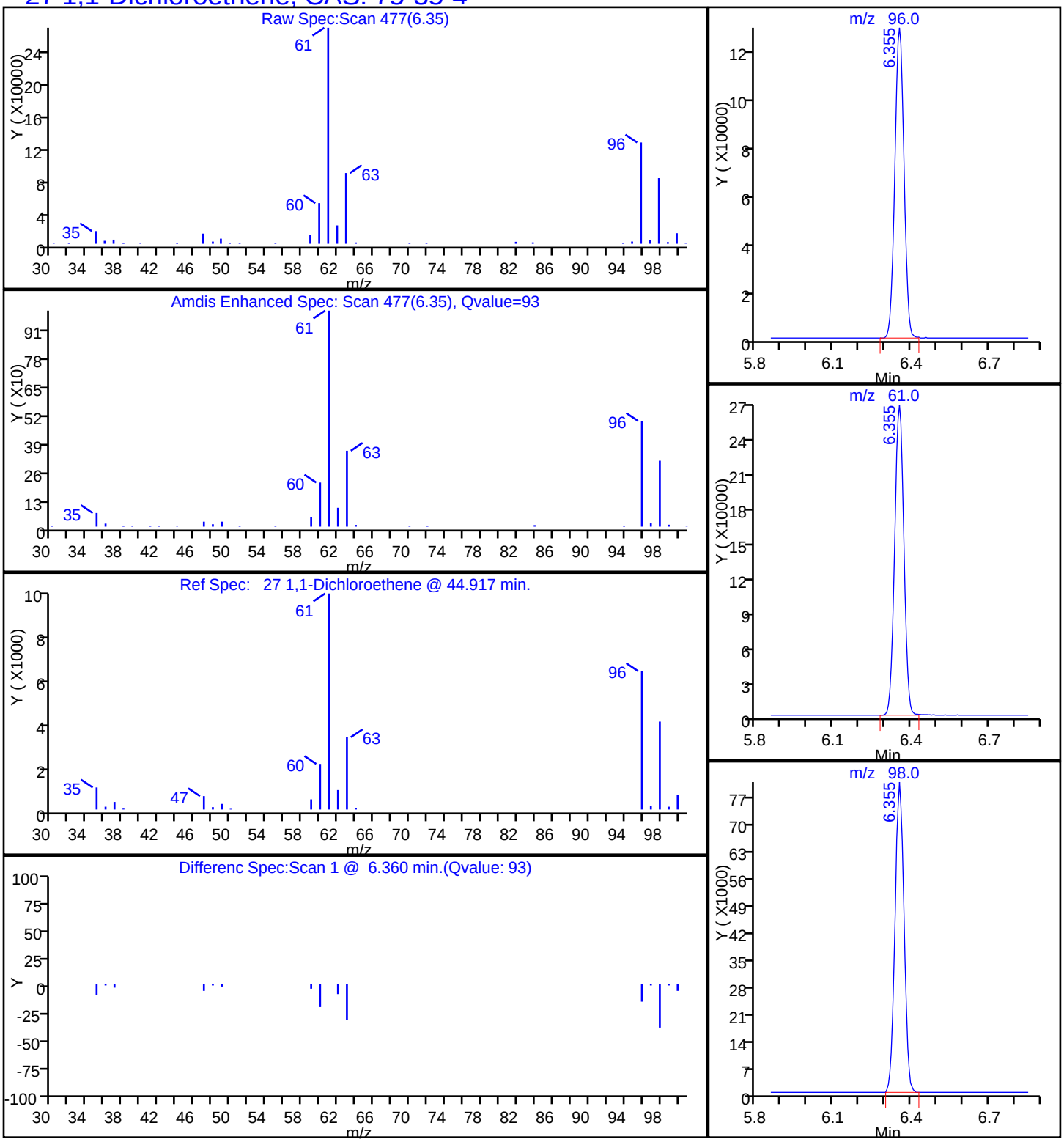




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

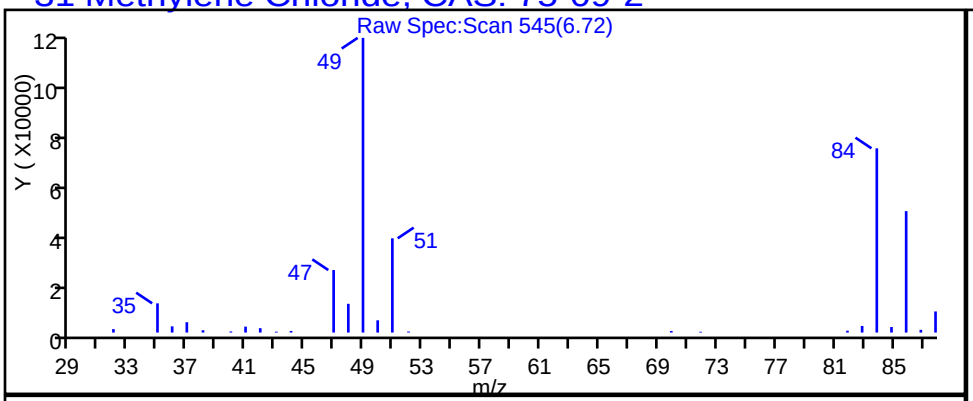
27 1,1-Dichloroethene, CAS: 75-35-4

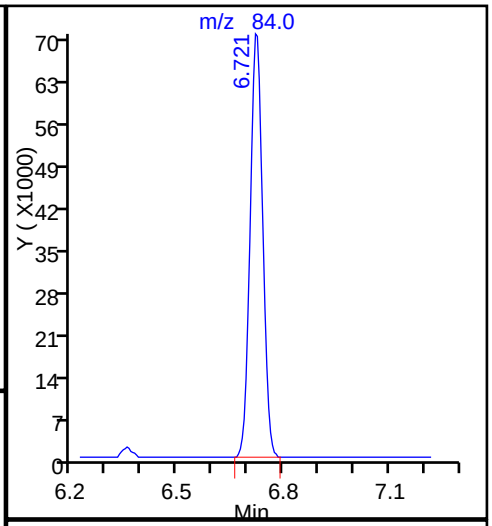


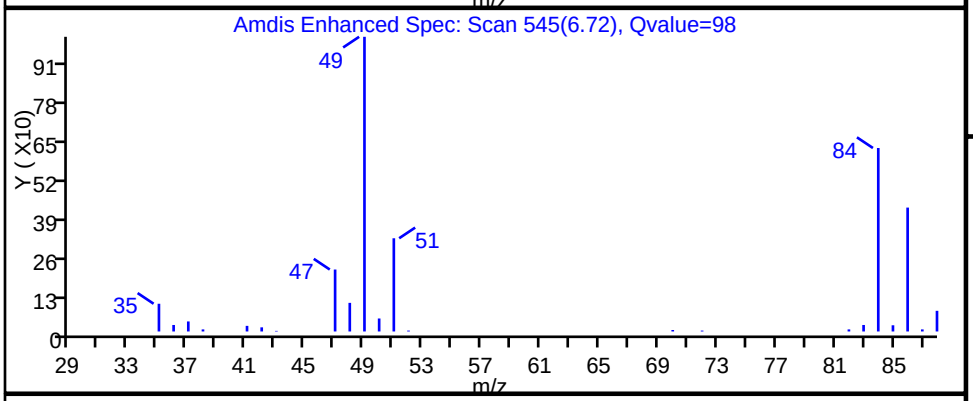
TestAmerica Knoxville

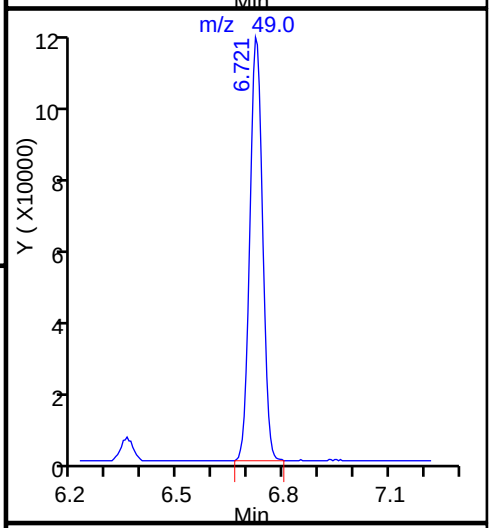
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

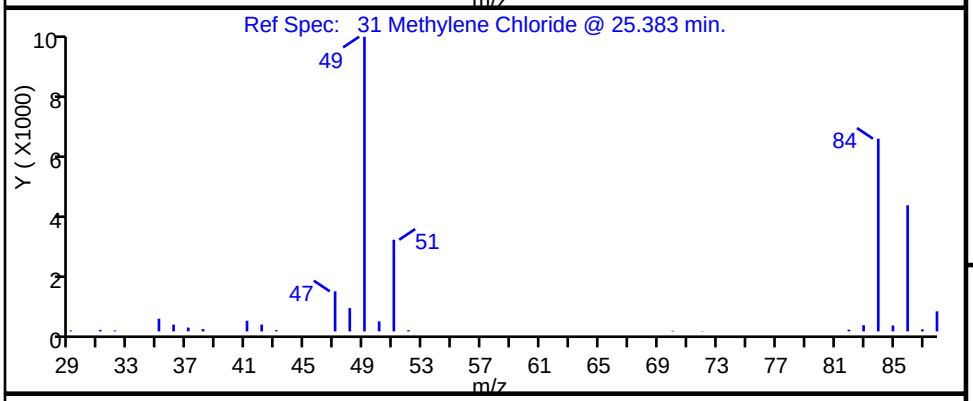
31 Methylene Chloride, CAS: 75-09-2

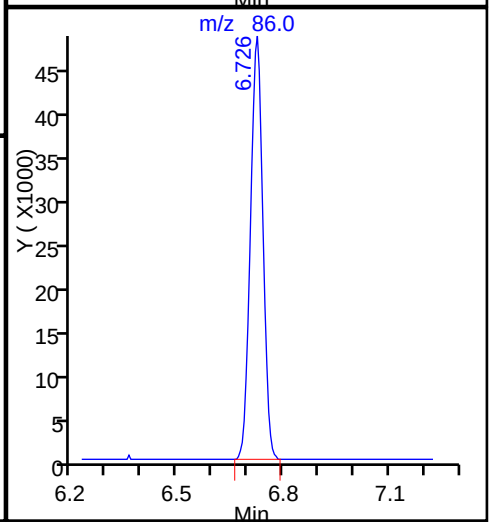


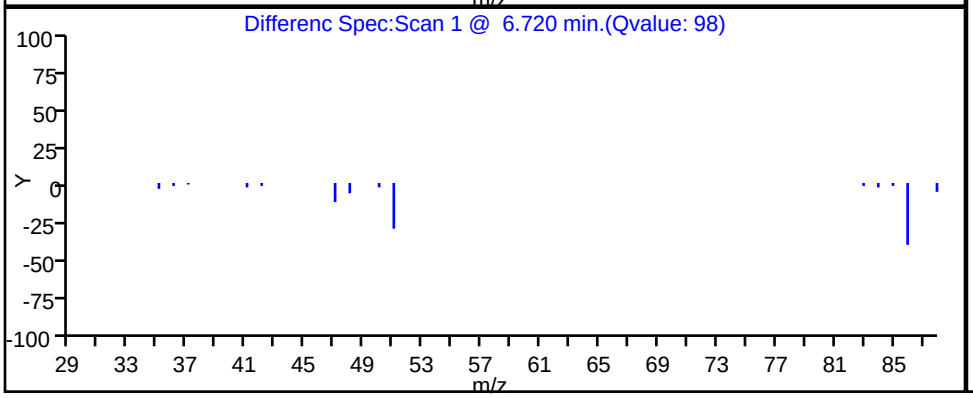








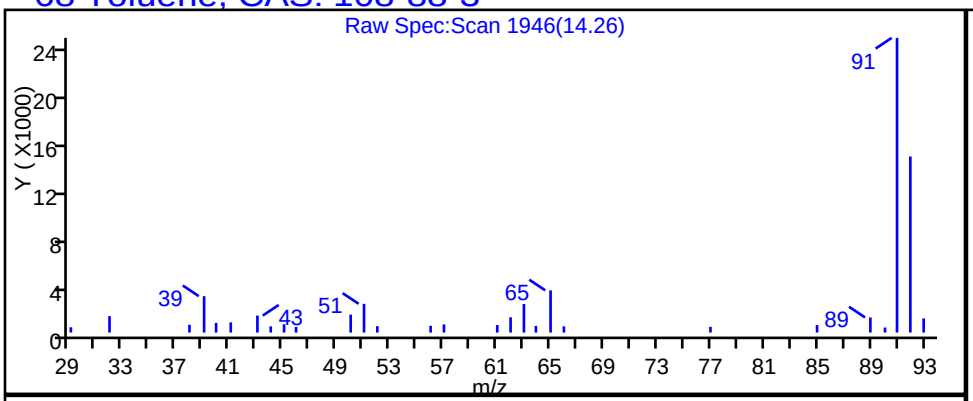


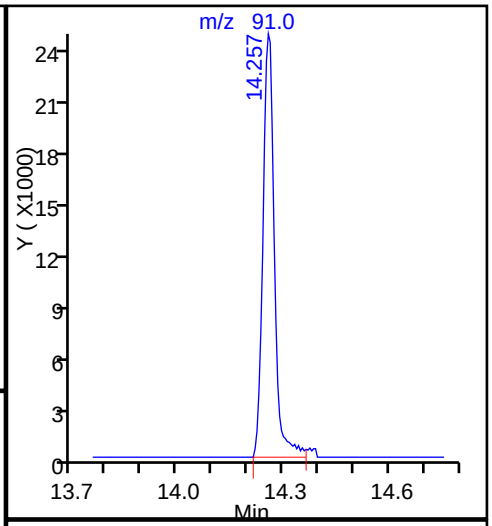


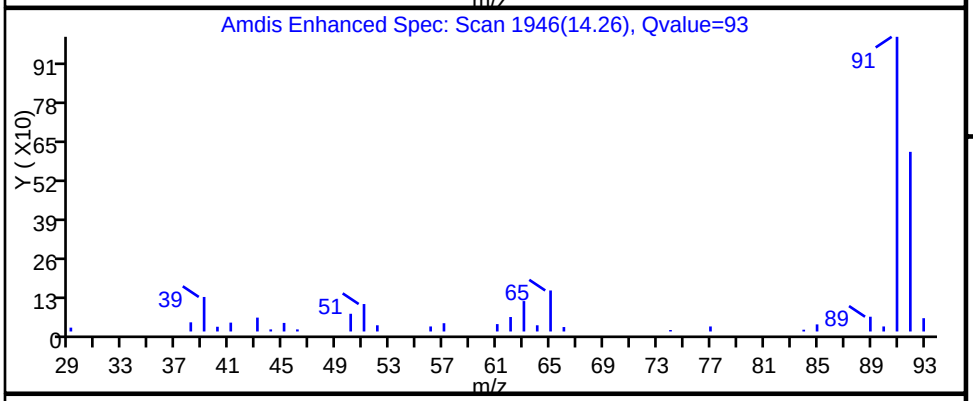
TestAmerica Knoxville

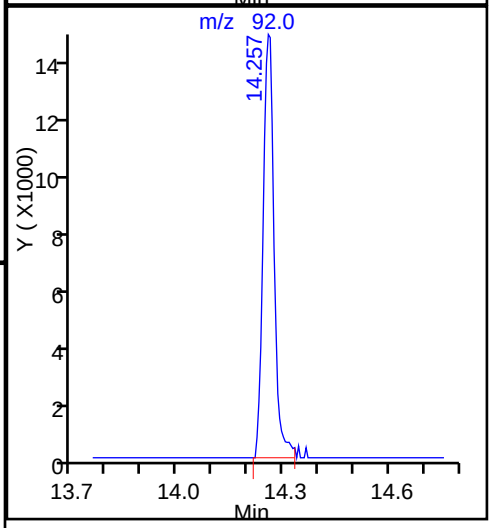
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

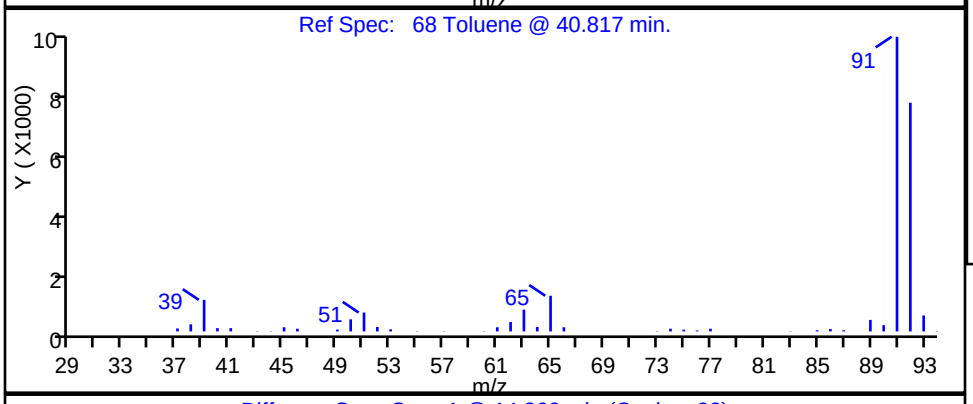
68 Toluene, CAS: 108-88-3

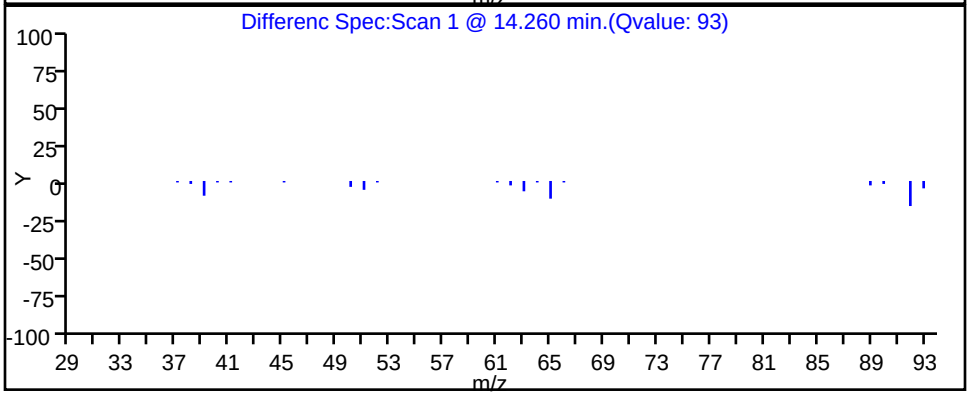






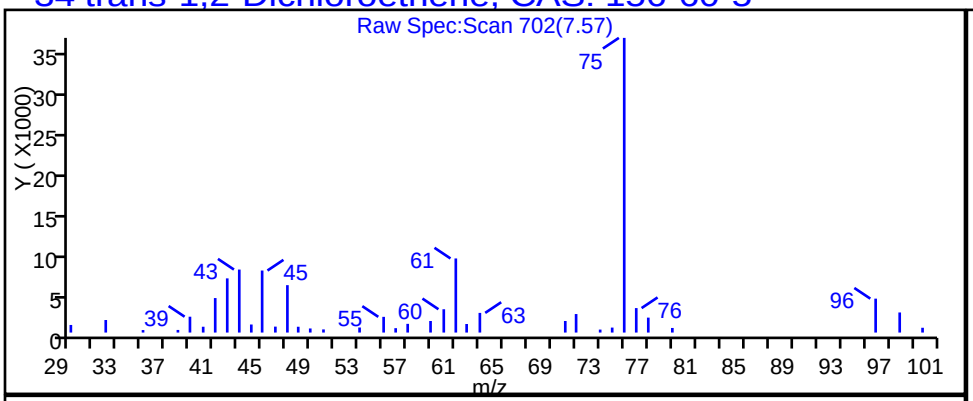


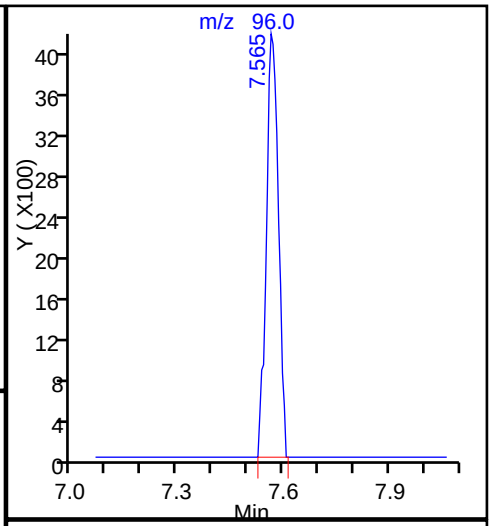


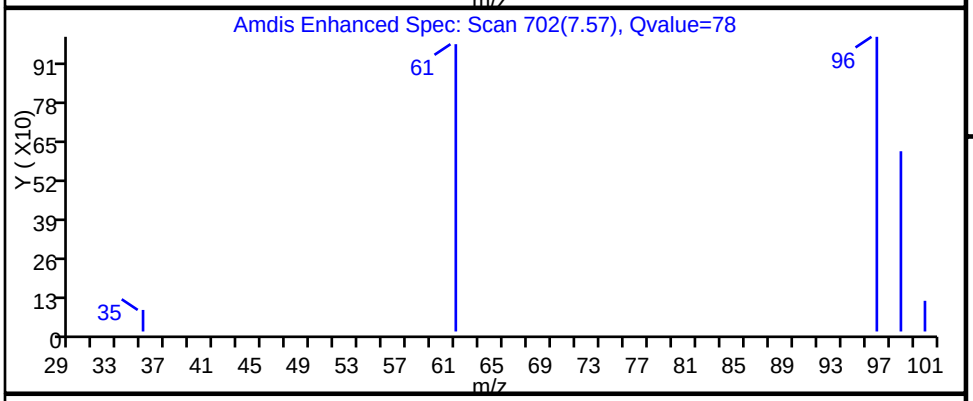


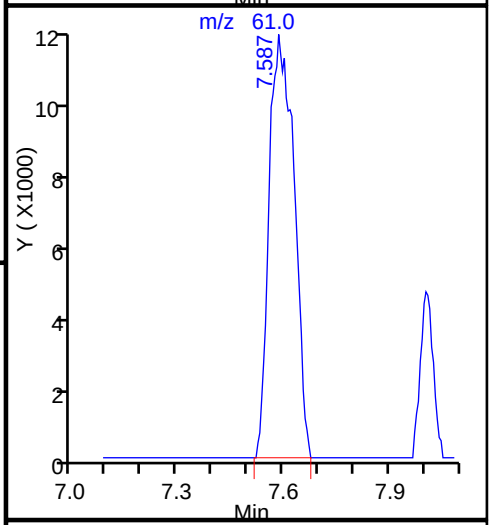
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D
Injection Date: 20-Jul-2016 23:36:30 Instrument ID: MJ
Lims ID: 140-5356-A-2 Lab Sample ID: 140-5356-2
Client ID: A-MID GAC
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

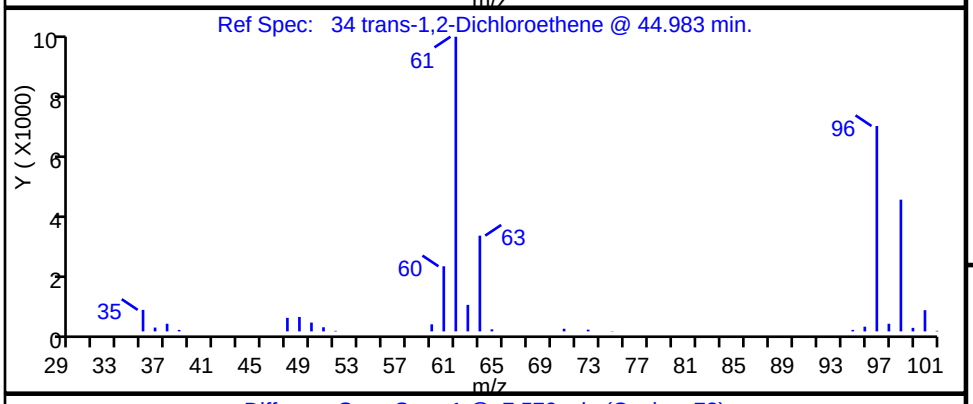
34 trans-1,2-Dichloroethene, CAS: 156-60-5

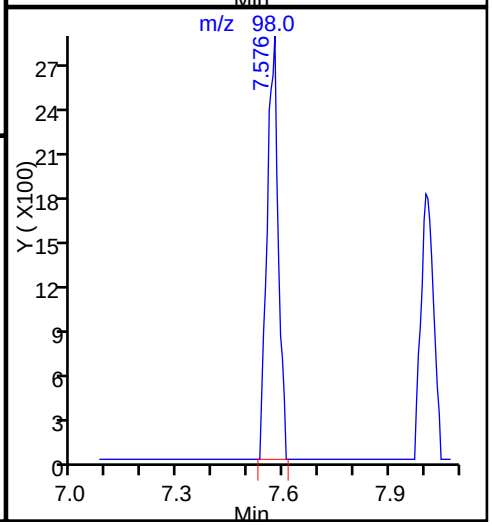


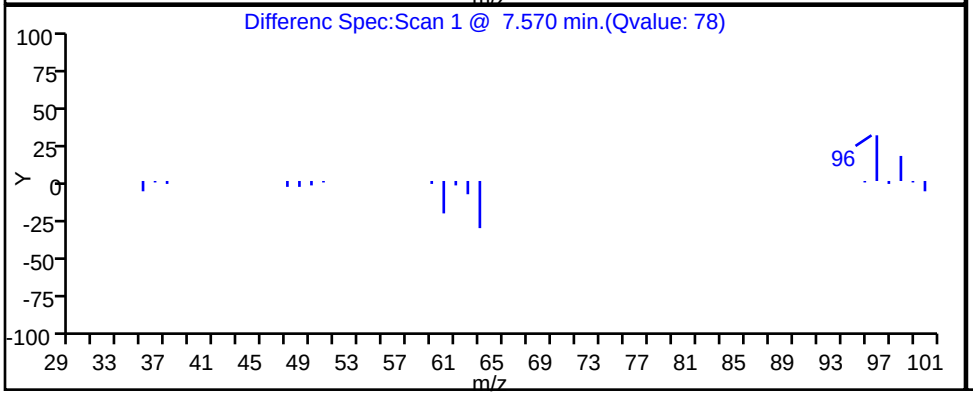












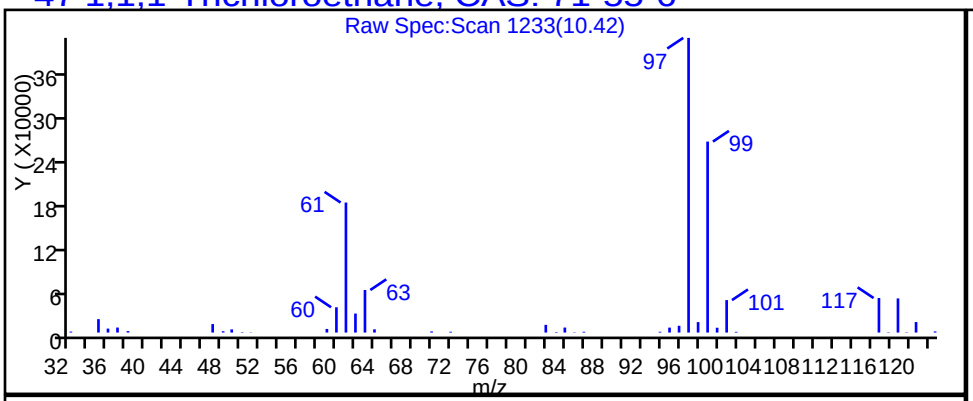
Report Date: 21-Jul-2016 09:59:32 Chrom Revision: 2.2 18-Jul-2016 15:30:42

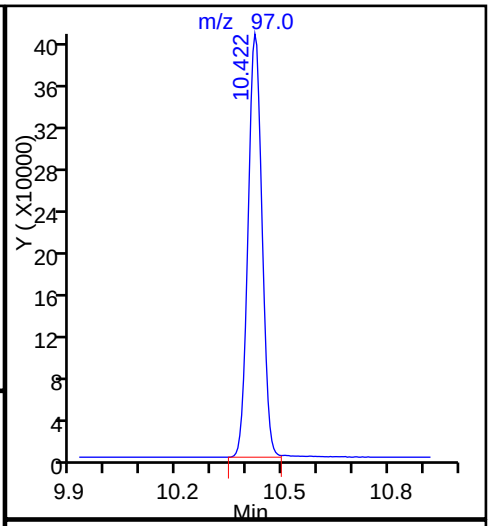
TestAmerica Knoxville

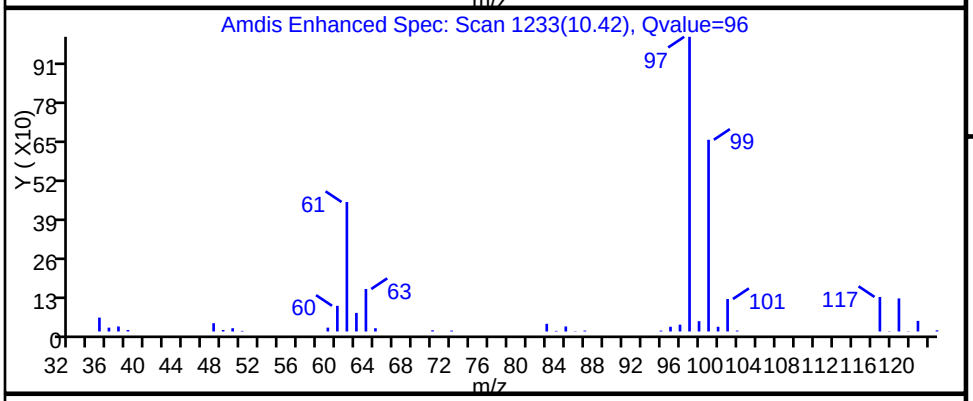
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D

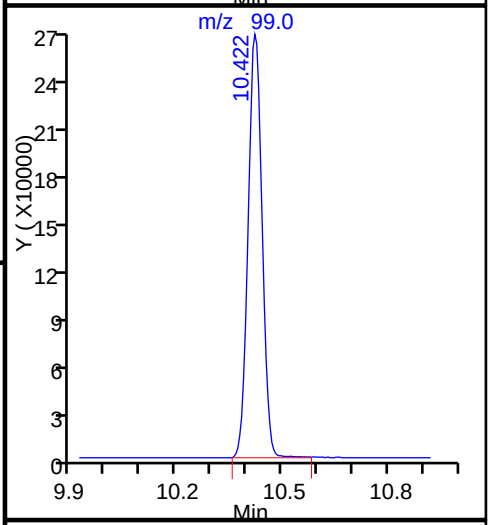
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

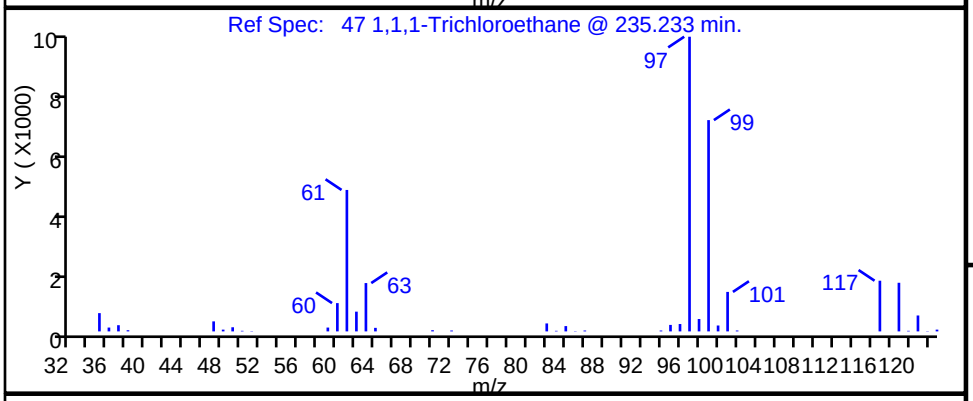
47 1,1,1-Trichloroethane, CAS: 71-55-6

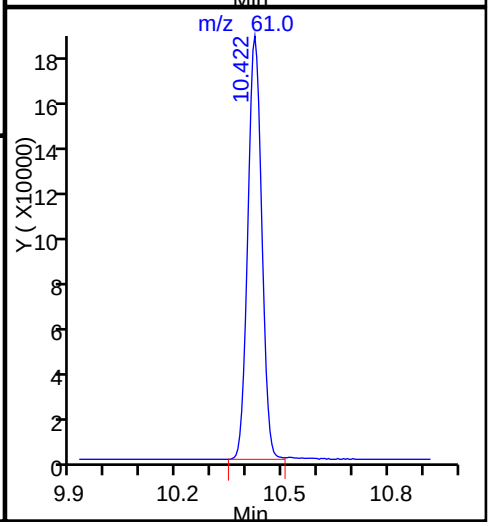


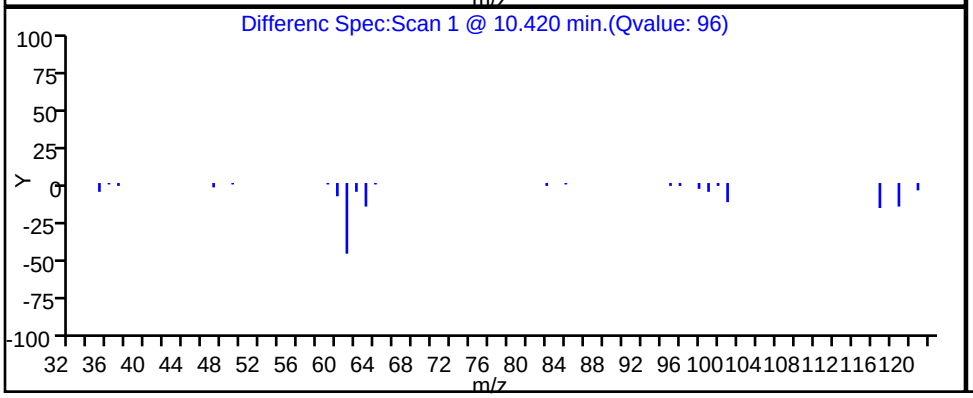










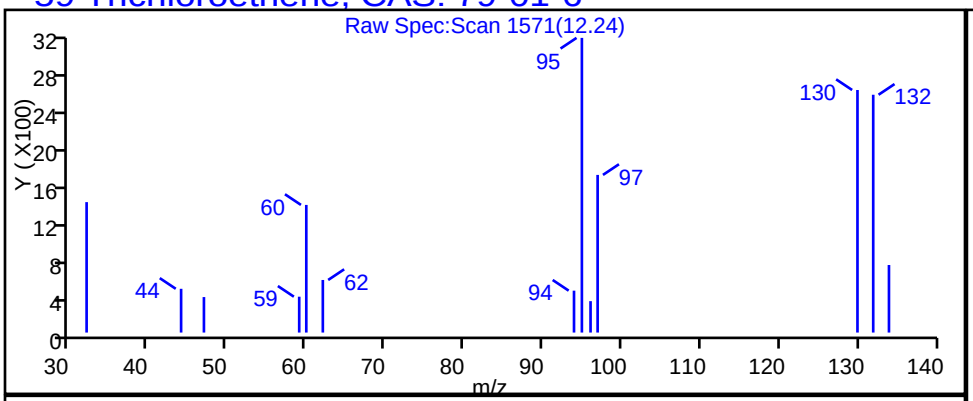


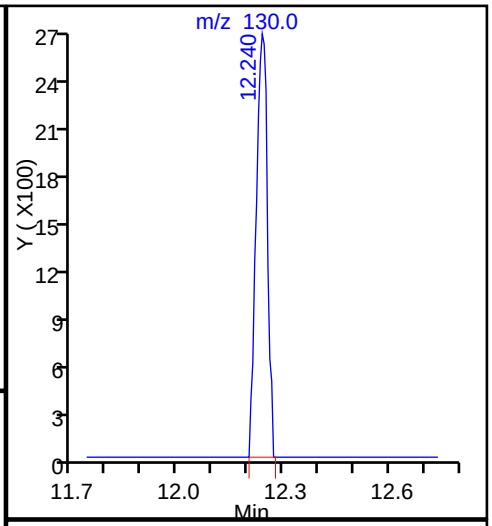
TestAmerica Knoxville

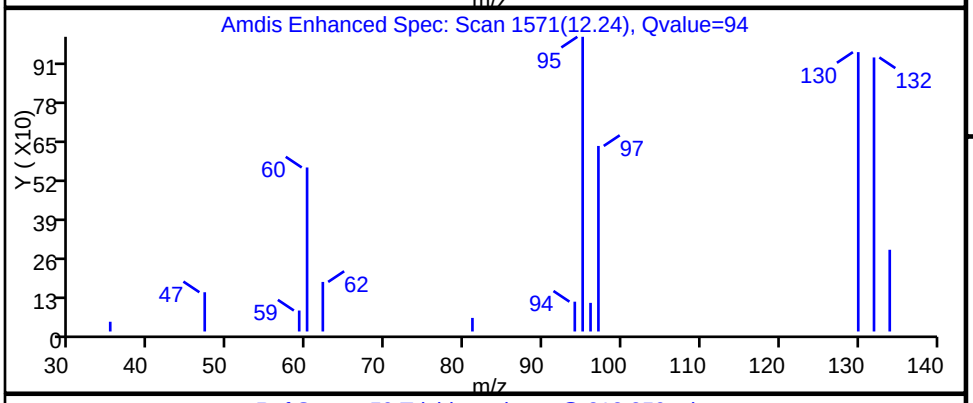
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D

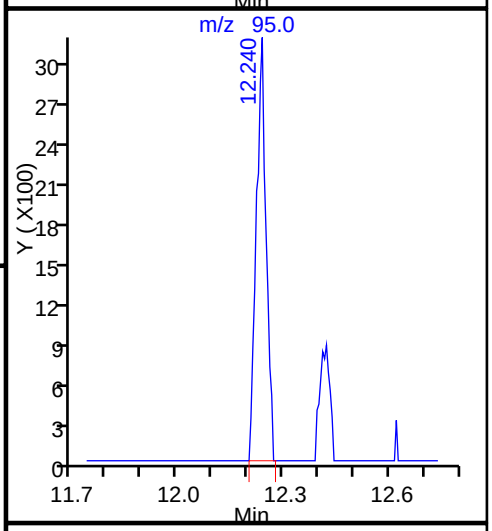
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

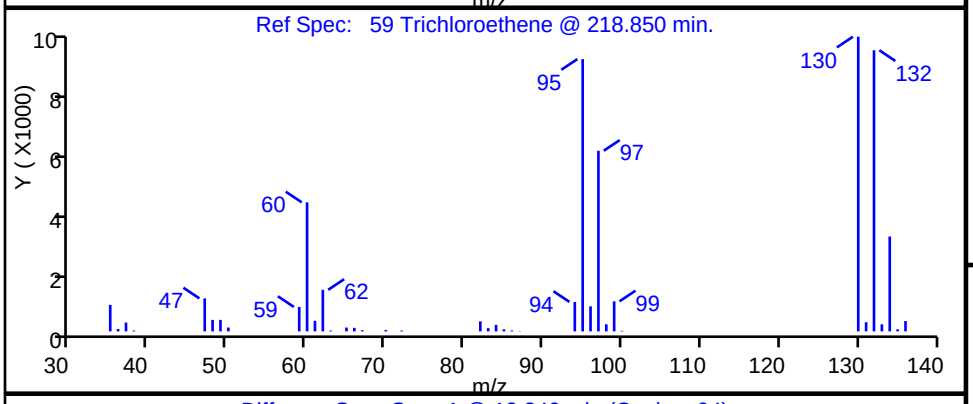
59 Trichloroethene, CAS: 79-01-6

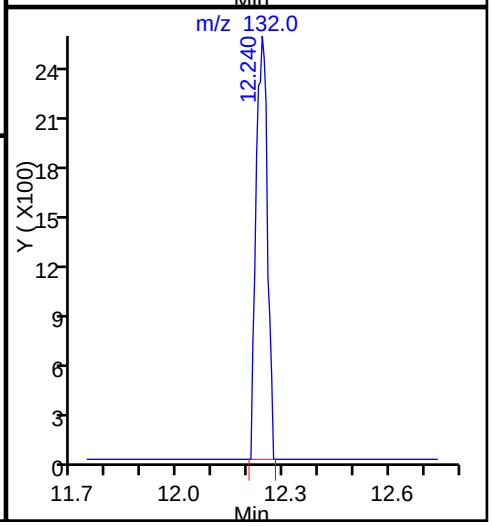


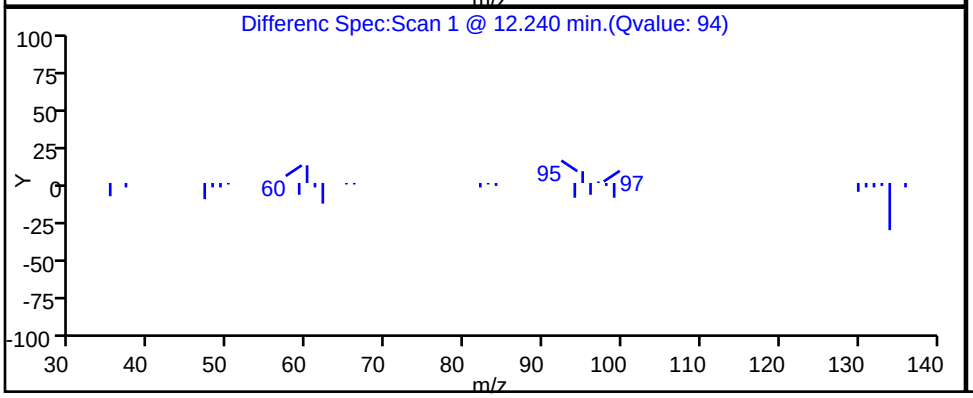












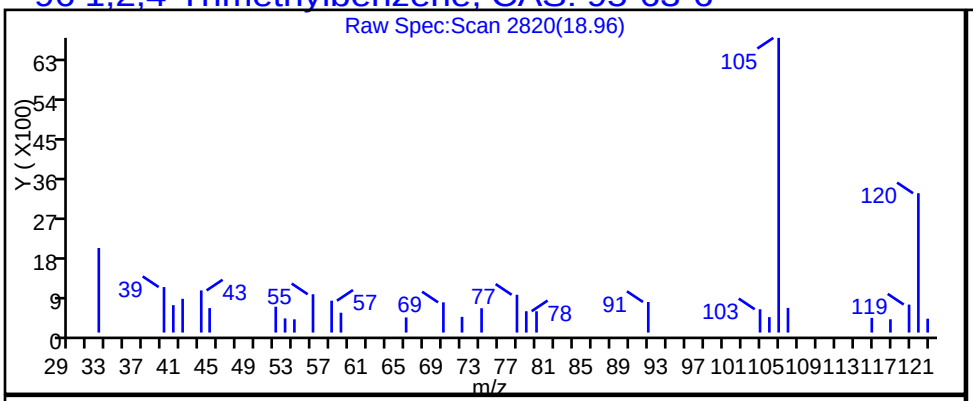
Report Date: 21-Jul-2016 09:59:32 Chrom Revision: 2.2 18-Jul-2016 15:30:42

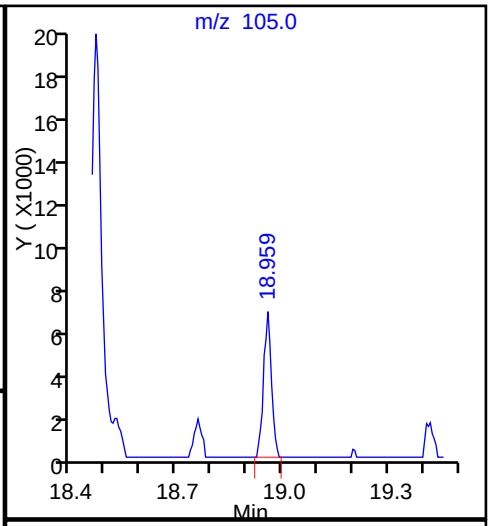
TestAmerica Knoxville

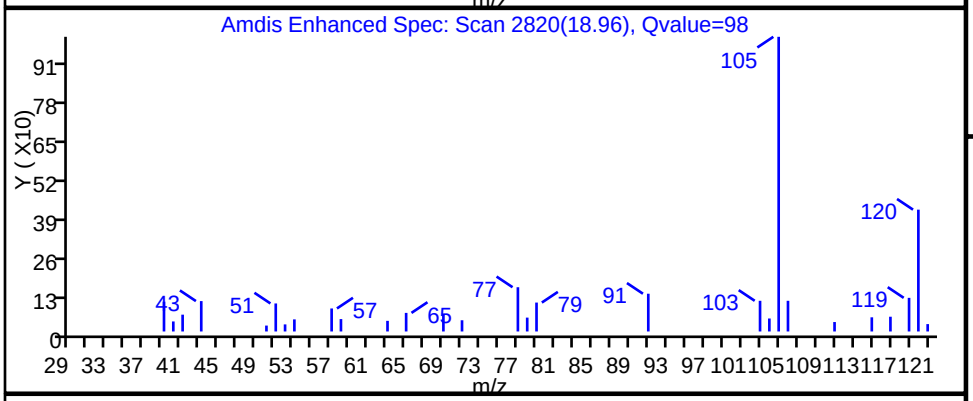
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D

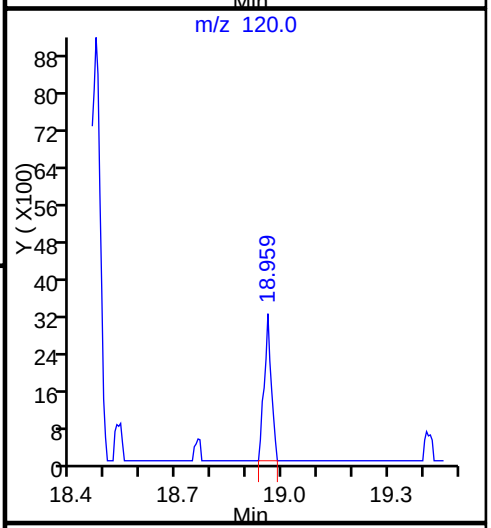
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

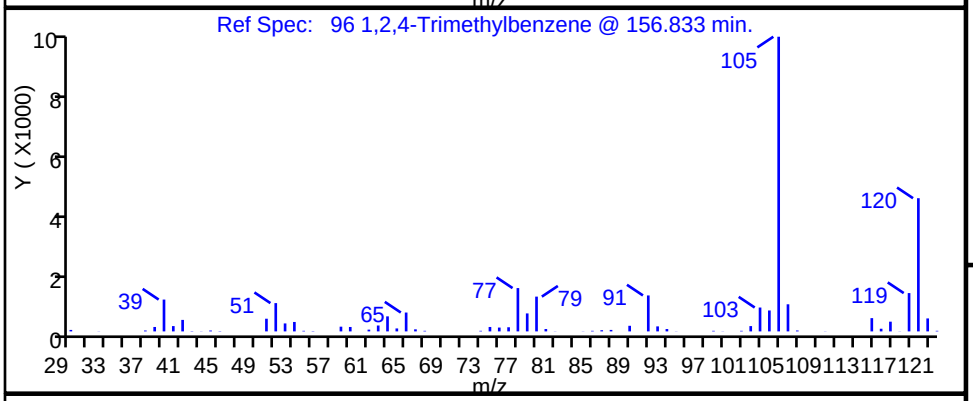
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

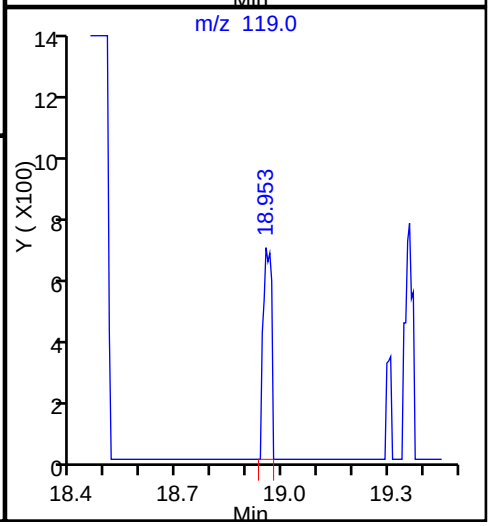


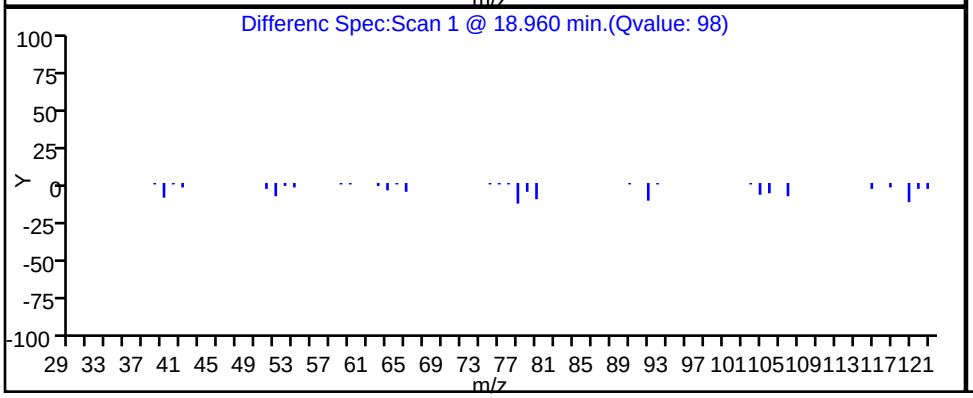








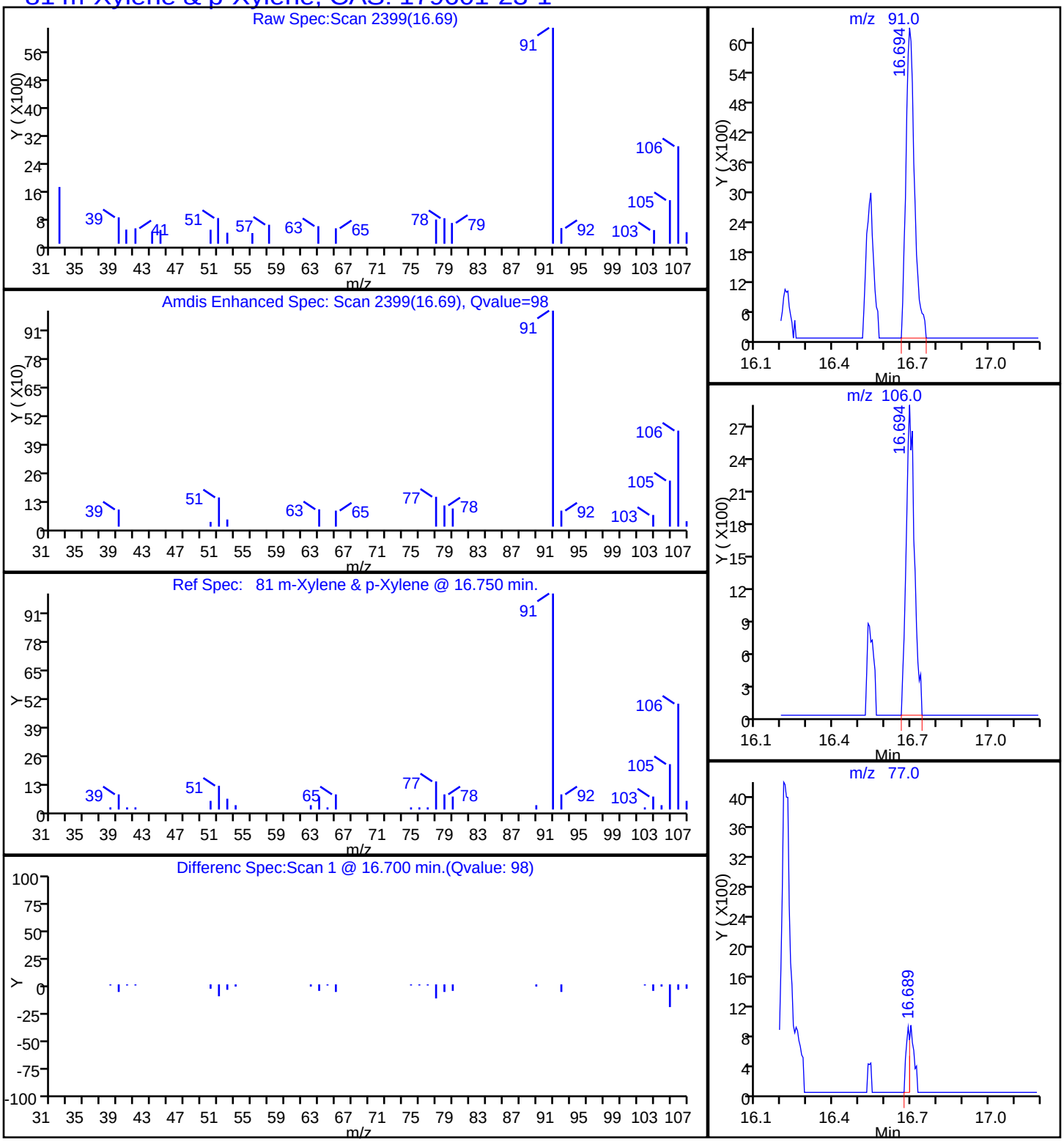




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

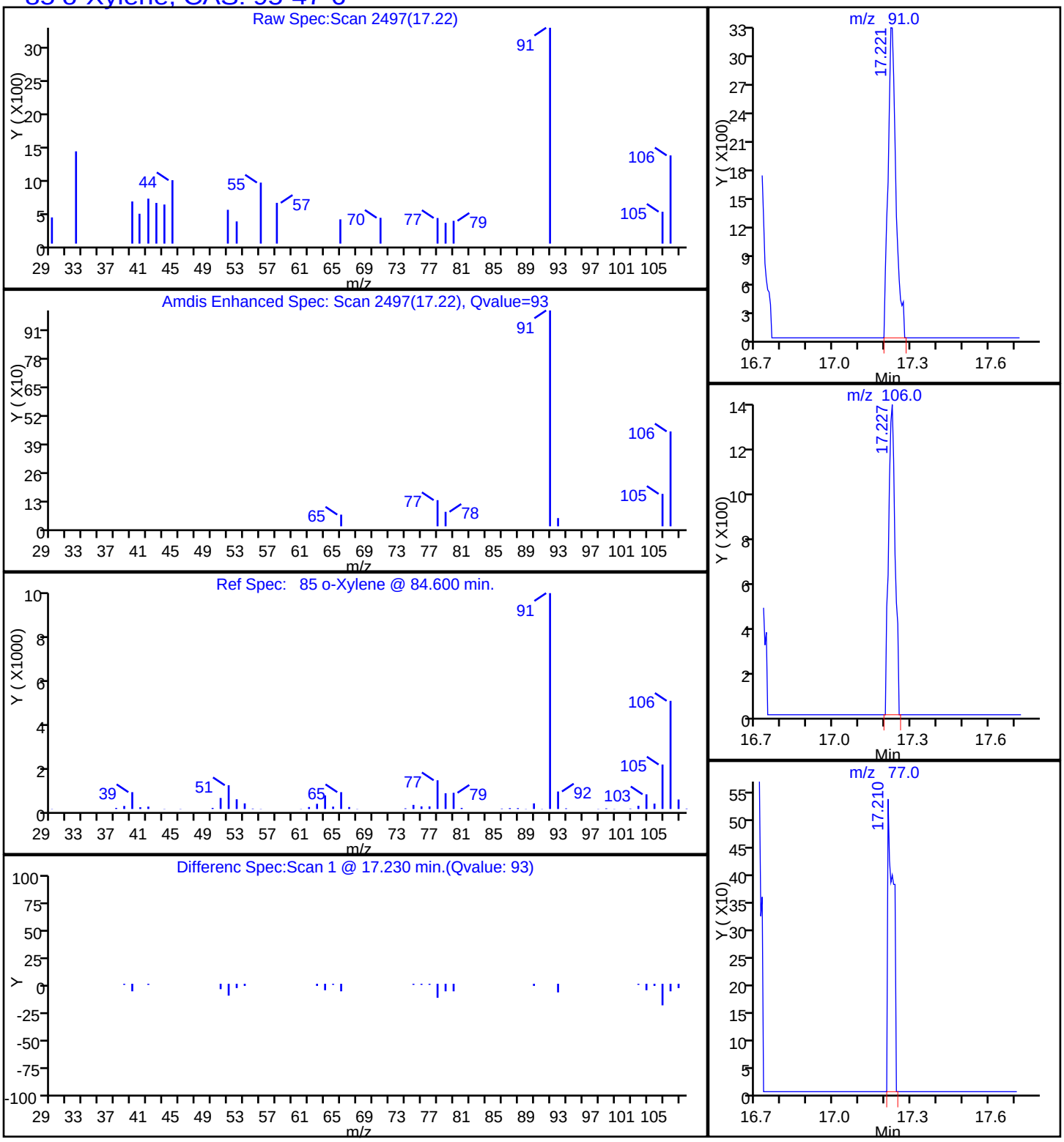
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P109.D				
Injection Date:	20-Jul-2016 23:36:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-2	Lab Sample ID:	140-5356-2		
Client ID:	A-MID GAC				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: A-EFFLUENT | Lab Sample ID: 140-5356-3

Matrix: Air | Lab File ID: JG20P110.D

Analysis Method: TO 15 LL | Date Collected: 07/14/2016 11:38

Sample wt/vol: 100(mL) | Date Analyzed: 07/21/2016 00:29

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5891 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.34	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.66		0.40	0.075
67-66-3	Chloroform	119.38	0.23	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	18		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.63		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.9		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	30		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.14	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	11		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.7		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.36	J	0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	19		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	3.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.31	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.17	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.54	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-5356-3

Matrix: Air Lab File ID: JG20P110.D

Analysis Method: TO 15 LL Date Collected: 07/14/2016 11:38

Sample wt/vol: 100(mL) Date Analyzed: 07/21/2016 00:29

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5891 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.1	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	2.3		1.4	0.27
67-66-3	Chloroform	119.38	1.1	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	73		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	12		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	120		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.59	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	37		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	6.4		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	1.4	J	1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	110		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	18		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.44	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.3	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D
Lims ID: 140-5356-A-3
Client ID: A-EFFLUENT
Sample Type: Client
Inject. Date: 21-Jul-2016 00:29:30 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003196-016
Misc. Info.: 140-5356-a-3
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Jul-2016 09:47:50 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: tajh Date: 21-Jul-2016 09:42:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.373	9.373	0.000	92	217952	4.00	
* 2 1,4-Difluorobenzene	114	11.535	11.535	0.000	96	976970	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.215	16.216	-0.001	88	902457	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.840	17.835	0.005	89	523087	3.93	
6 Chlorodifluoromethane	67	3.929	3.924	0.005	94	3574	0.1321	
8 Dichlorodifluoromethane	85	3.993	3.993	0.000	99	30064	0.1255	
12 Vinyl chloride	62	4.381	4.381	0.000	95	1983	0.0346	
27 1,1-Dichloroethene	96	6.360	6.355	0.005	93	382861	5.94	
31 Methylene Chloride	84	6.726	6.726	0.000	98	126130	2.11	
34 trans-1,2-Dichloroethene	96	7.571	7.571	0.000	44	4596	0.0710	
37 1,1-Dichloroethane	63	8.012	8.007	0.005	99	77479	0.5884	
42 cis-1,2-Dichloroethene	96	9.028	9.023	0.005	98	236638	3.67	
44 Chloroform	83	9.384	9.378	0.006	28	6598	0.0452	
47 1,1,1-Trichloroethane	97	10.427	10.427	0.000	96	657074	3.89	
51 Benzene	78	11.008	11.008	0.000	97	11646	0.0683	
59 Trichloroethene	130	12.240	12.235	0.005	94	56721	0.6590	
68 Toluene	91	14.257	14.257	0.000	92	65684	0.3418	
79 Ethylbenzene	91	16.544	16.538	0.006	96	6003	0.0274	
81 m-Xylene & p-Xylene	91	16.694	16.700	-0.006	98	12936	0.0761	
85 o-Xylene	91	17.227	17.227	0.000	95	5670	0.0310	
96 1,2,4-Trimethylbenzene	105	18.959	18.959	0.000	97	10947	0.0625	
S 126 Xylenes, Total	100				0		0.1071	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

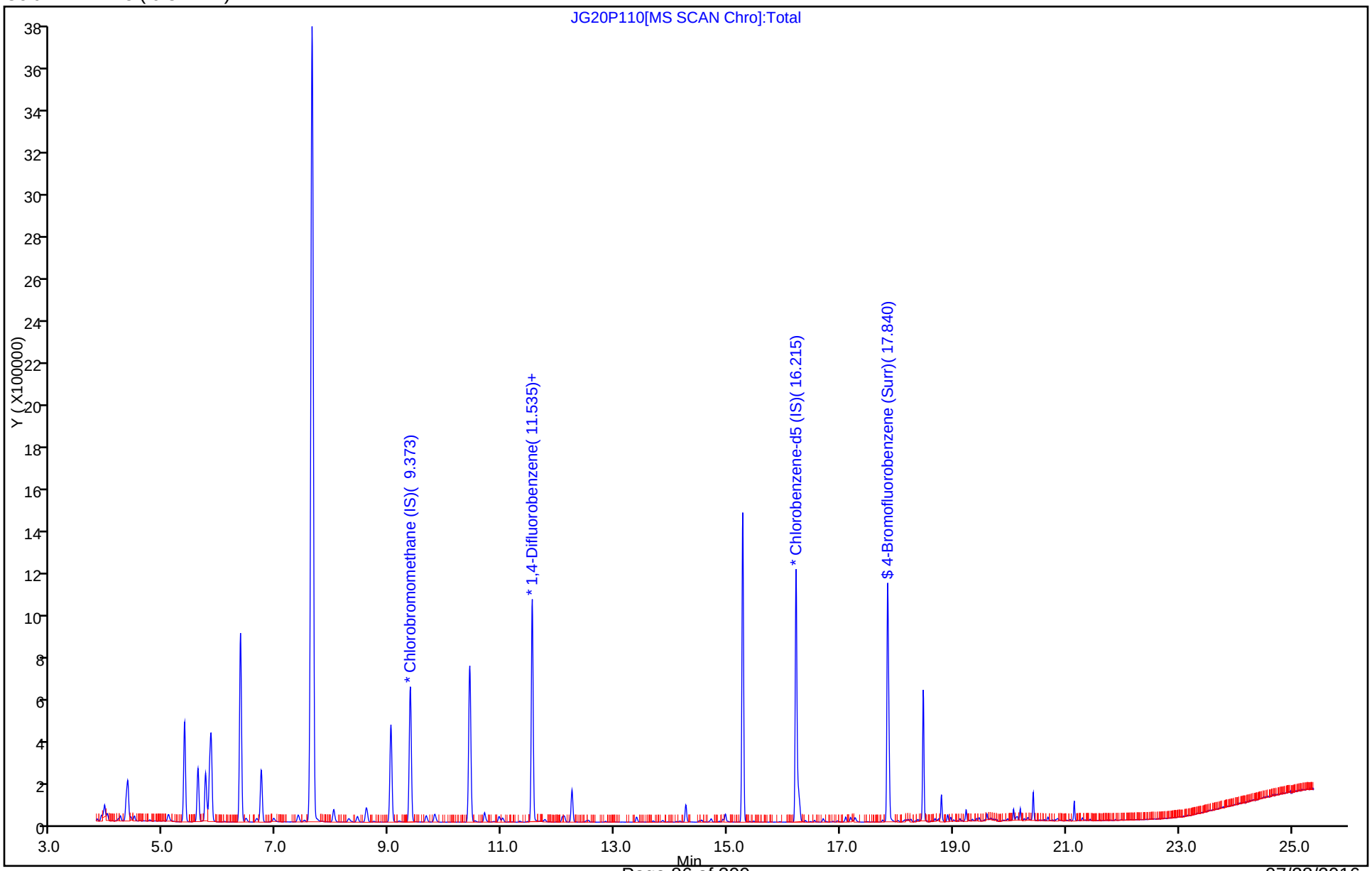
Report Date: 21-Jul-2016 09:59:35 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D

Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3	Worklist Smp#:	16
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Lims ID:	140-5356-A-3				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	21-Jul-2016 00:29:30	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-016				
Misc. Info.:	140-5356-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:47:50	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				

First Level Reviewer: tajh Date: 21-Jul-2016 09:42:41

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.93	98.14

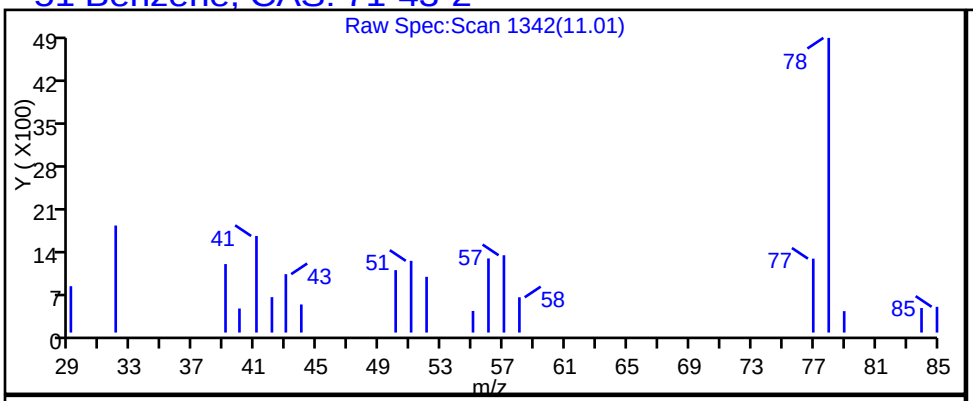
Report Date: 21-Jul-2016 09:59:35 Chrom Revision: 2.2 18-Jul-2016 15:30:42

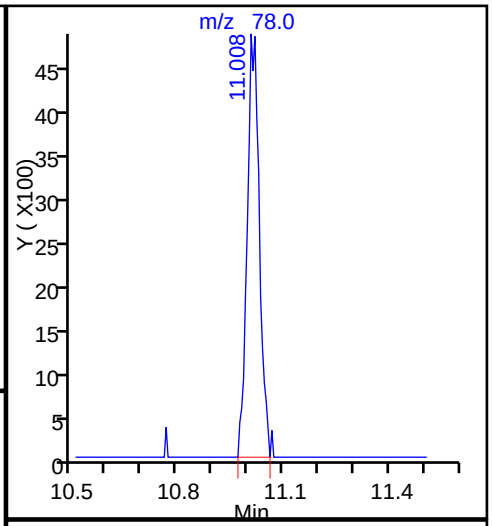
TestAmerica Knoxville

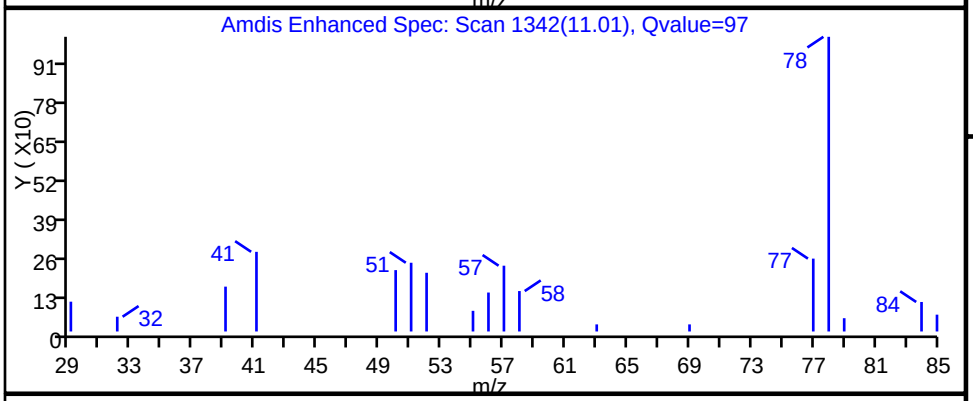
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D

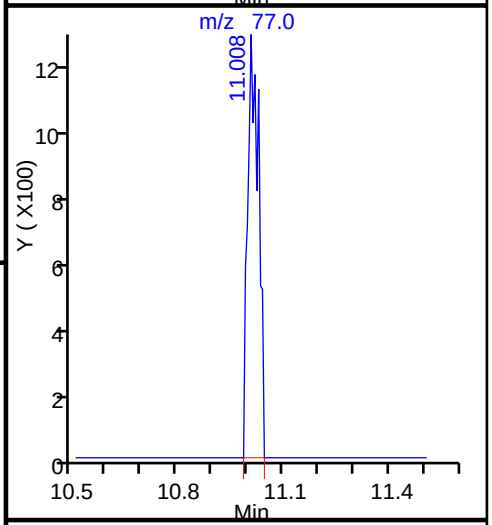
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

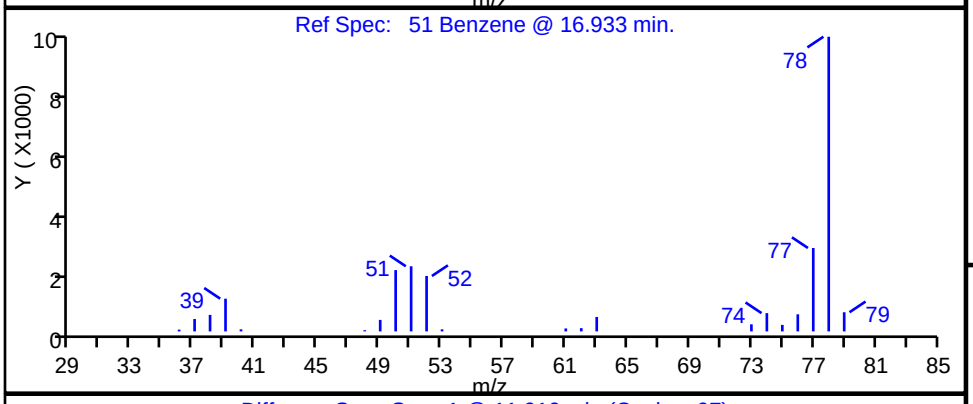
51 Benzene, CAS: 71-43-2

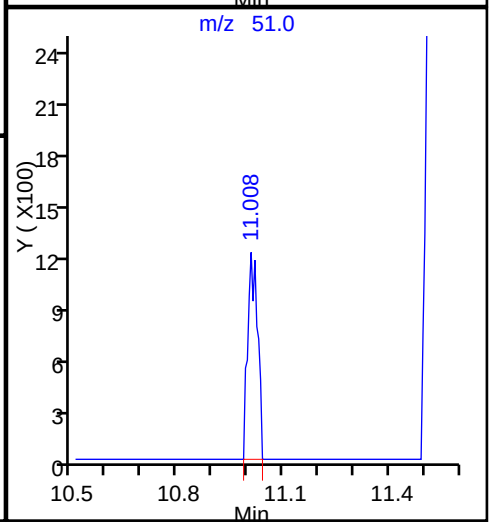


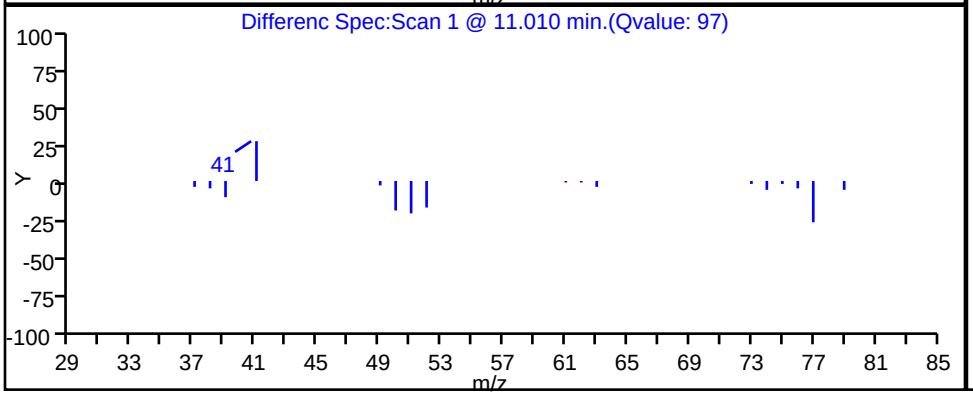








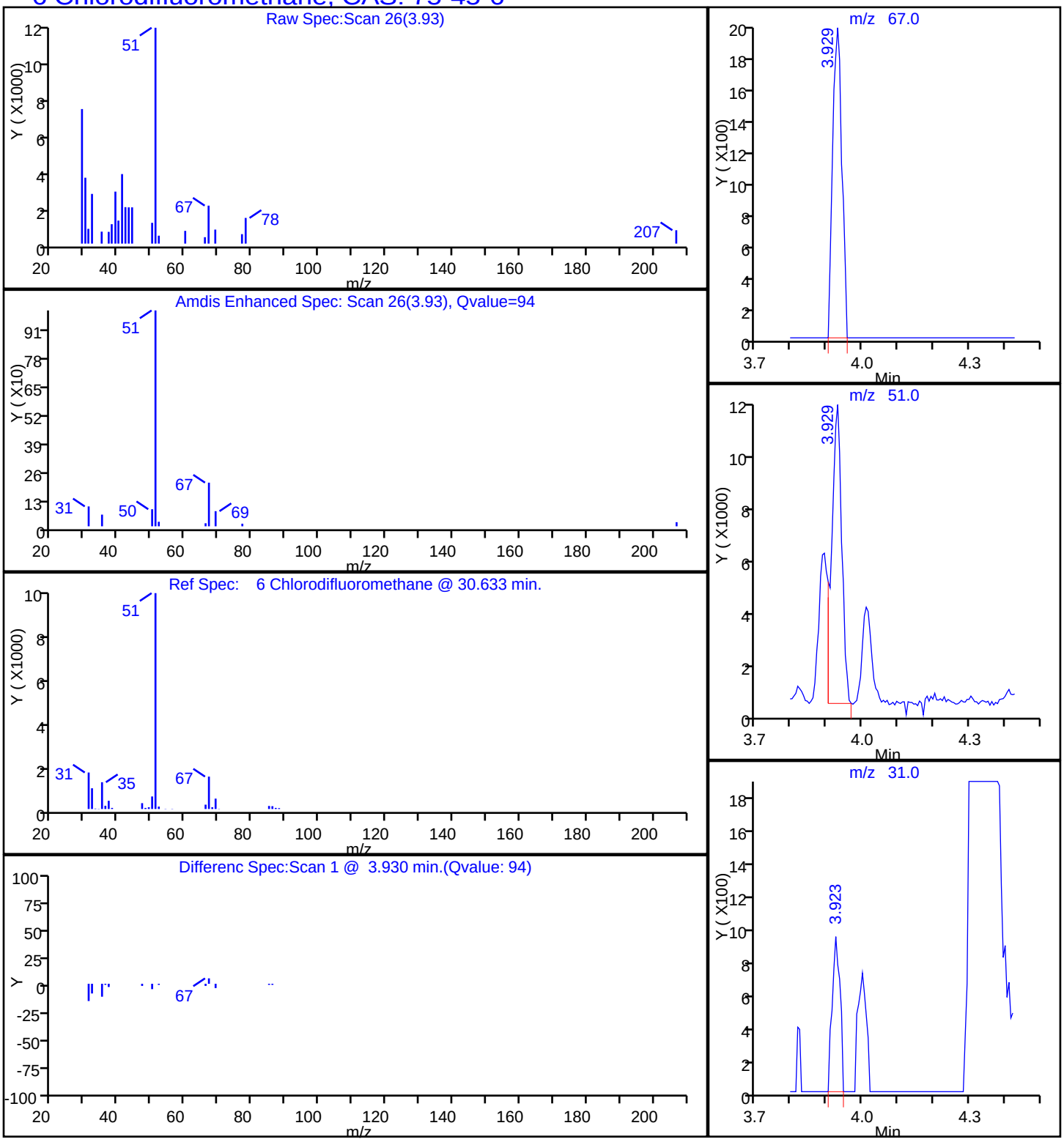




TestAmerica Knoxville

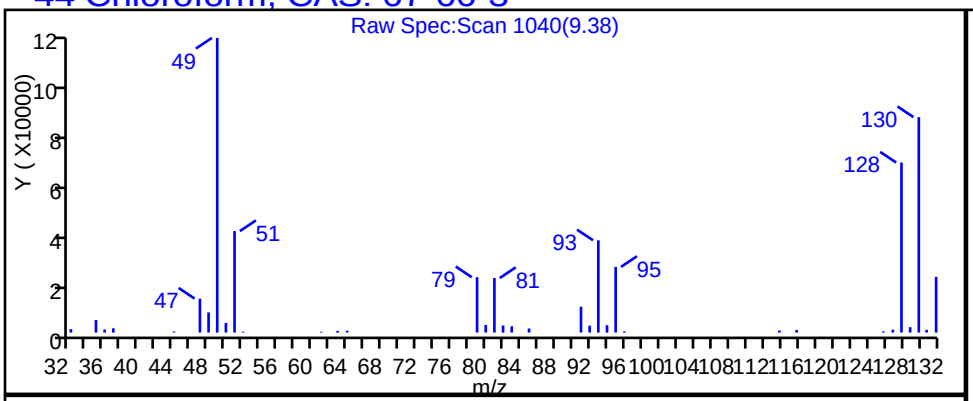
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D		
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

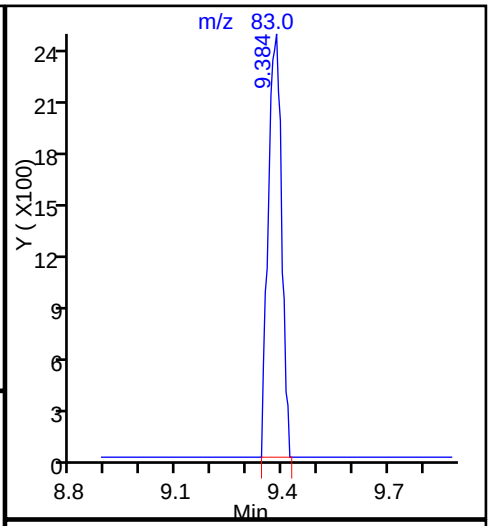
6 Chlorodifluoromethane, CAS: 75-45-6

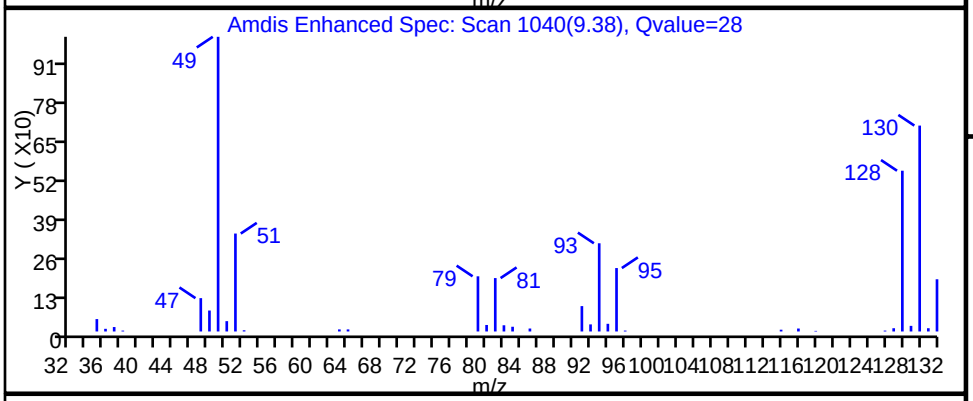


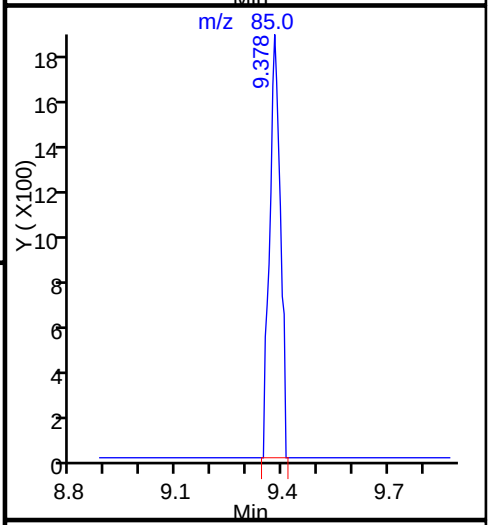
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D
Injection Date: 21-Jul-2016 00:29:30 Instrument ID: MJ
Lims ID: 140-5356-A-3 Lab Sample ID: 140-5356-3
Client ID: A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

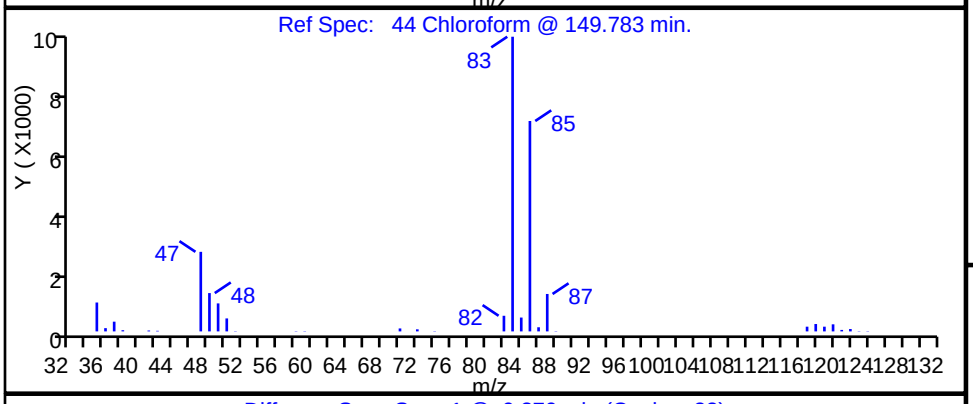
44 Chloroform, CAS: 67-66-3

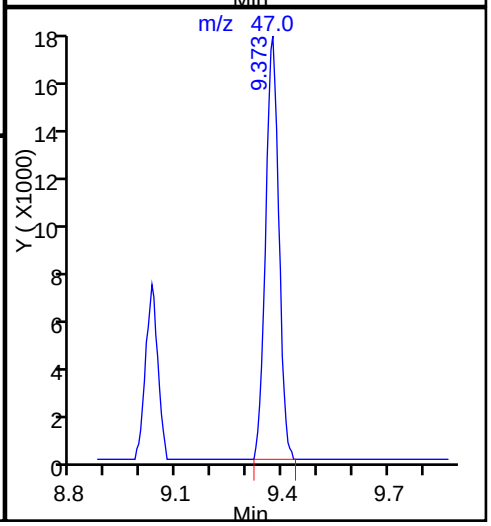


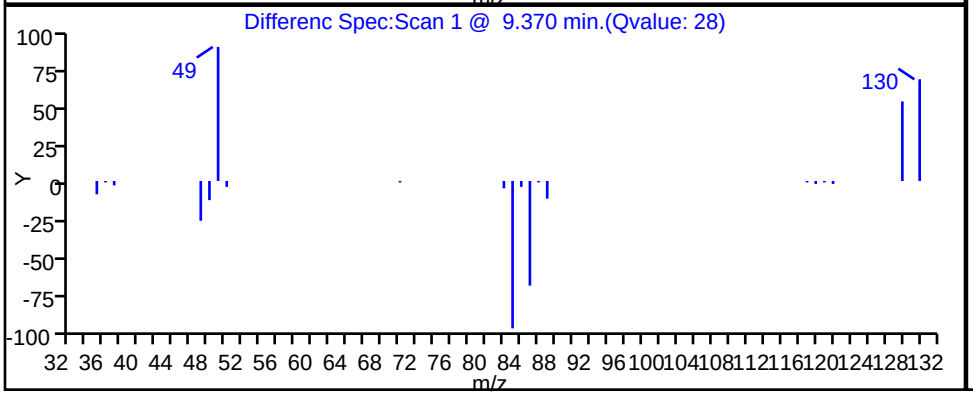












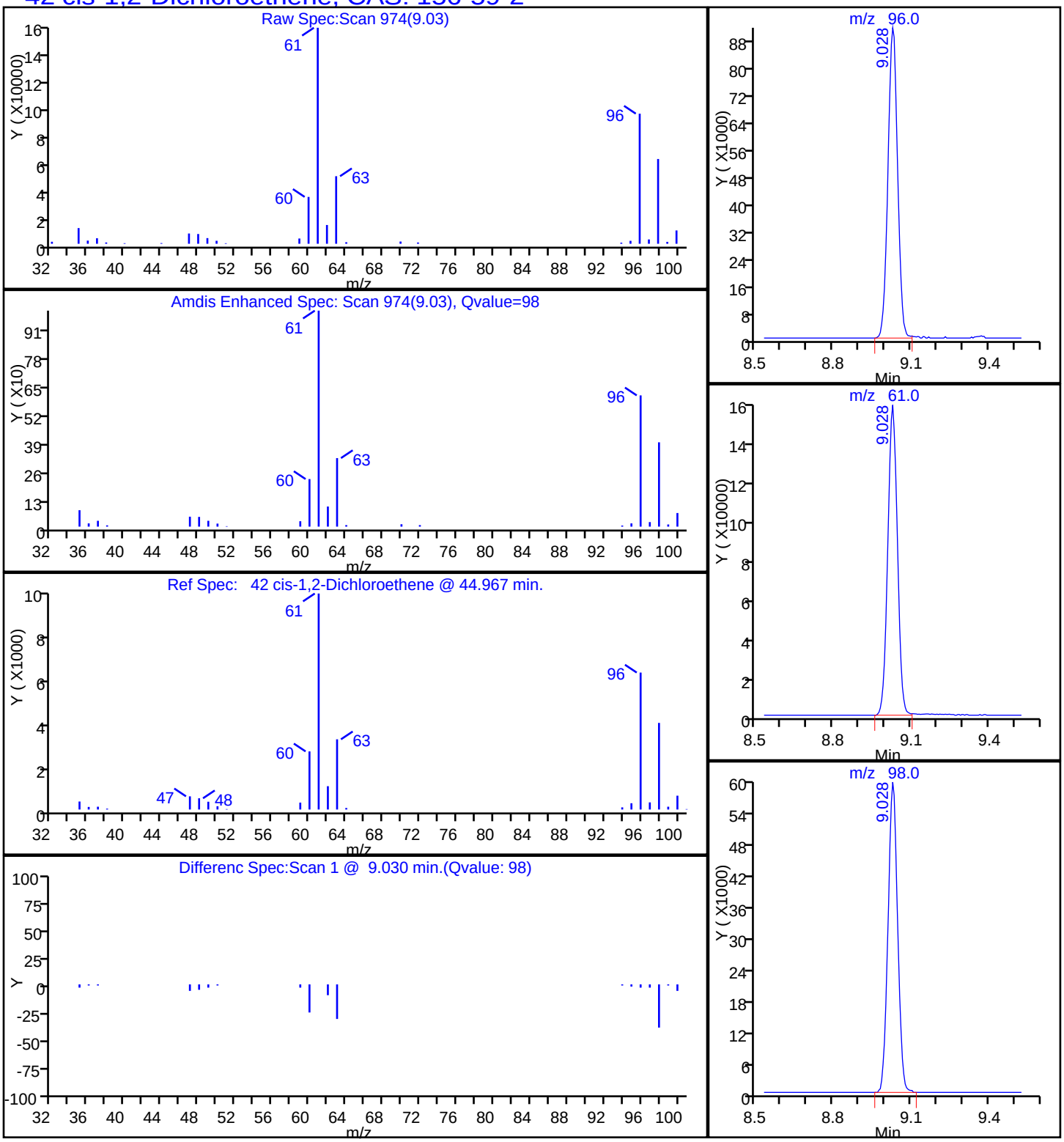
Report Date: 21-Jul-2016 09:59:35 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D

Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

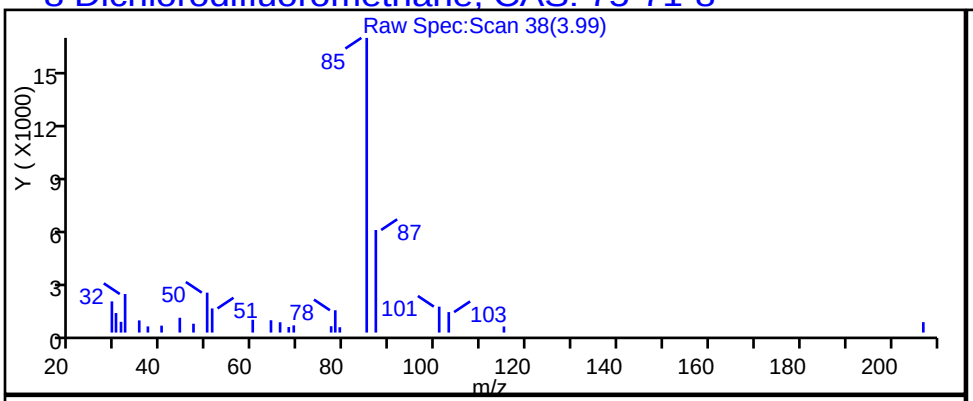
42 cis-1,2-Dichloroethene, CAS: 156-59-2

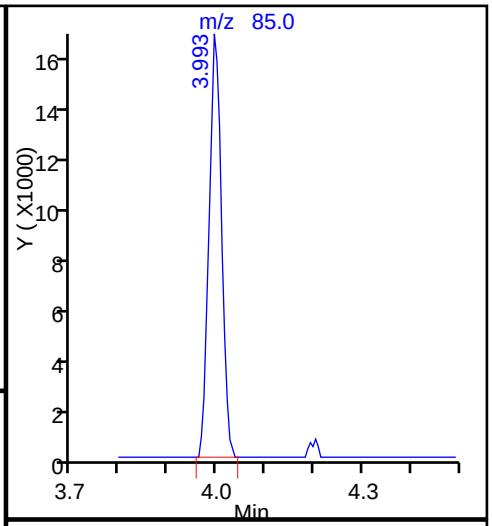


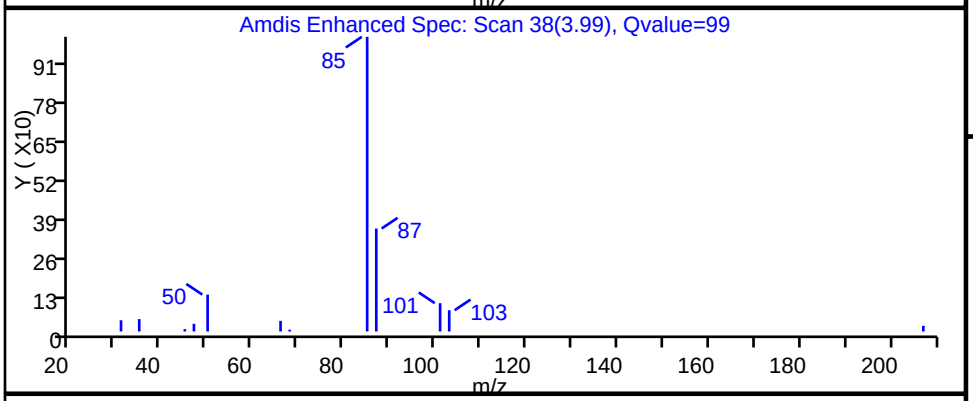
TestAmerica Knoxville

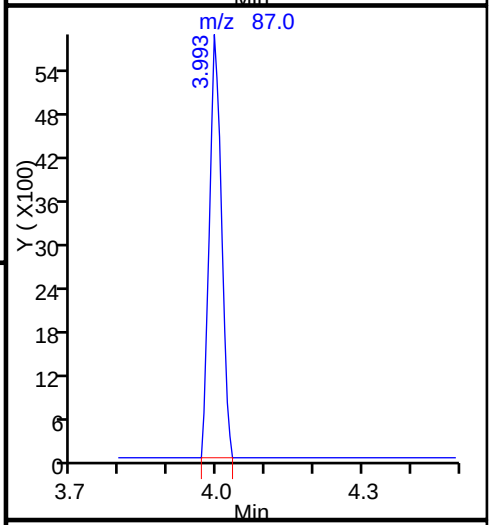
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

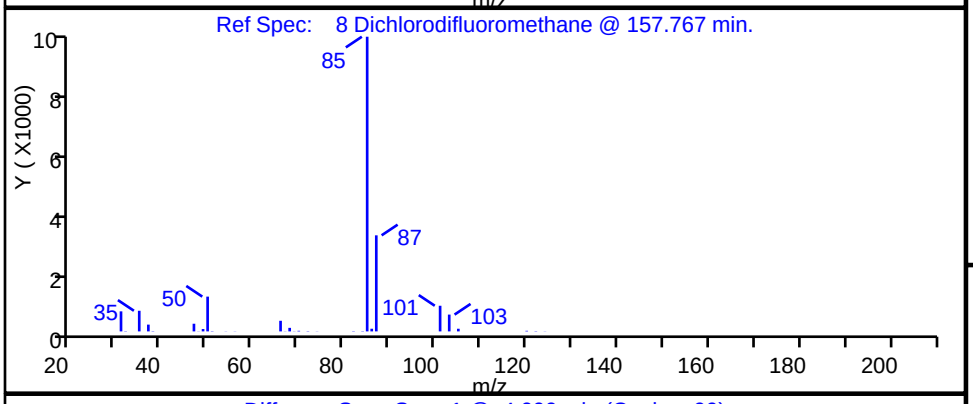
8 Dichlorodifluoromethane, CAS: 75-71-8

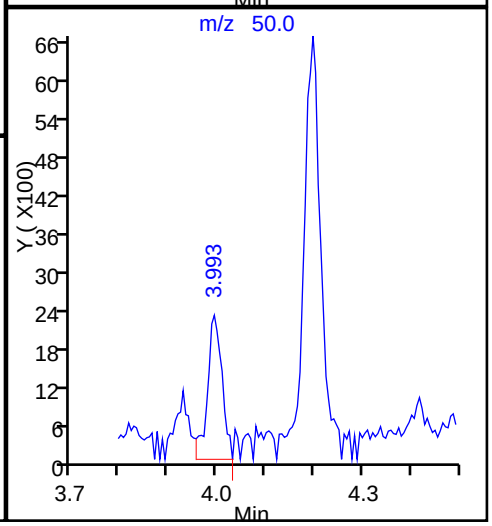


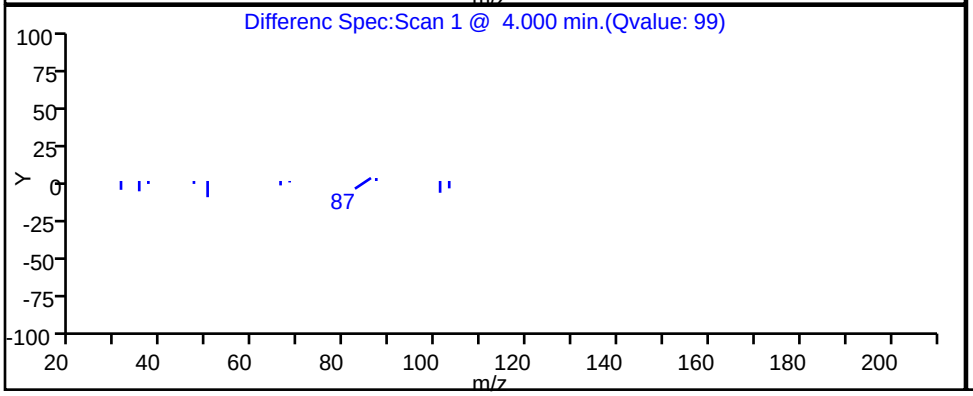








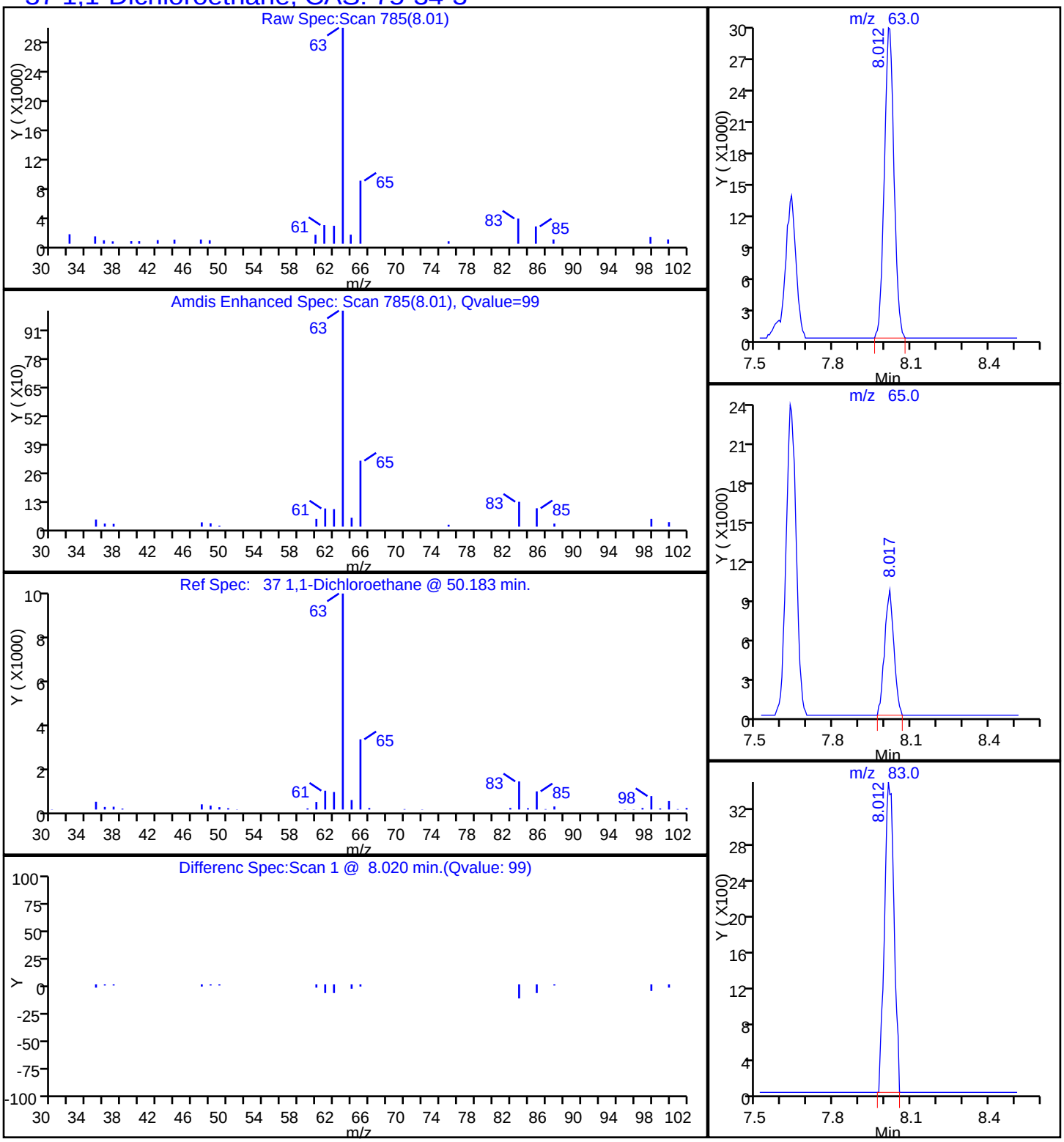




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

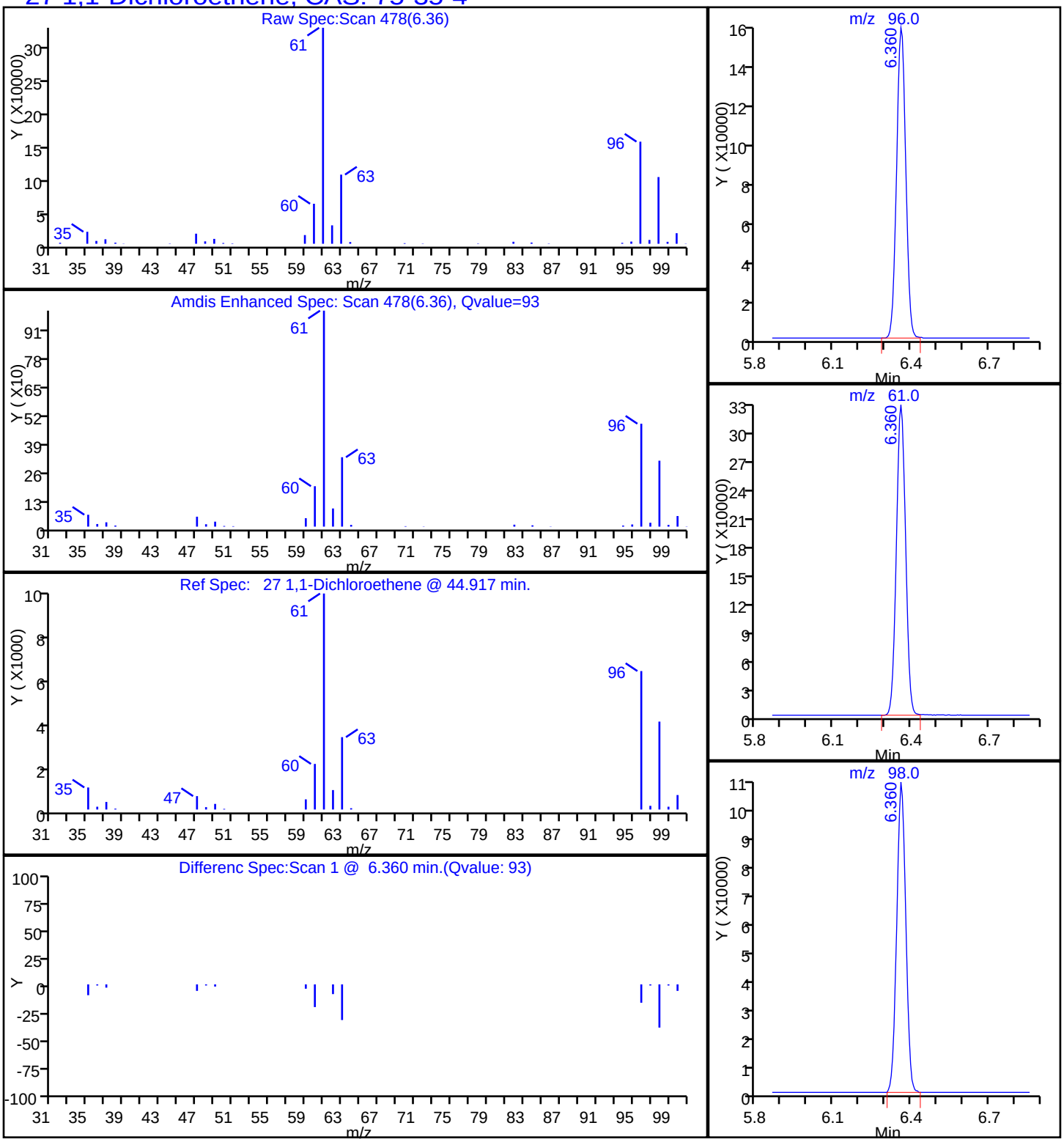
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

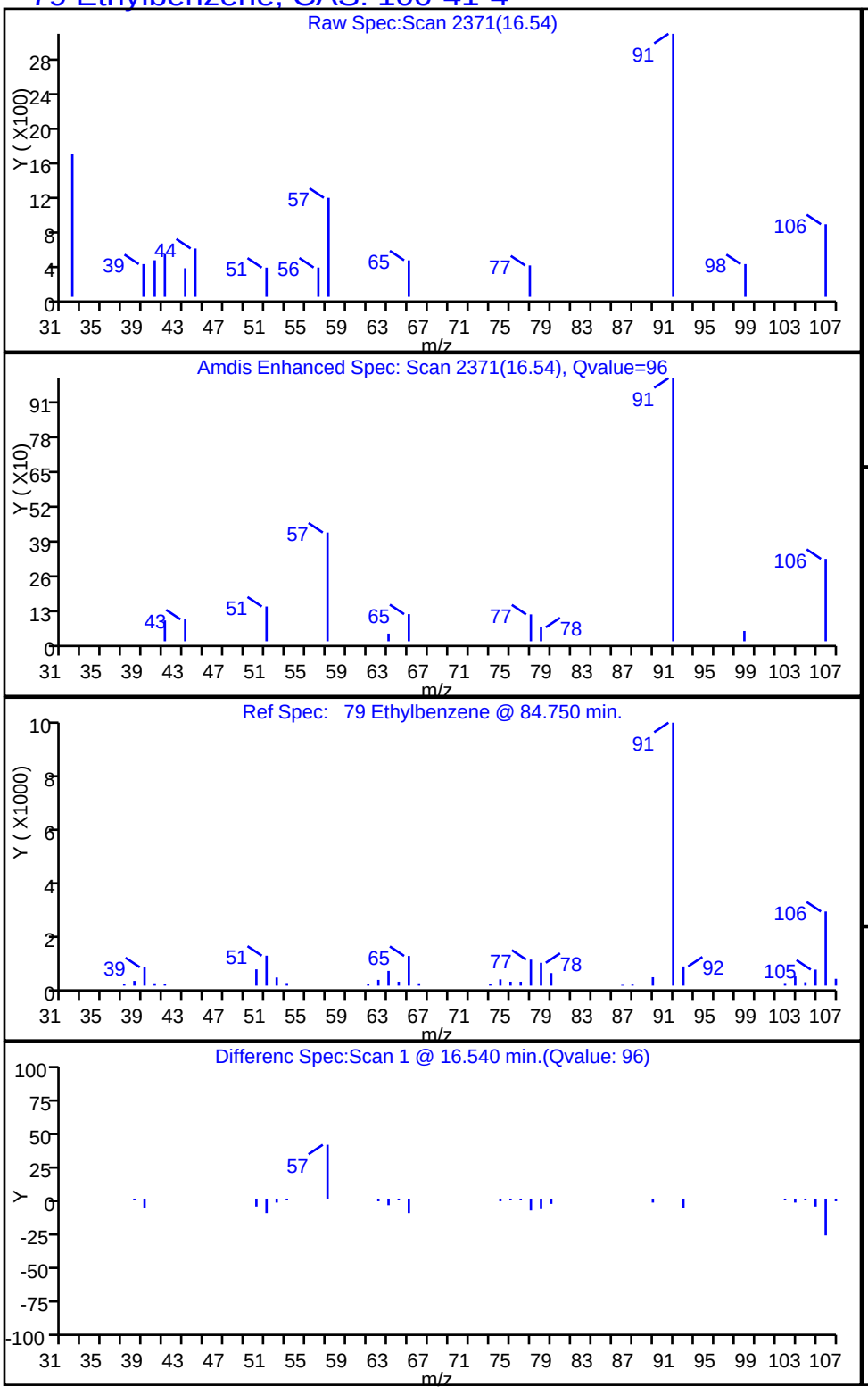
27 1,1-Dichloroethene, CAS: 75-35-4

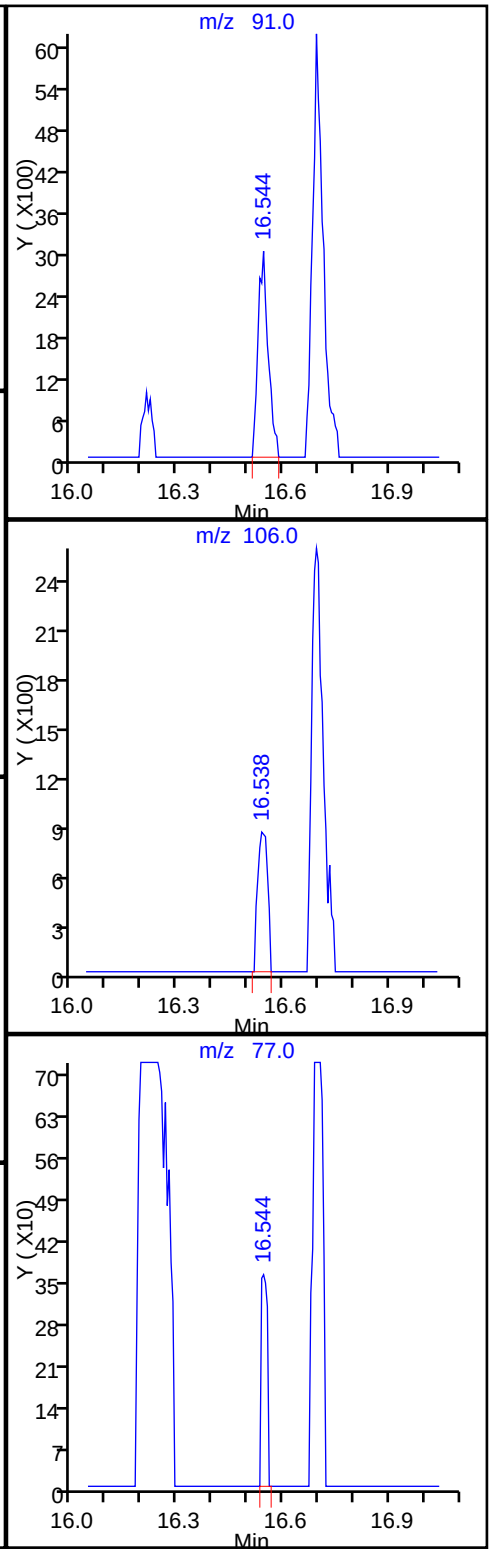


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

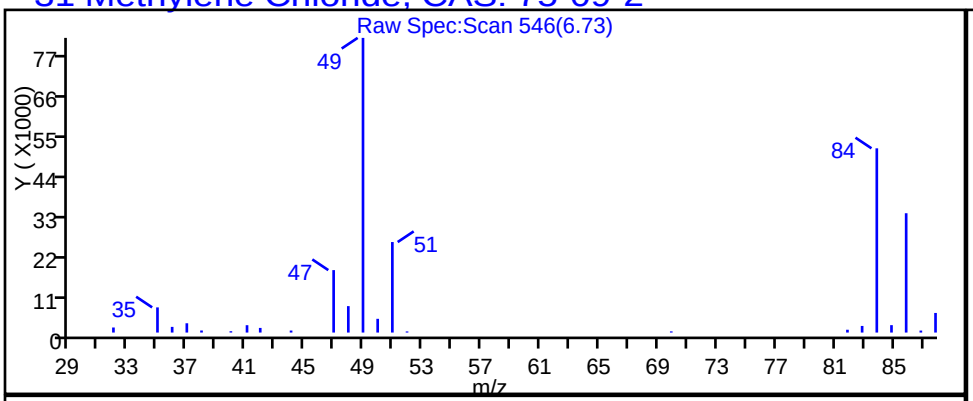
79 Ethylbenzene, CAS: 100-41-4

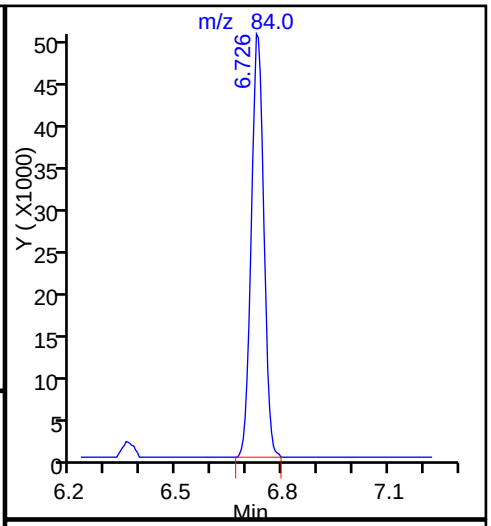


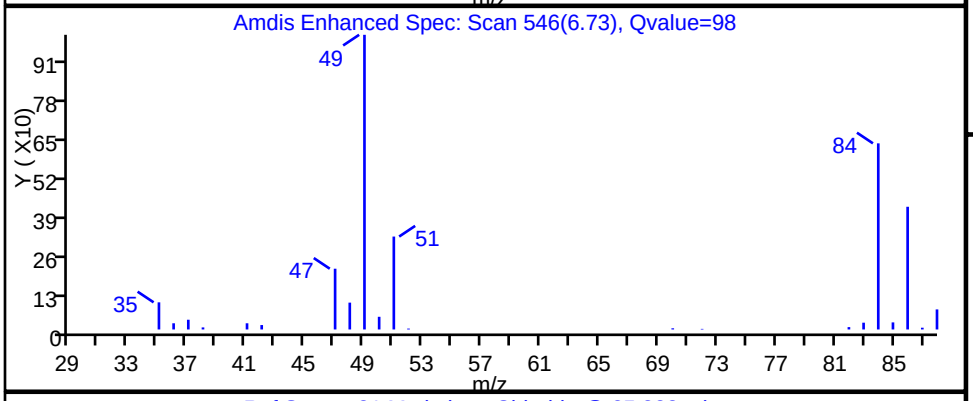


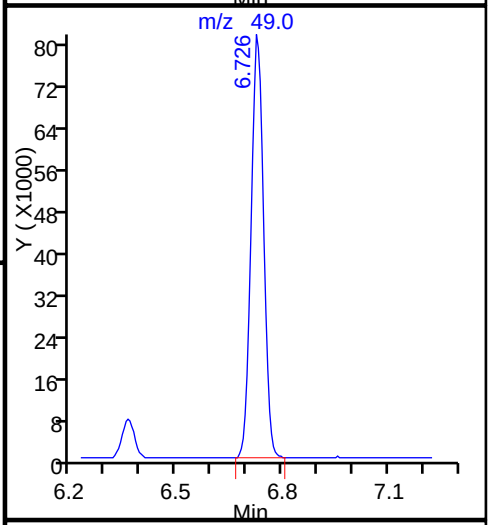
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D
Injection Date: 21-Jul-2016 00:29:30 Instrument ID: MJ
Lims ID: 140-5356-A-3 Lab Sample ID: 140-5356-3
Client ID: A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

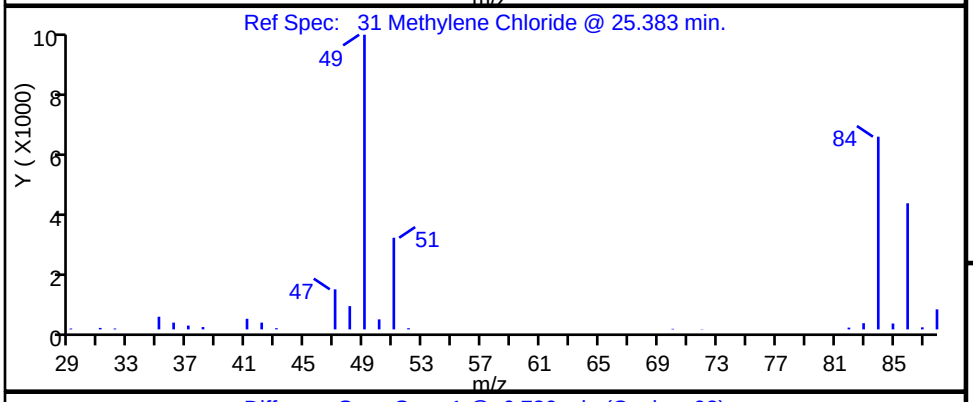
31 Methylene Chloride, CAS: 75-09-2

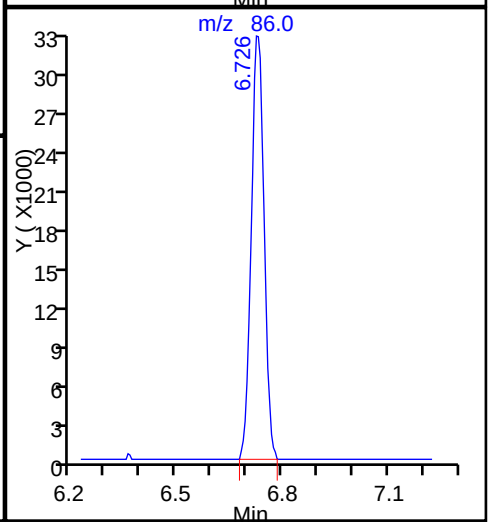


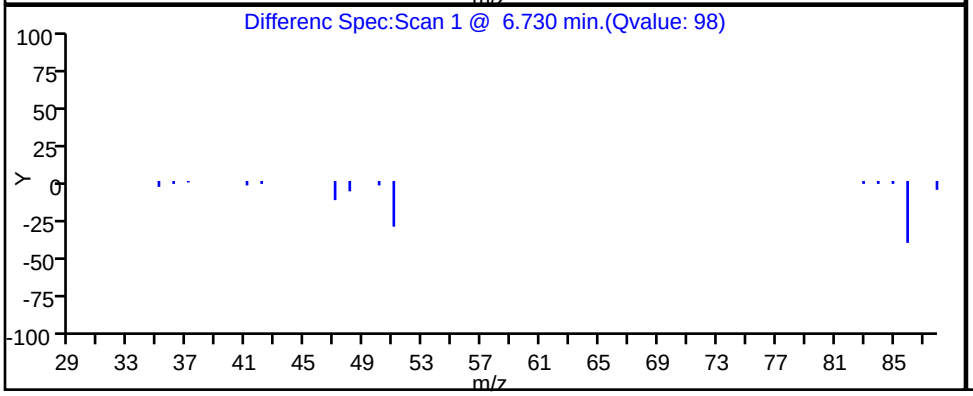






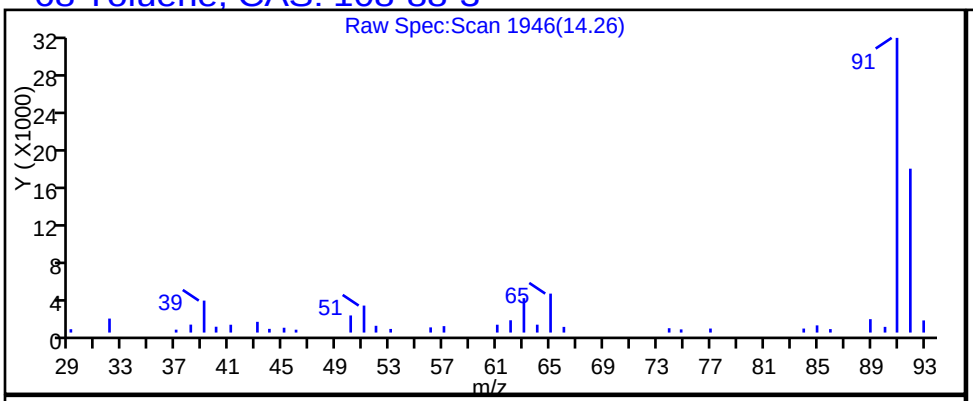


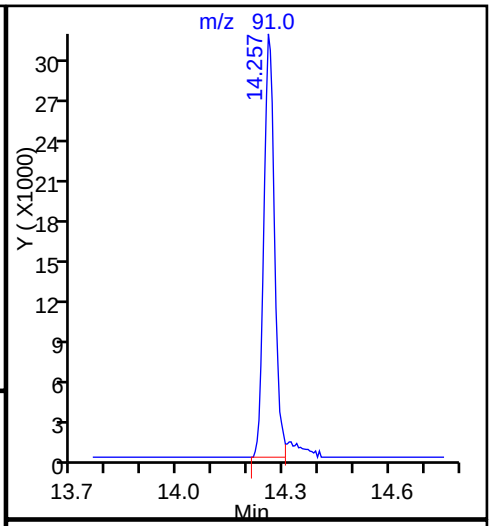


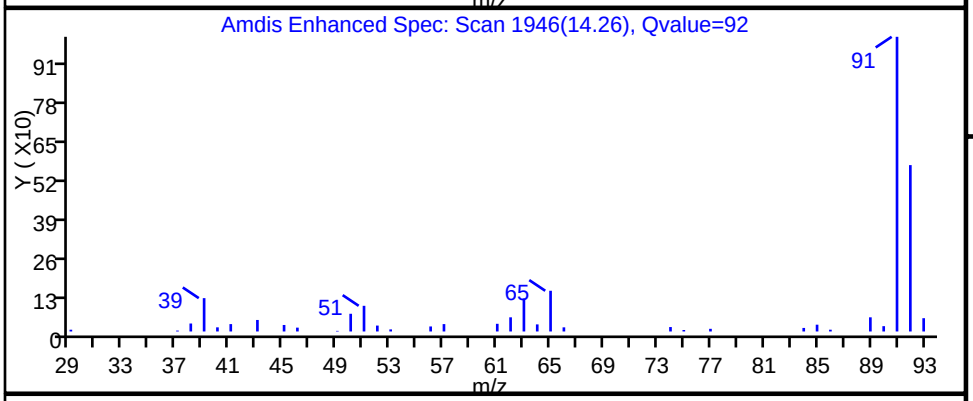


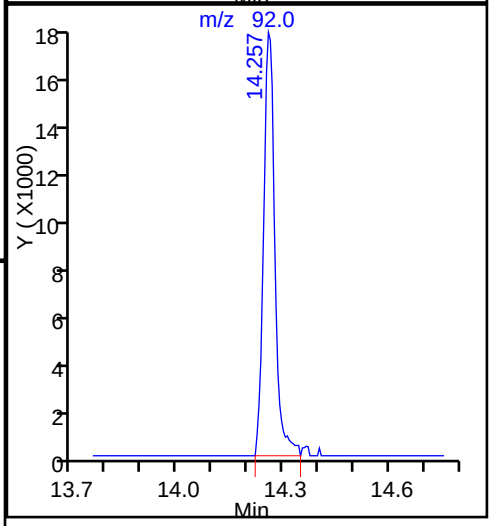
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D
Injection Date: 21-Jul-2016 00:29:30 Instrument ID: MJ
Lims ID: 140-5356-A-3 Lab Sample ID: 140-5356-3
Client ID: A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 10 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

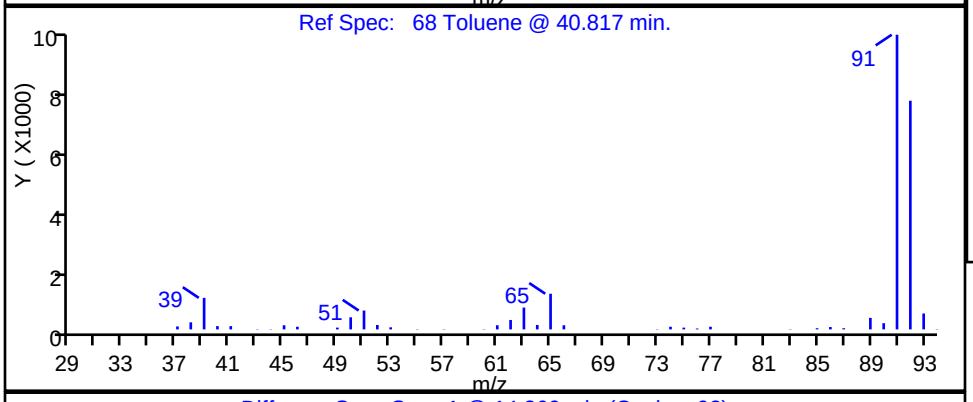
68 Toluene, CAS: 108-88-3

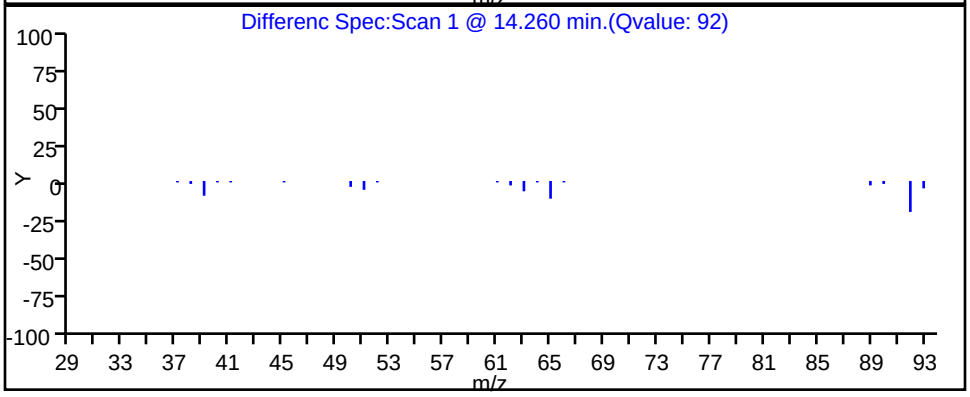








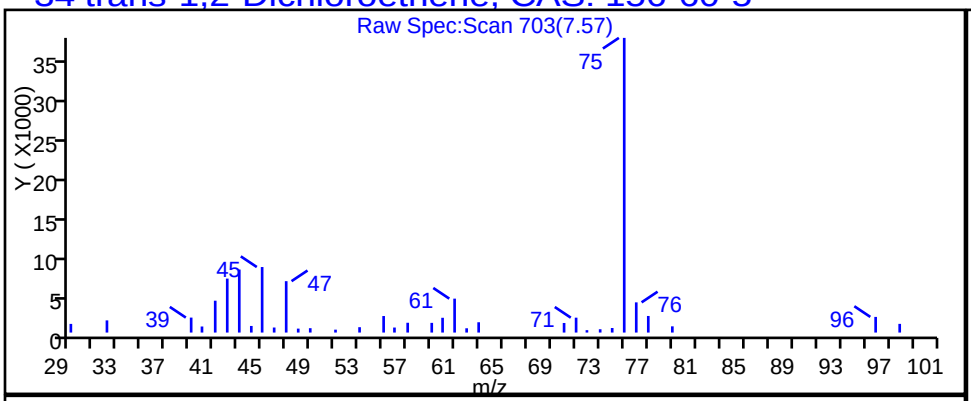


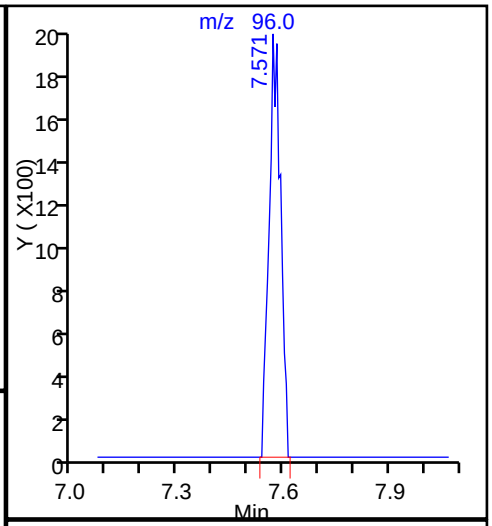


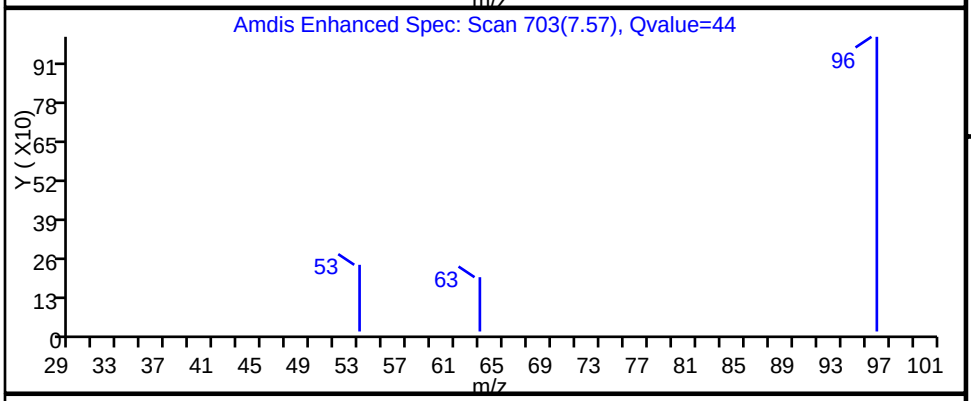
TestAmerica Knoxville

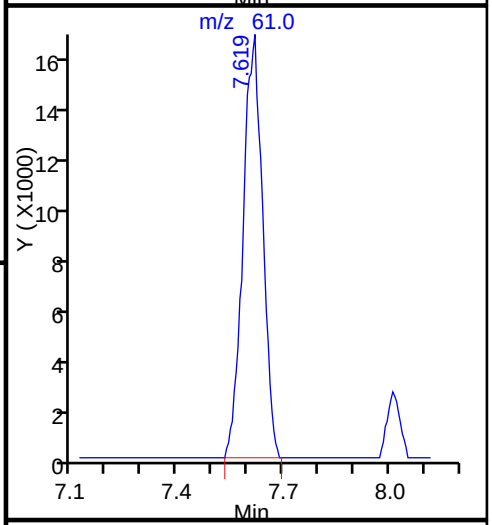
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

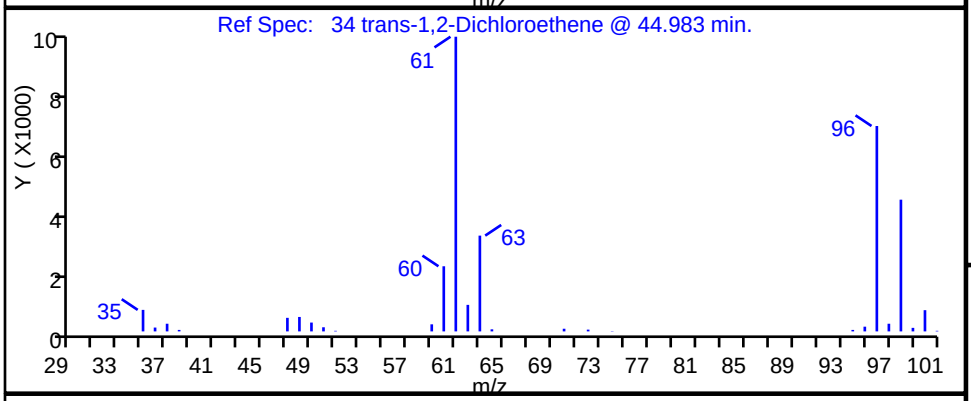
34 trans-1,2-Dichloroethene, CAS: 156-60-5

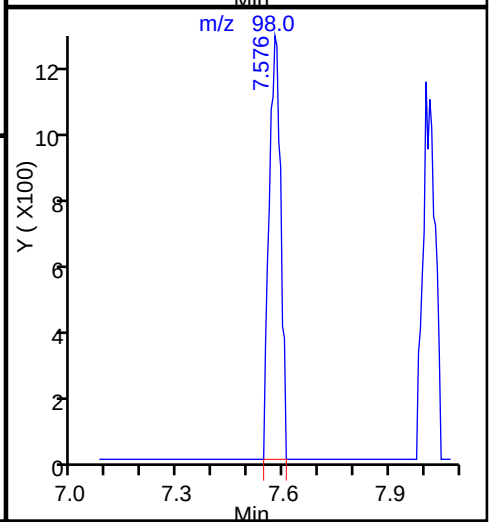


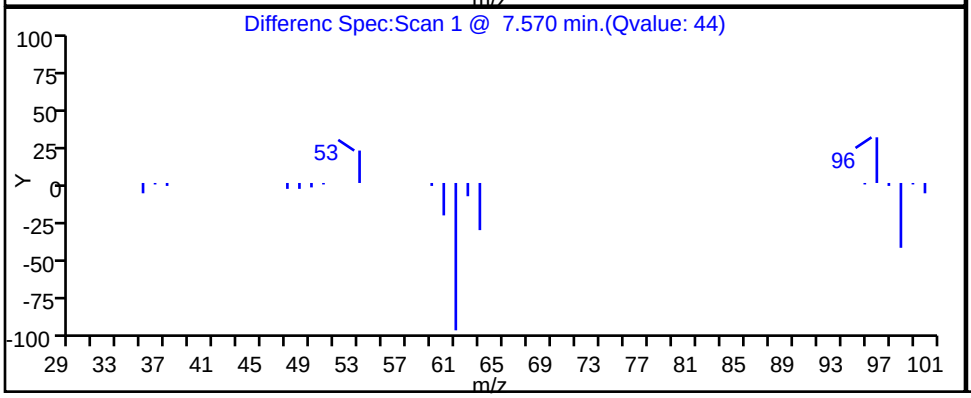












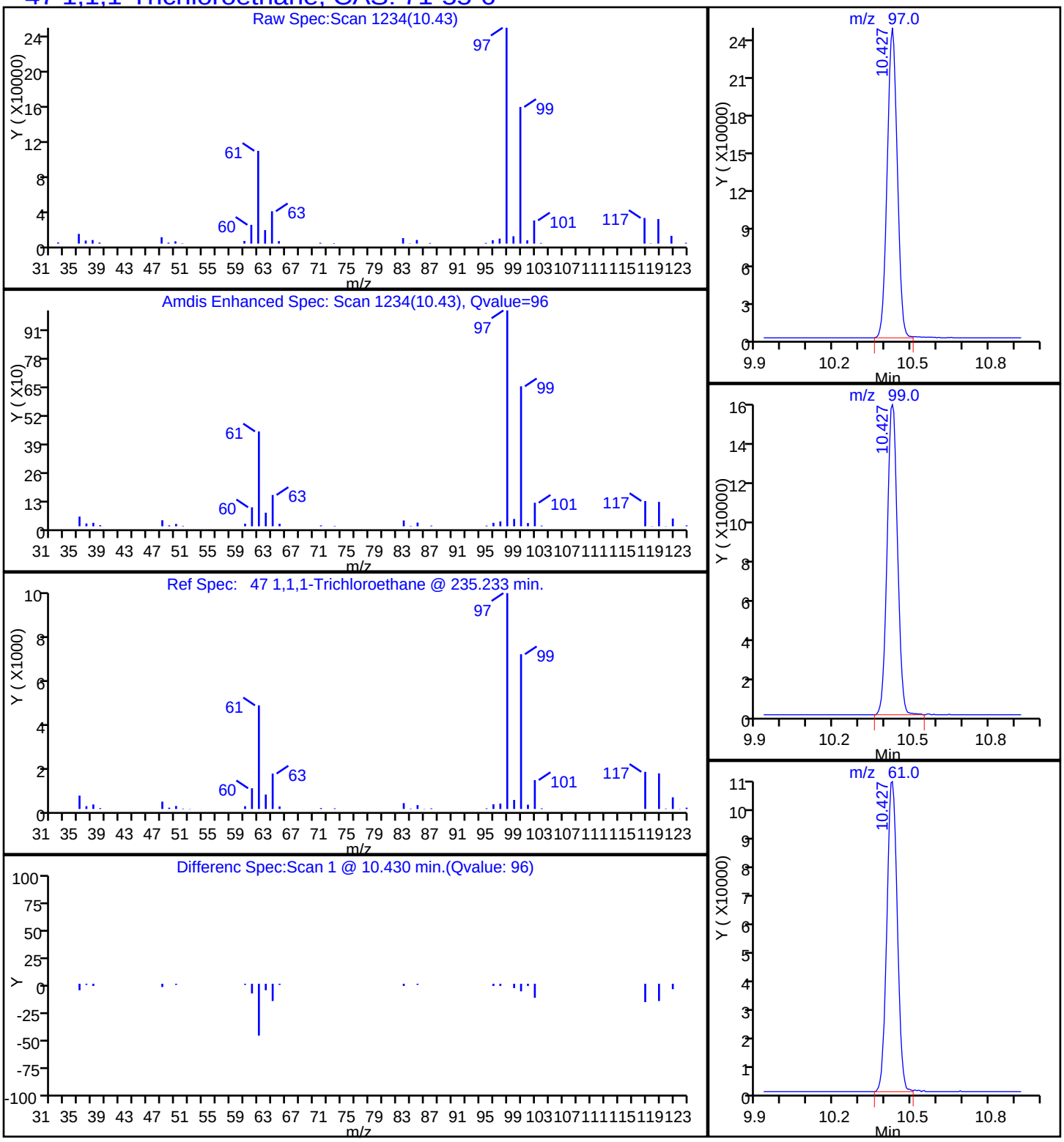
Report Date: 21-Jul-2016 09:59:35 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D

Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6

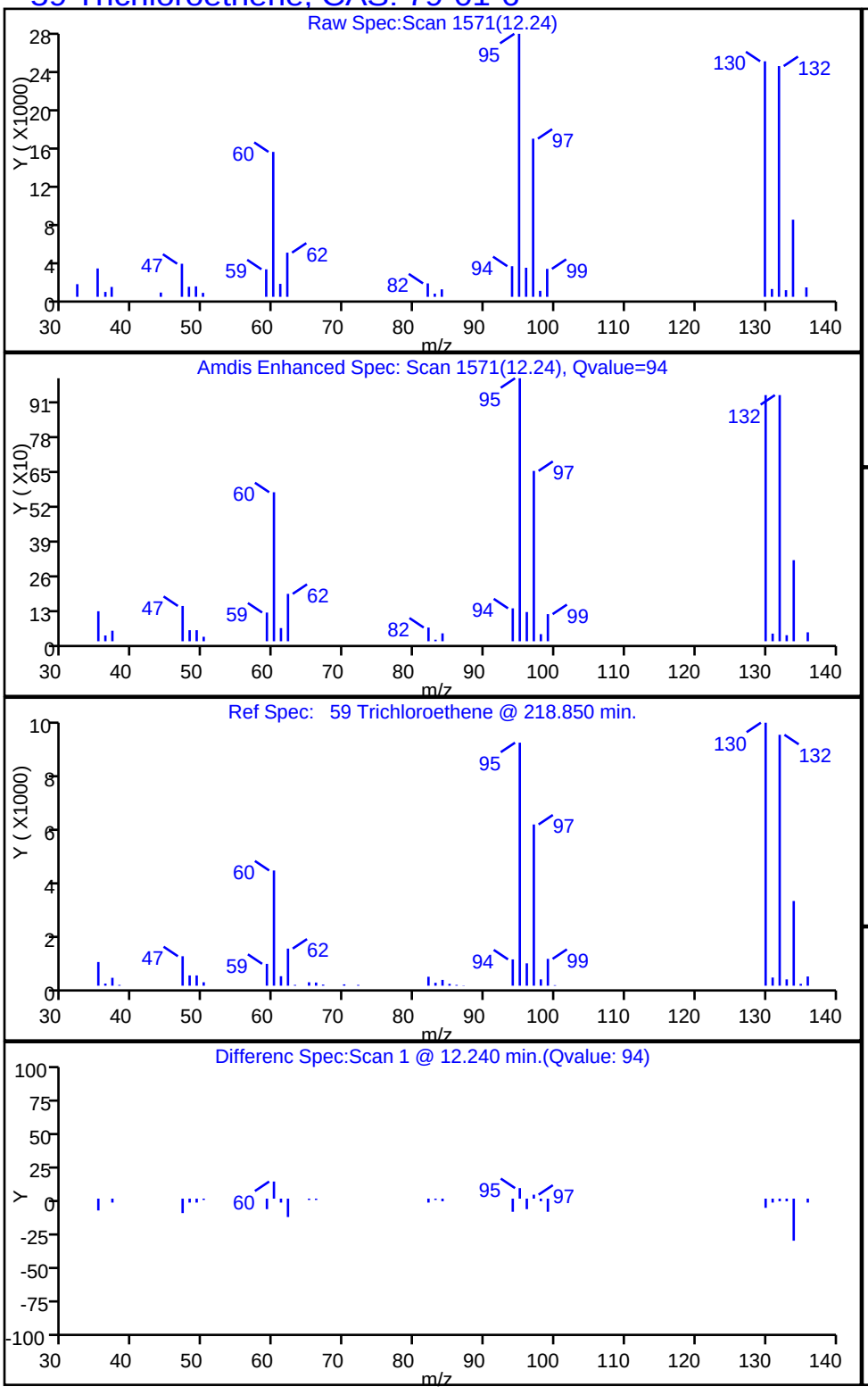


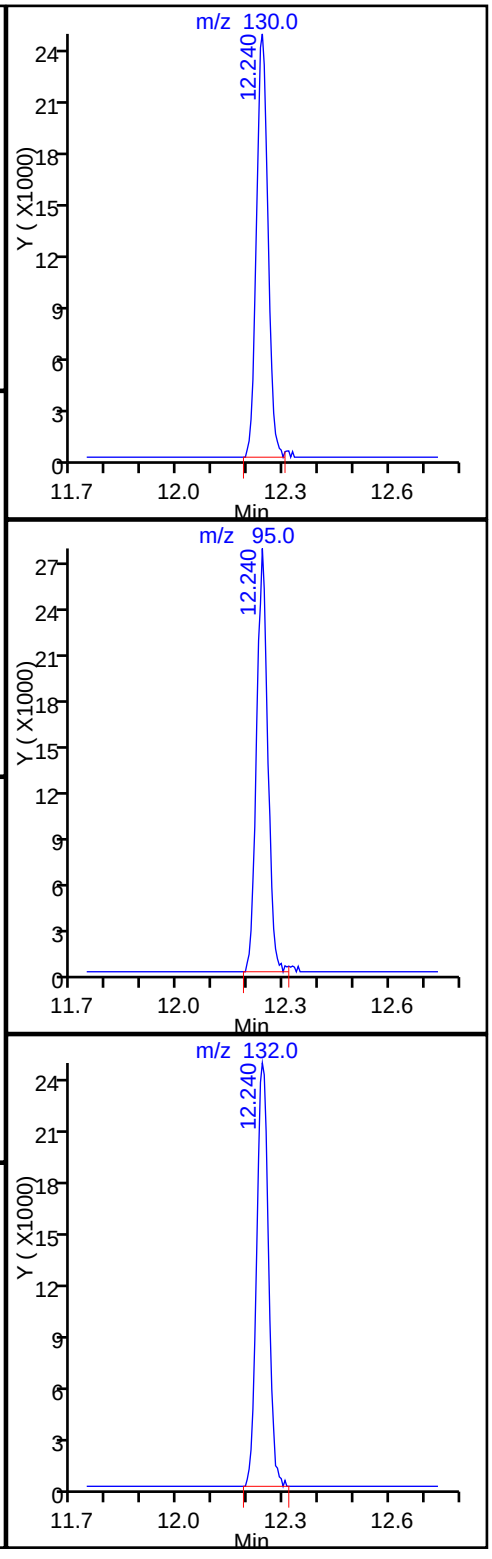
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D

Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3
Client ID:	A-EFFLUENT		
Operator ID:	7126	ALS Bottle#:	10 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6

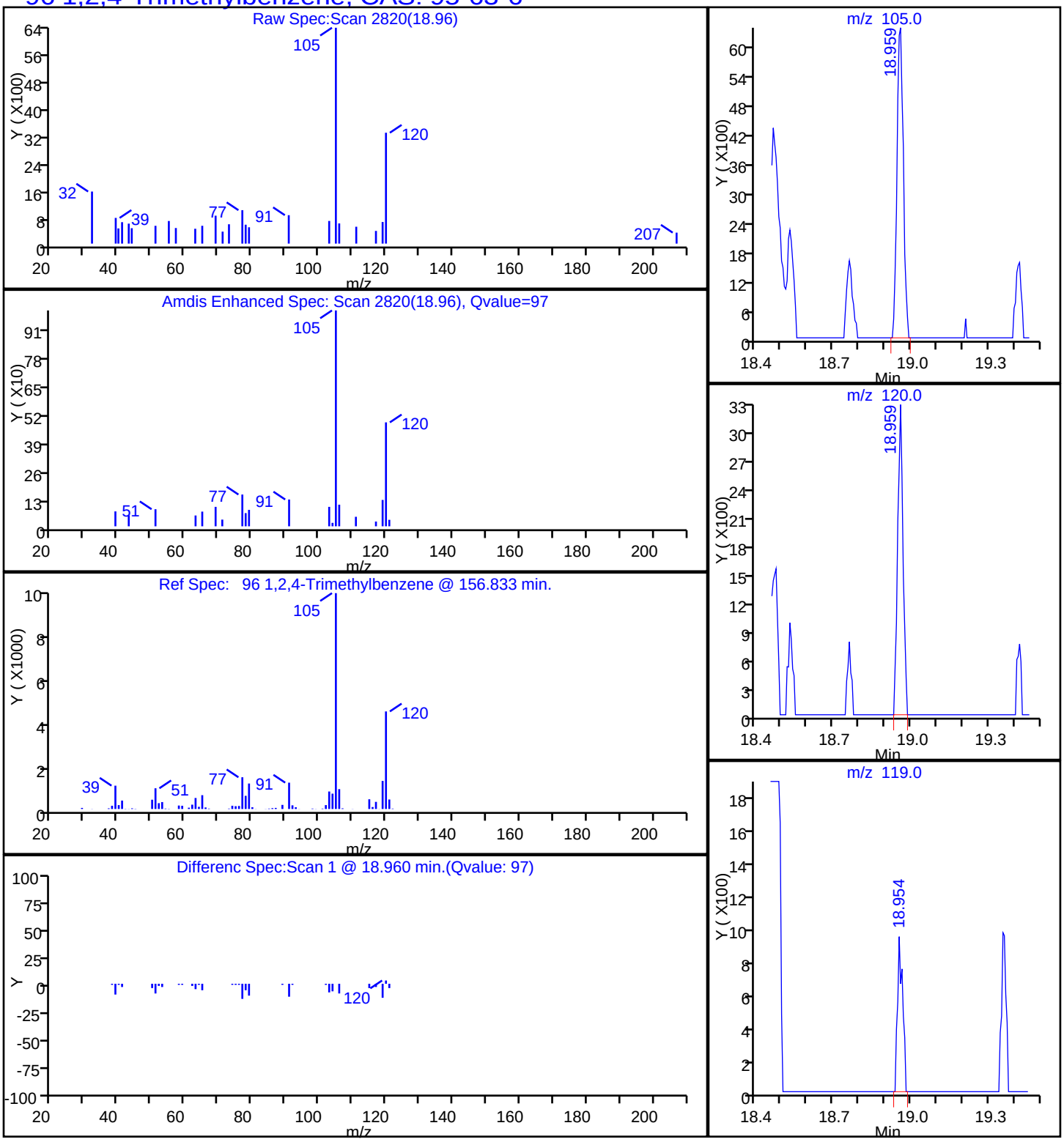




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

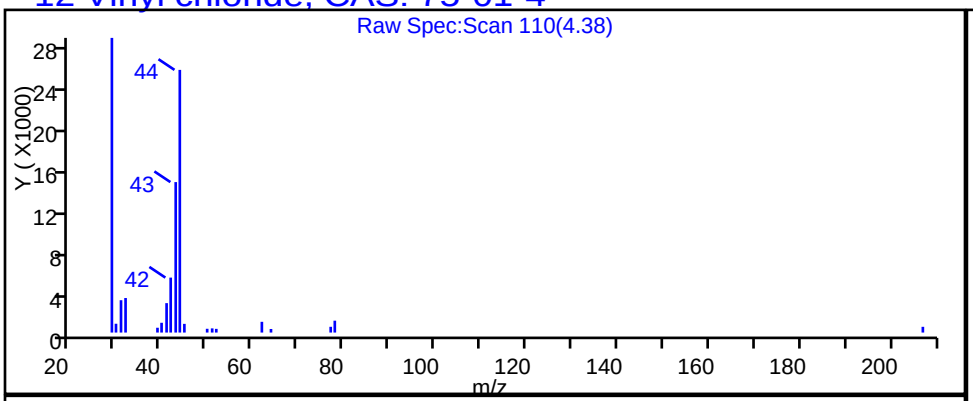
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

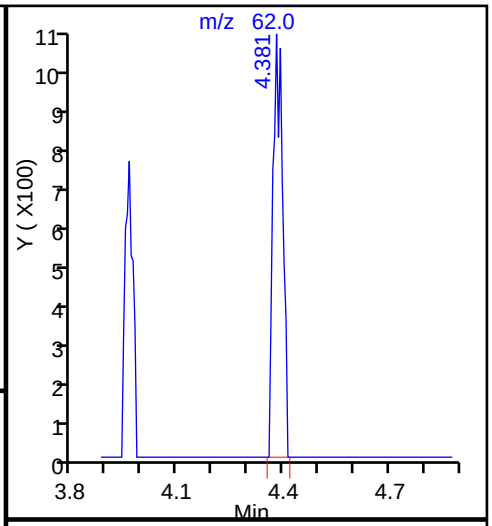


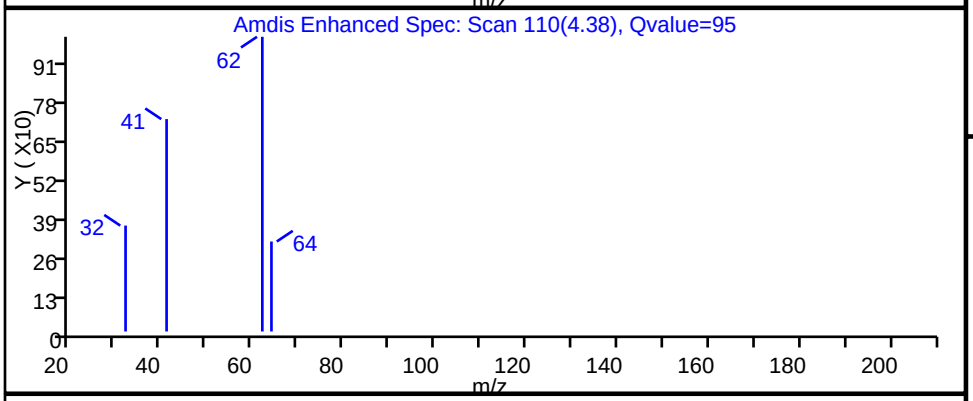
TestAmerica Knoxville

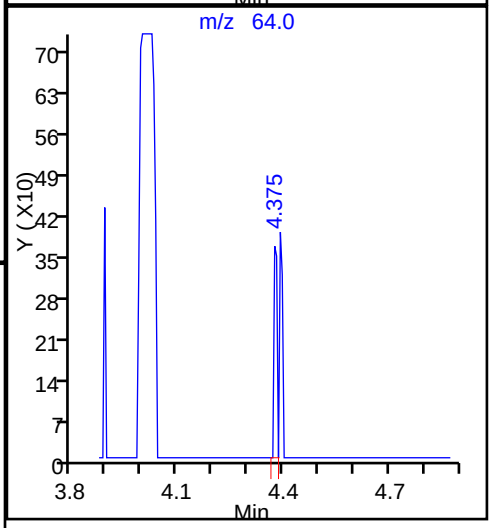
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

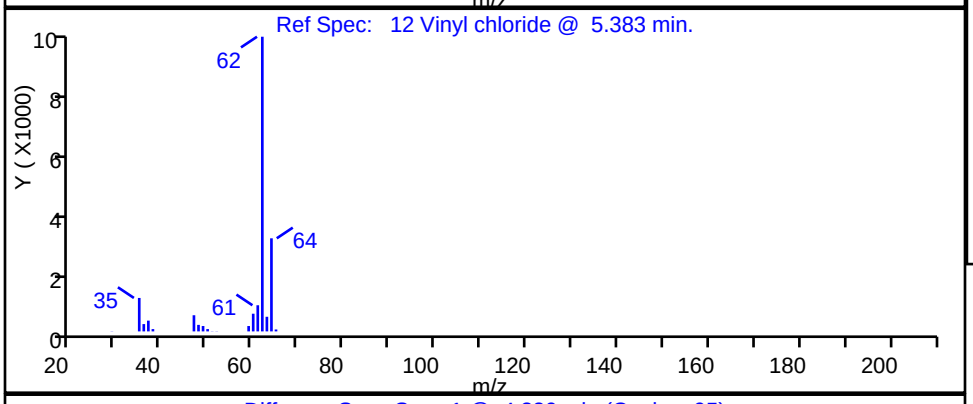
12 Vinyl chloride, CAS: 75-01-4

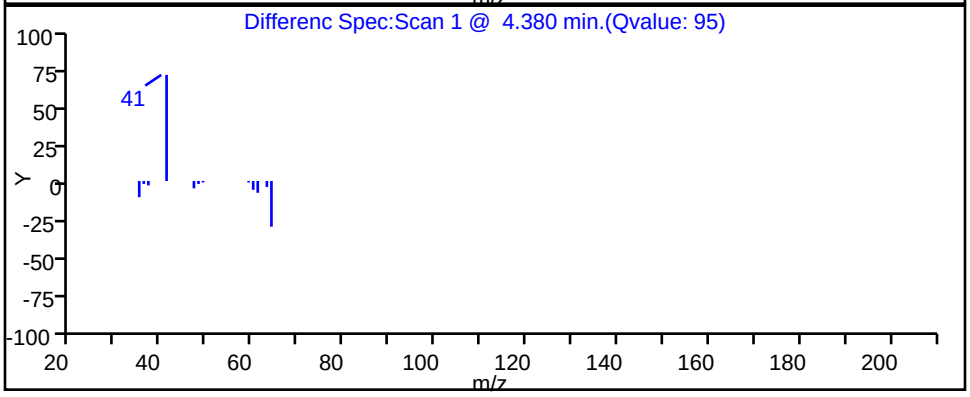








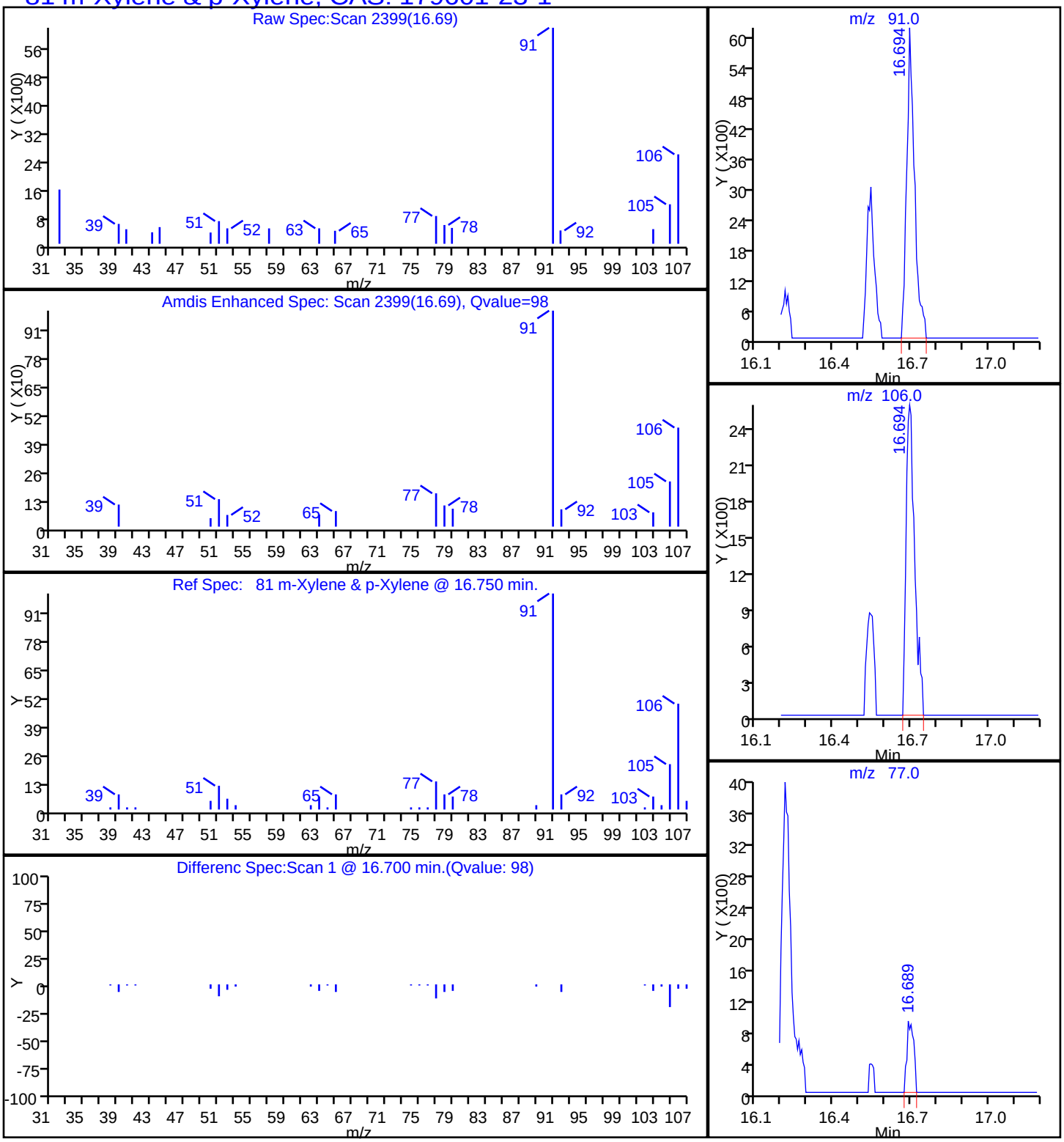




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

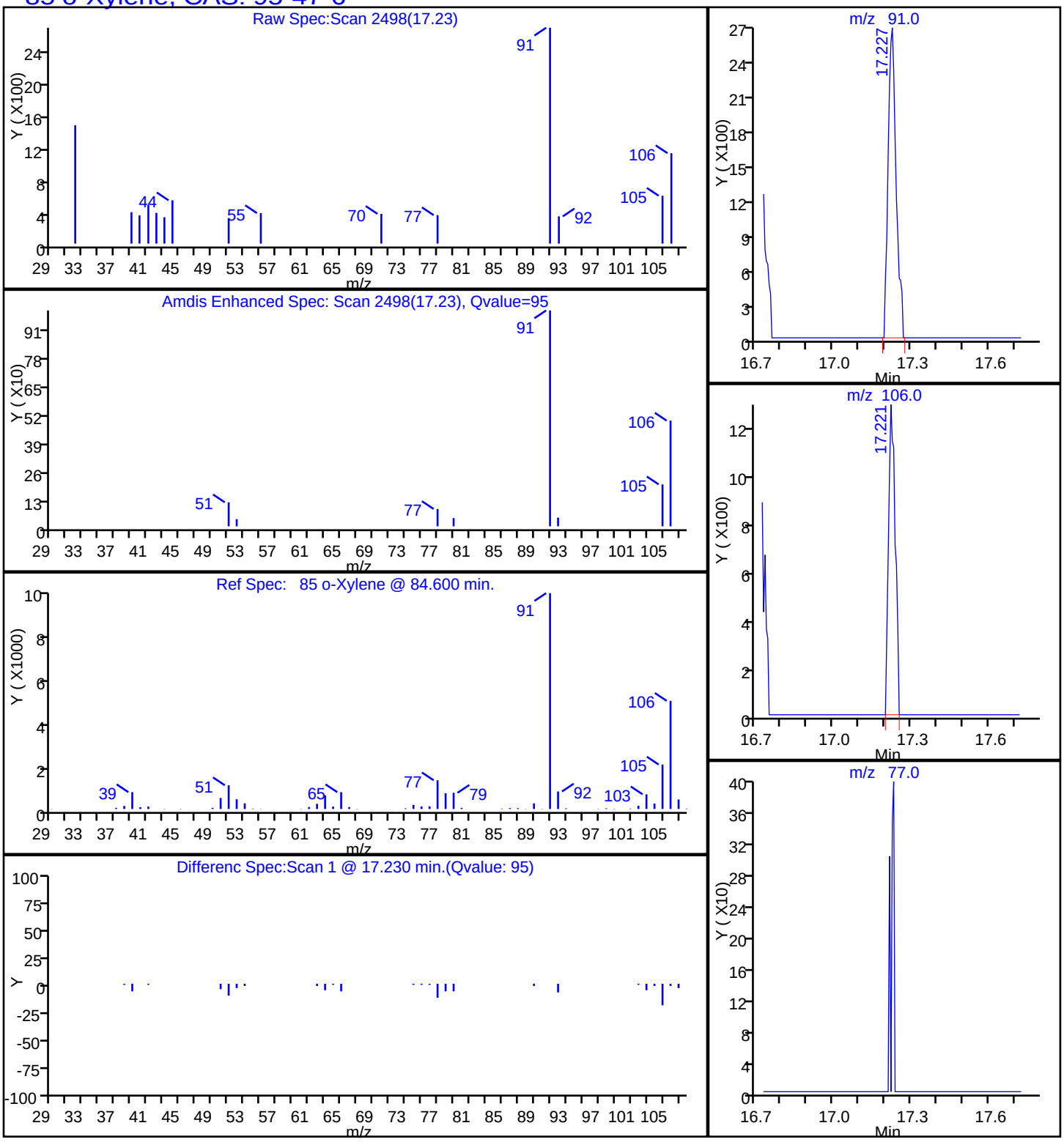
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JG20P110.D				
Injection Date:	21-Jul-2016 00:29:30	Instrument ID:	MJ		
Lims ID:	140-5356-A-3	Lab Sample ID:	140-5356-3		
Client ID:	A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: C-INFLUENT | Lab Sample ID: 140-5356-4

Matrix: Air | Lab File ID: EG19P110.D

Analysis Method: TO 15 LL | Date Collected: 07/14/2016 10:12

Sample wt/vol: 100(mL) | Date Analyzed: 07/19/2016 20:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5859 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.5		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.19	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.5		0.40	0.075
67-66-3	Chloroform	119.38	0.48		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.64		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	2.8		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	1.4		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.30	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	1.6		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	14	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.5		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.24	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.90		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.31	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.5		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: C-INFLUENT Lab Sample ID: 140-5356-4

Matrix: Air Lab File ID: EG19P110.D

Analysis Method: TO 15 LL Date Collected: 07/14/2016 10:12

Sample wt/vol: 100(mL) Date Analyzed: 07/19/2016 20:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5859 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	8.0		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	1.2	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	13		1.4	0.27
67-66-3	Chloroform	119.38	2.4		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.5		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	11		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	5.5		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.3	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	4.2		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	6.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	76	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	46		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.2	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.4		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.5		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D
Lims ID: 140-5356-A-4
Client ID: C-INFLUENT
Sample Type: Client
Inject. Date: 19-Jul-2016 20:34:30 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003184-014
Misc. Info.: 140-5356-a-4
Operator ID: 007126 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Jul-2016 12:47:49 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK029

First Level Reviewer: tajh Date: 20-Jul-2016 09:01:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.611	7.605	0.006	90	377310	4.00	
* 2 1,4-Difluorobenzene	114	9.844	9.849	-0.005	96	1834925	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.832	14.831	0.001	93	1801990	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.503	16.503	0.000	86	1527661	4.43	
6 Chlorodifluoromethane	67	2.920	2.925	-0.005	96	36998	0.7074	
8 Dichlorodifluoromethane	85	2.974	2.973	0.001	99	48205	0.1100	
27 1,1-Dichloroethene	96	4.818	4.818	0.000	95	29319	0.2795	
31 Methylene Chloride	84	5.152	5.141	0.011	97	24799	0.2433	
37 1,1-Dichloroethane	63	6.322	6.317	0.005	99	124844	0.5648	
42 cis-1,2-Dichloroethene	96	7.288	7.282	0.006	99	15418	0.1281	
44 Chloroform	83	7.622	7.622	0.000	91	29204	0.0968	
47 1,1,1-Trichloroethane	97	8.630	8.635	-0.005	96	1042624	2.80	
51 Benzene	78	9.240	9.239	0.001	98	172925	0.4993	
52 Carbon tetrachloride	117	9.261	9.261	0.000	37	16783	0.0384	
59 Trichloroethene	130	10.615	10.614	0.001	90	329543	1.70	
68 Toluene	91	12.804	12.804	0.000	93	140335	0.3277	
76 Tetrachloroethene	129	13.974	13.985	-0.011	30	6256	0.0316	
79 Ethylbenzene	91	15.182	15.187	-0.005	98	35588	0.0609	
81 m-Xylene & p-Xylene	91	15.349	15.354	-0.005	99	93986	0.2028	
85 o-Xylene	91	15.883	15.883	0.000	65	48219	0.0985	
92 1,3,5-Trimethylbenzene	120	17.274	17.279	-0.005	88	19160	0.0627	
96 1,2,4-Trimethylbenzene	105	17.749	17.748	0.001	98	98464	0.1804	
102 1,2,3-Trimethylbenzene	105	18.250	18.250	0.000	97	19976	0.0483	
116 Naphthalene	128	20.370	20.369	0.001	97	19877	0.0386	
S 126 Xylenes, Total	100				0		0.3013	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

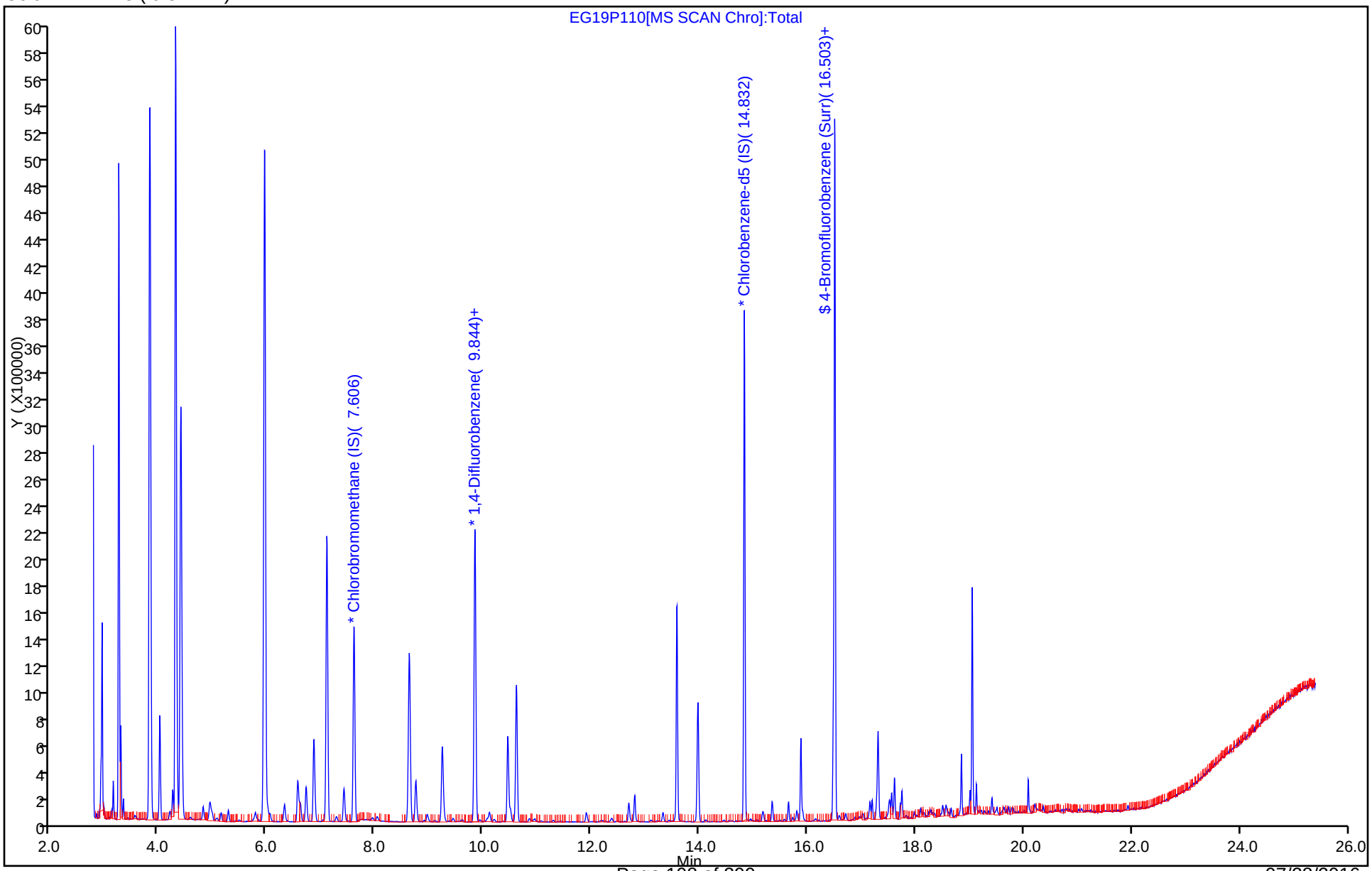
Report Date: 20-Jul-2016 12:49:07 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4	Worklist Smp#:	14
Client ID:	C-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Lims ID:	140-5356-A-4				
Client ID:	C-INFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jul-2016 20:34:30	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-014				
Misc. Info.:	140-5356-a-4				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				

First Level Reviewer: tajh Date: 20-Jul-2016 09:01:23

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.43	110.87

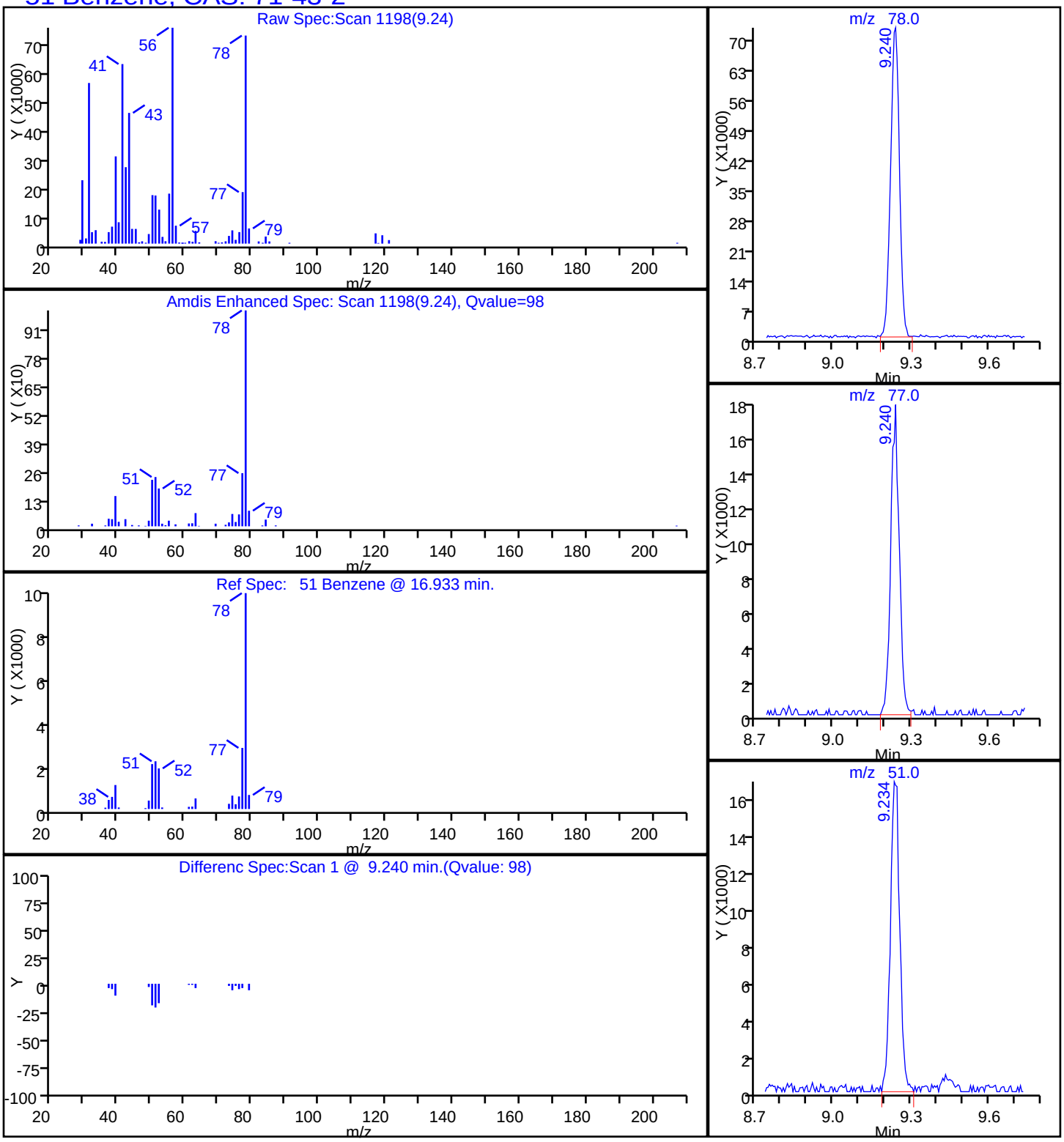
Report Date: 20-Jul-2016 12:49:09 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

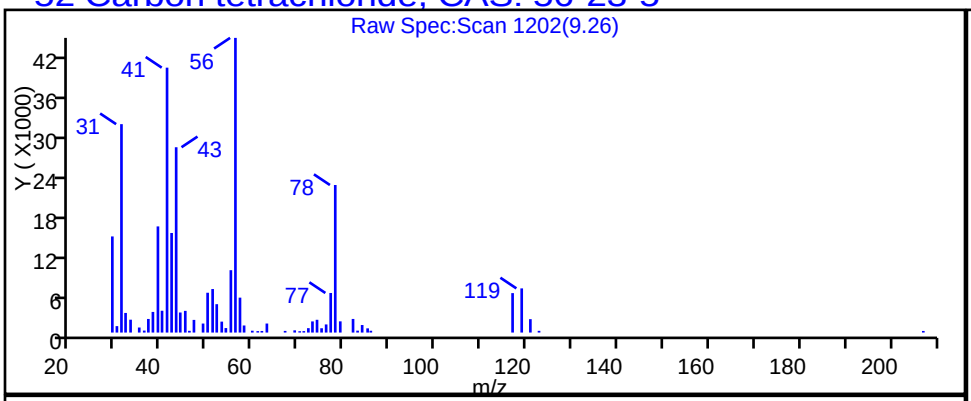
51 Benzene, CAS: 71-43-2

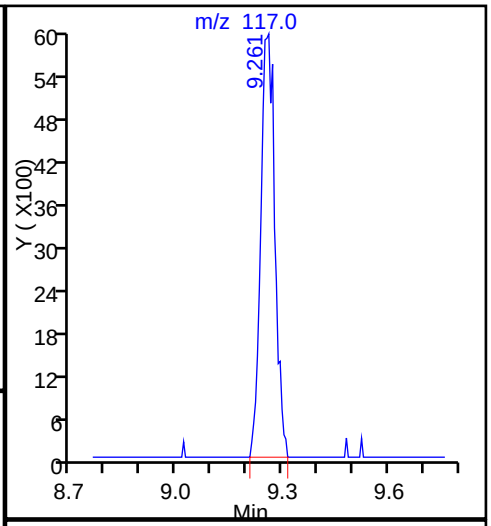


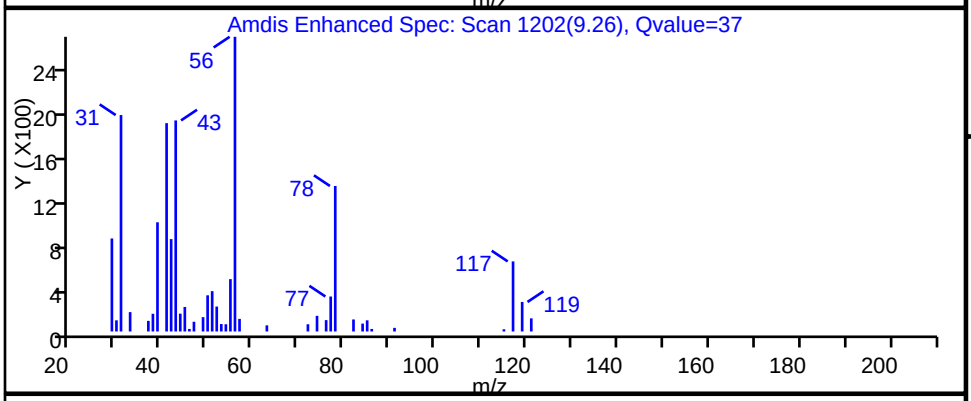
TestAmerica Knoxville

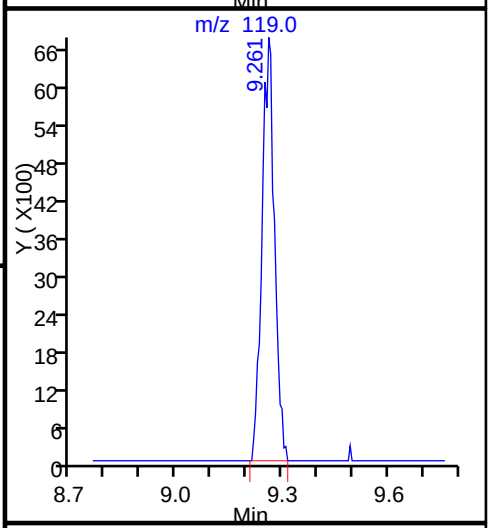
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

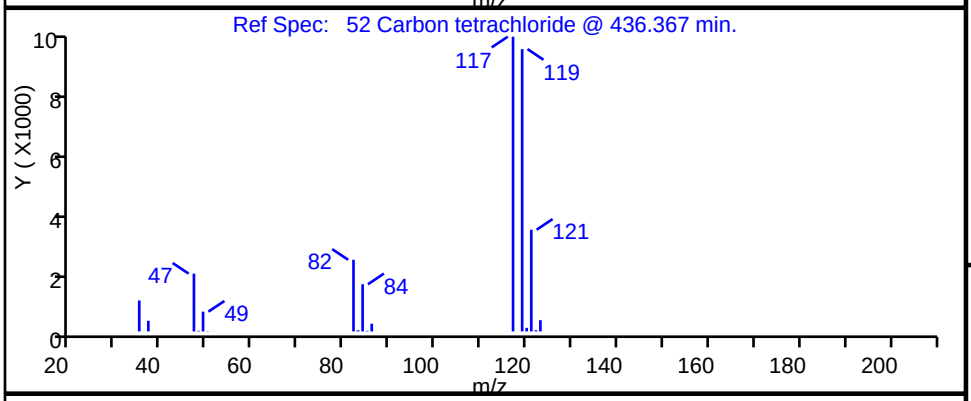
52 Carbon tetrachloride, CAS: 56-23-5

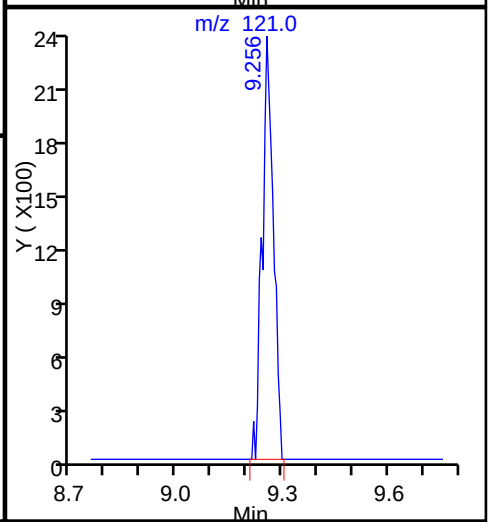


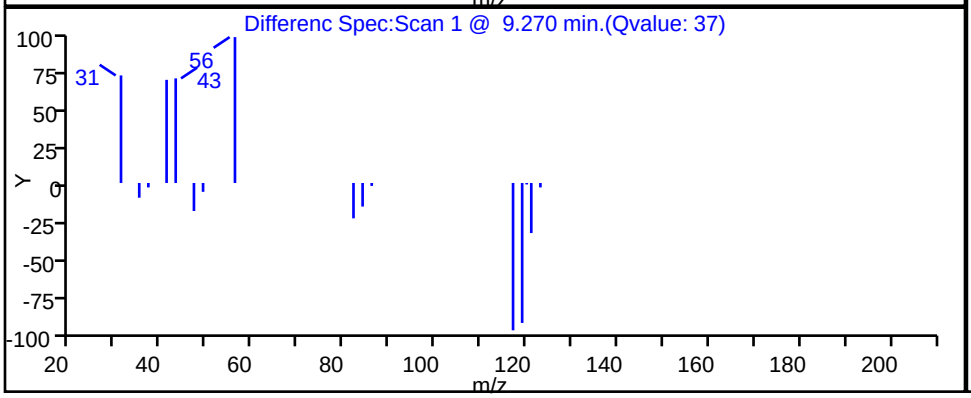












Report Date: 20-Jul-2016 12:49:07 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

Injection Date: 19-Jul-2016 20:34:30 Instrument ID: ME

Lims ID: 140-5356-A-4 Lab Sample ID: 140-5356-4

Client ID: C-INFLUENT

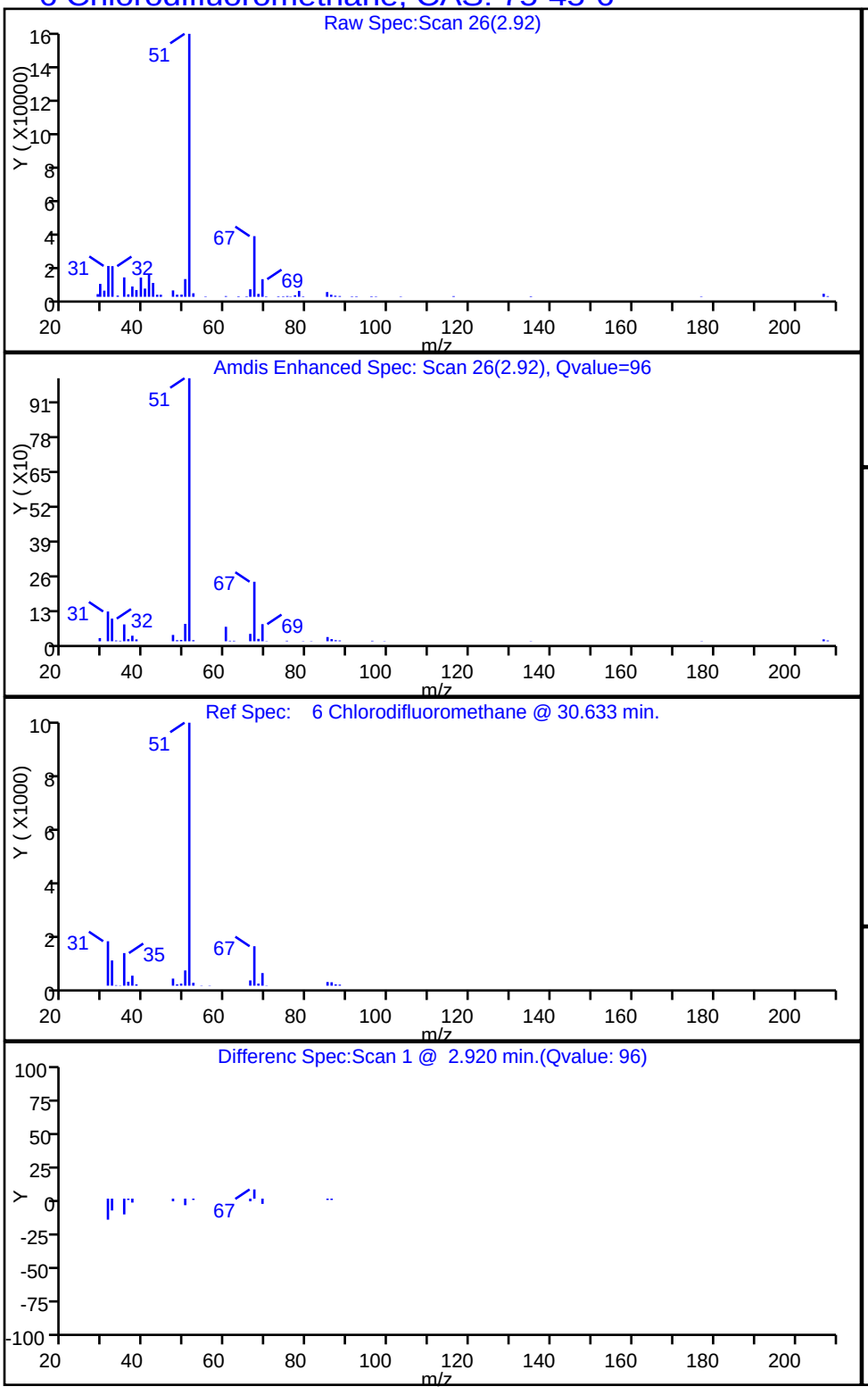
Operator ID: 007126 ALS Bottle#: 10 Worklist Smp#: 14

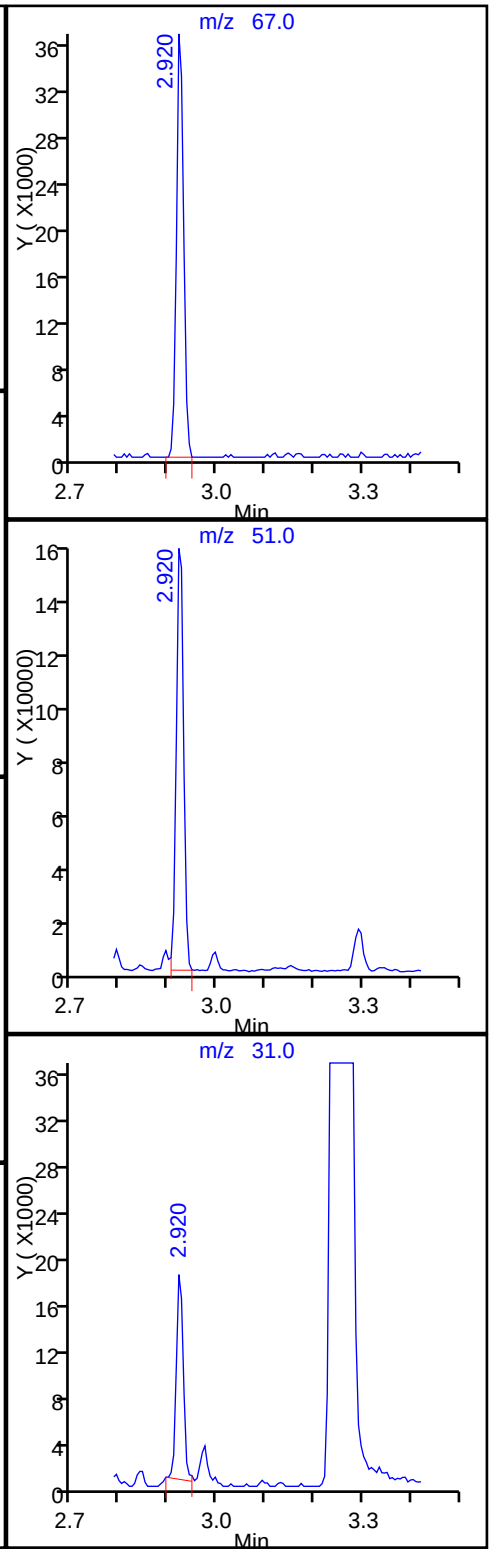
Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

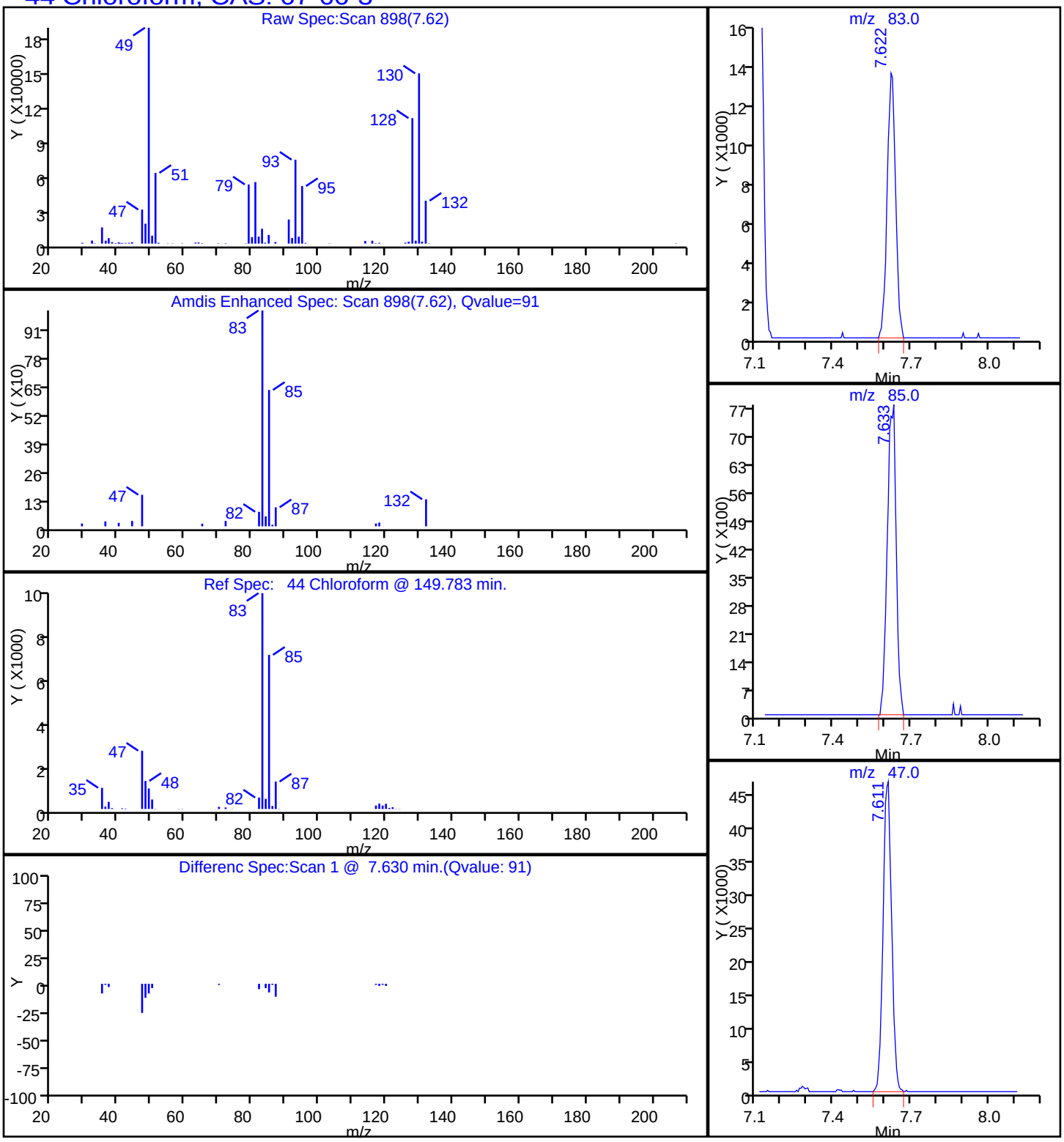




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 Chloroform, CAS: 67-66-3



Report Date: 20-Jul-2016 12:49:08 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

Injection Date: 19-Jul-2016 20:34:30 Instrument ID: ME

Lims ID: 140-5356-A-4 Lab Sample ID: 140-5356-4

Client ID: C-INFLUENT

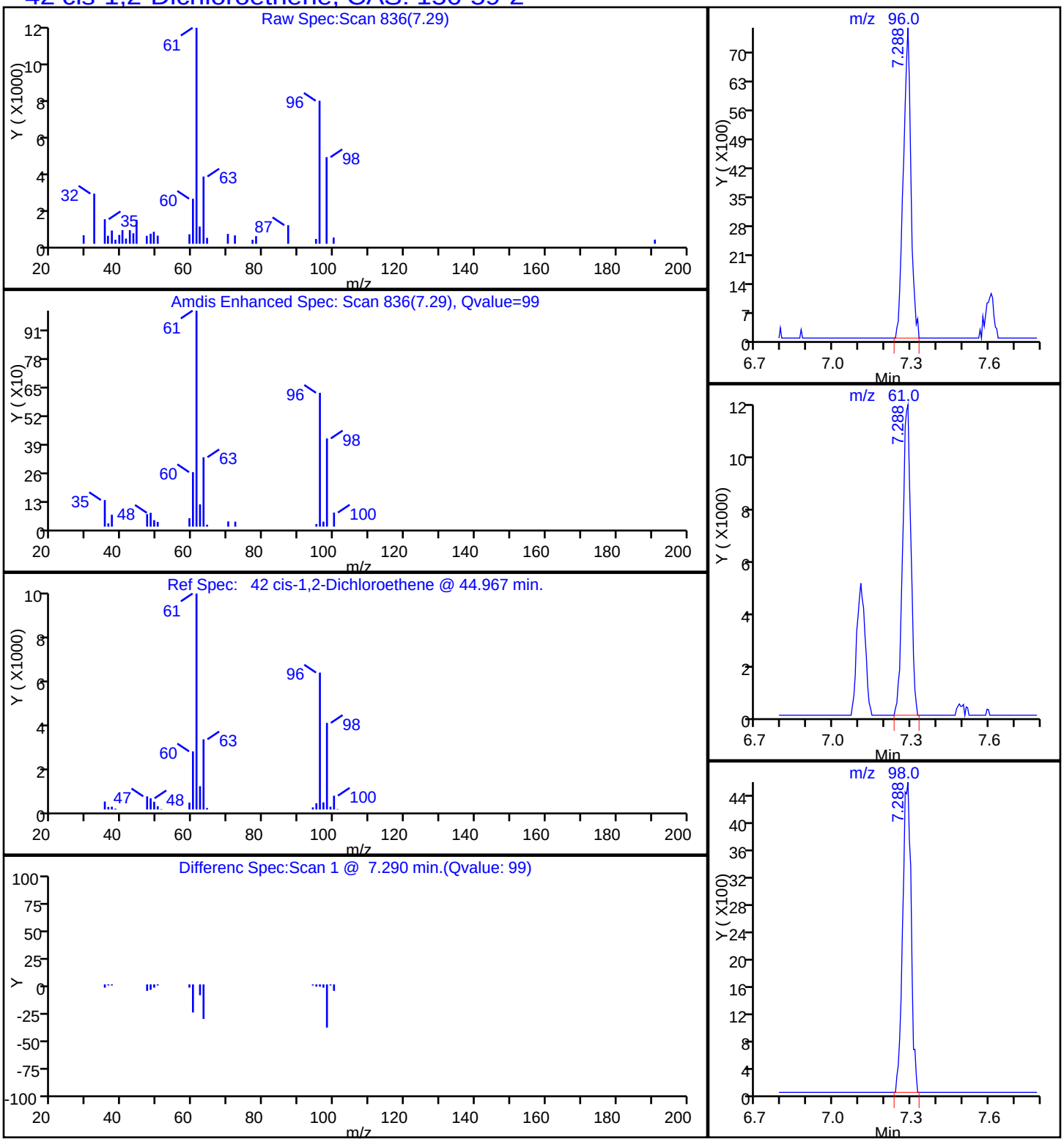
Operator ID: 007126 ALS Bottle#: 10 Worklist Smp#: 14

Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

42 cis-1,2-Dichloroethene, CAS: 156-59-2



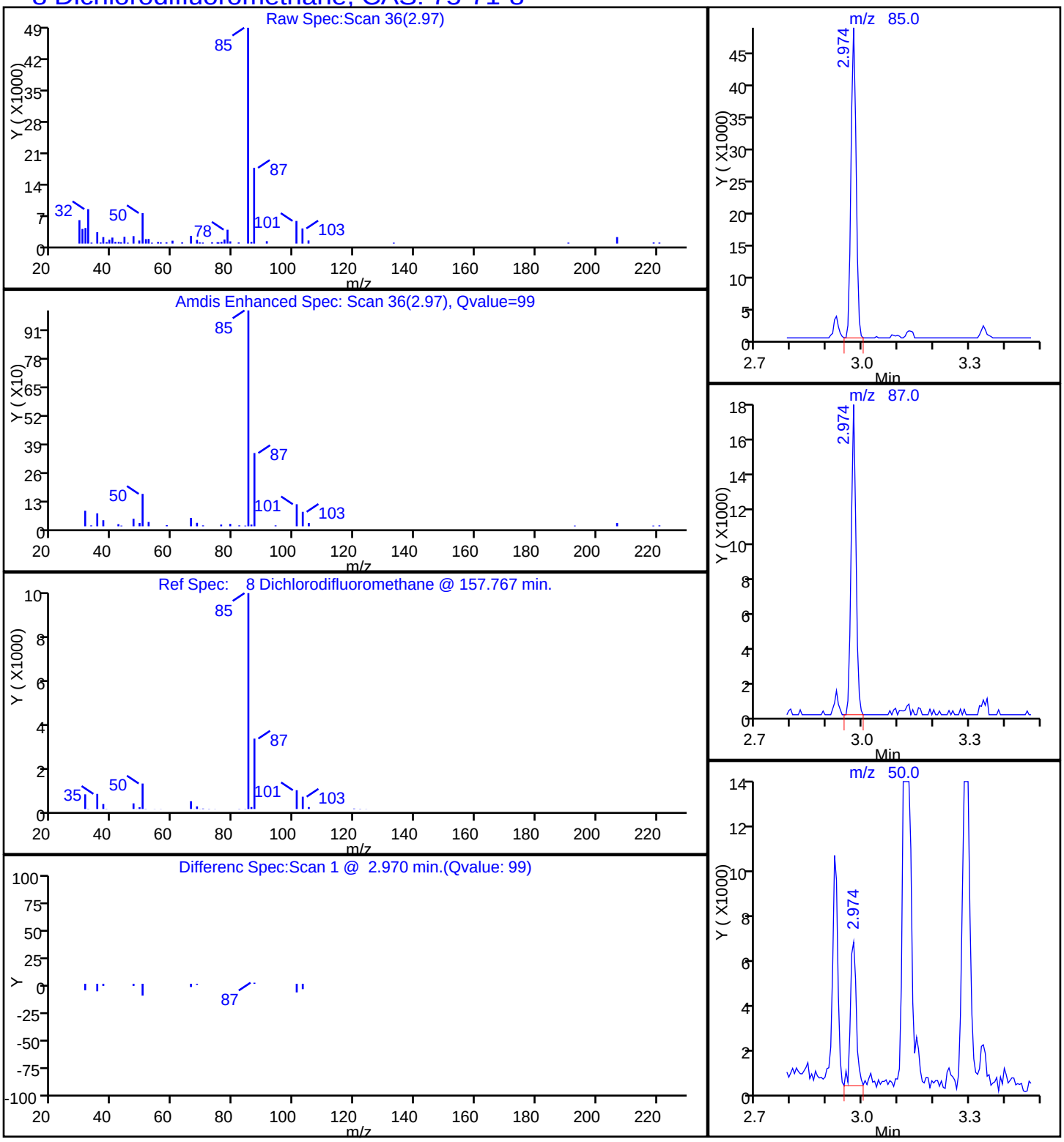
Report Date: 20-Jul-2016 12:49:08 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

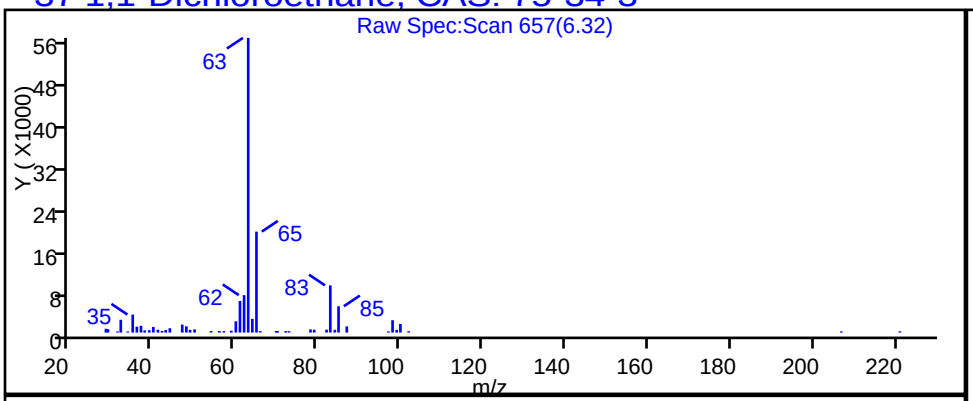
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

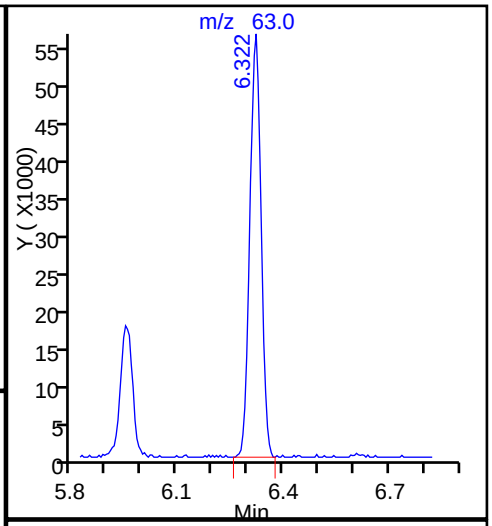
8 Dichlorodifluoromethane, CAS: 75-71-8

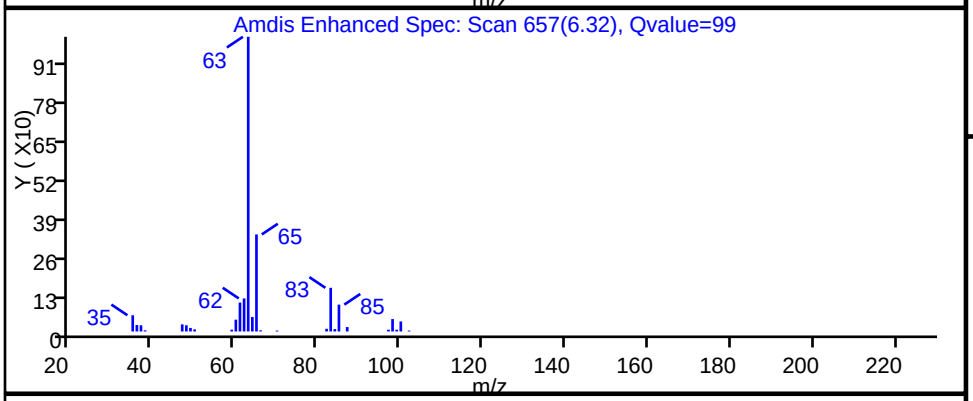


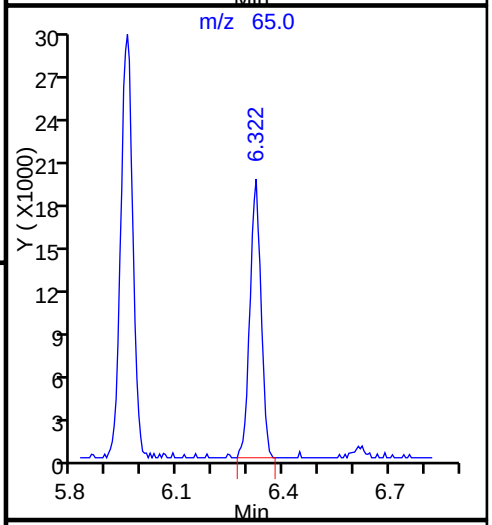
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D
Injection Date: 19-Jul-2016 20:34:30 Instrument ID: ME
Lims ID: 140-5356-A-4 Lab Sample ID: 140-5356-4
Client ID: C-INFLUENT
Operator ID: 007126 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

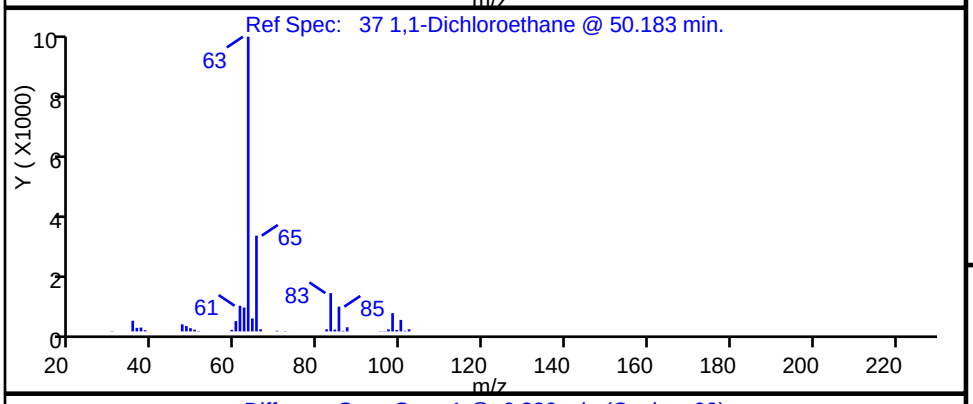
37 1,1-Dichloroethane, CAS: 75-34-3

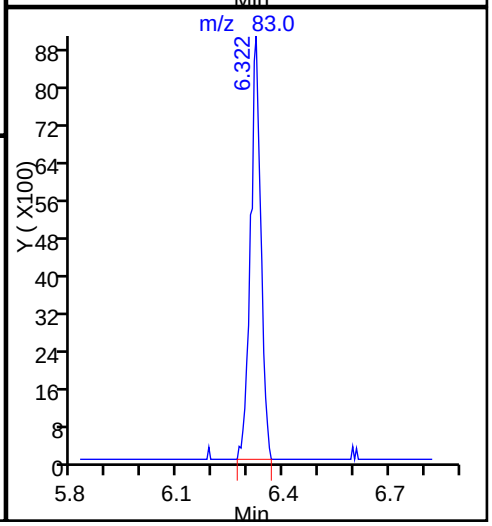


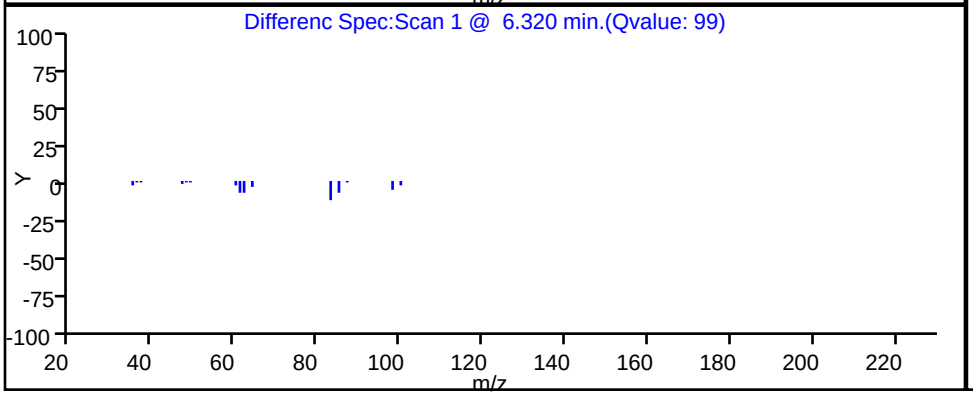








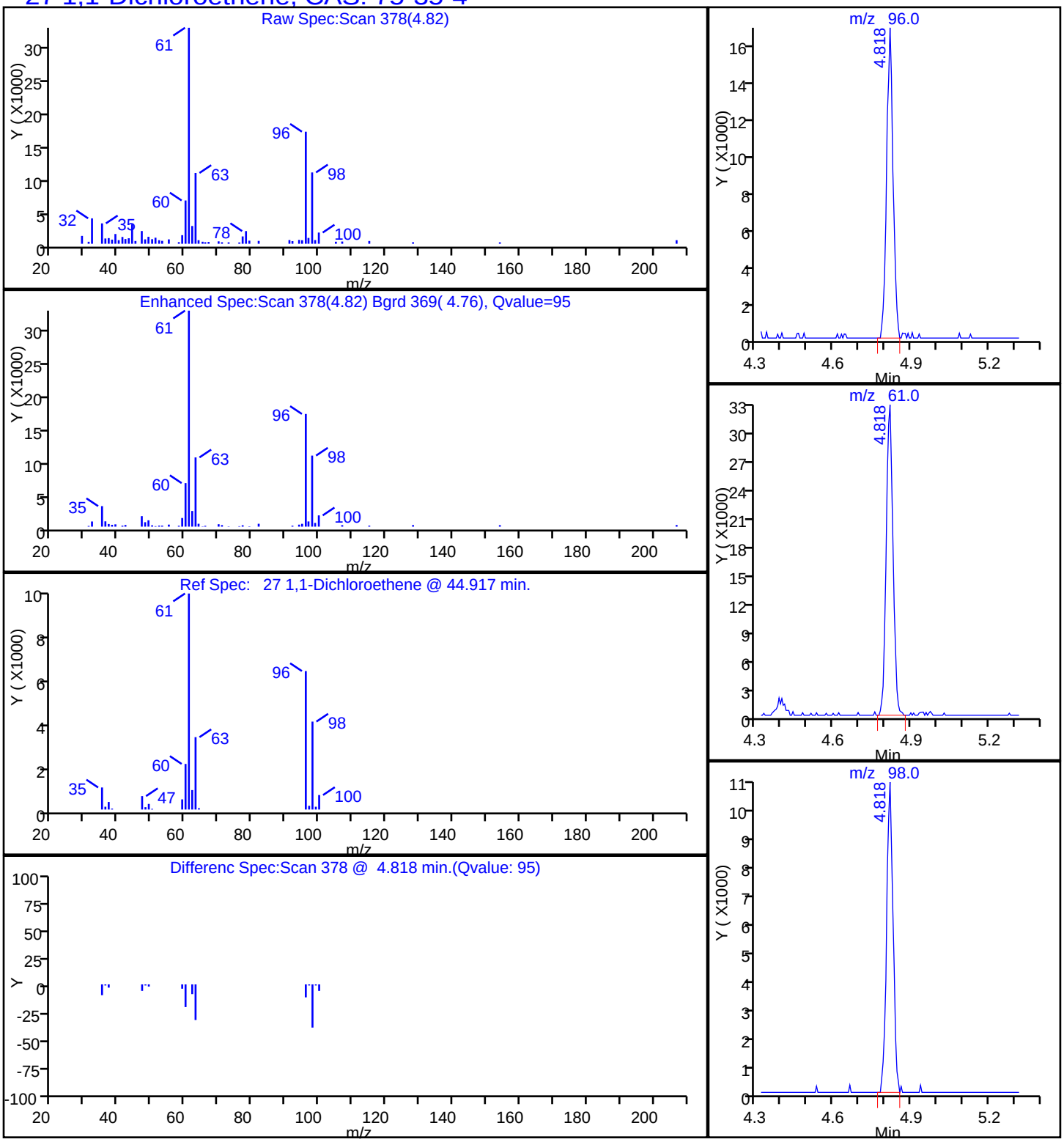




TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D
Injection Date: 19-Jul-2016 20:34:30 Instrument ID: ME
Lims ID: 140-5356-A-4 Lab Sample ID: 140-5356-4
Client ID: C-INFLUENT
Operator ID: 007126 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

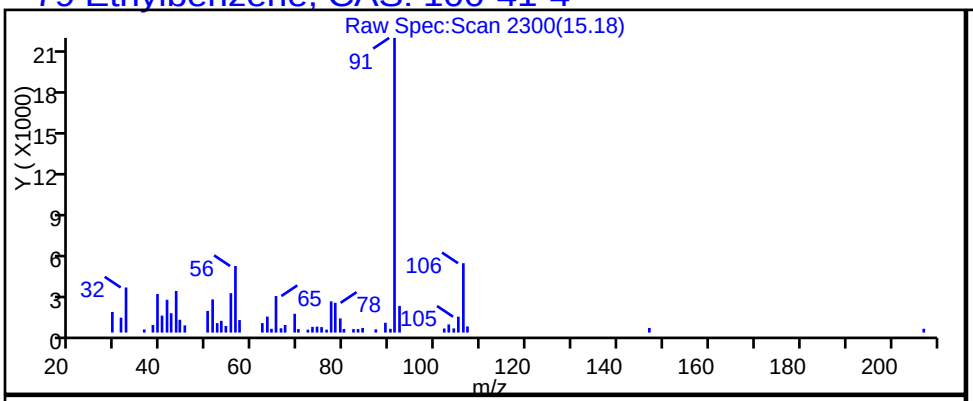
27 1,1-Dichloroethene, CAS: 75-35-4

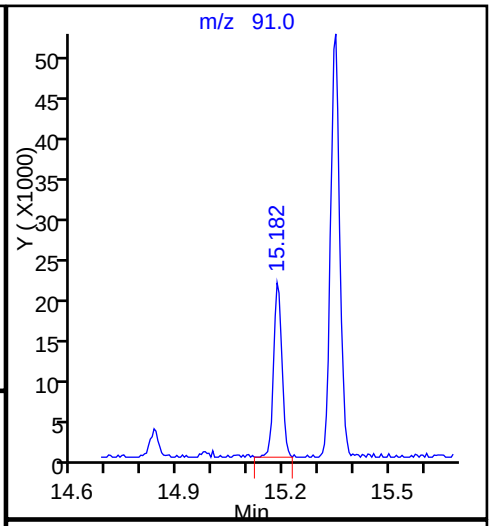


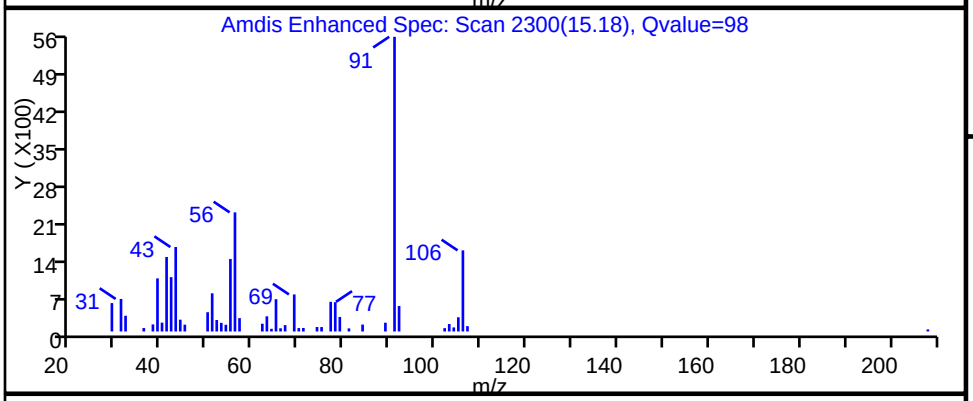
TestAmerica Knoxville

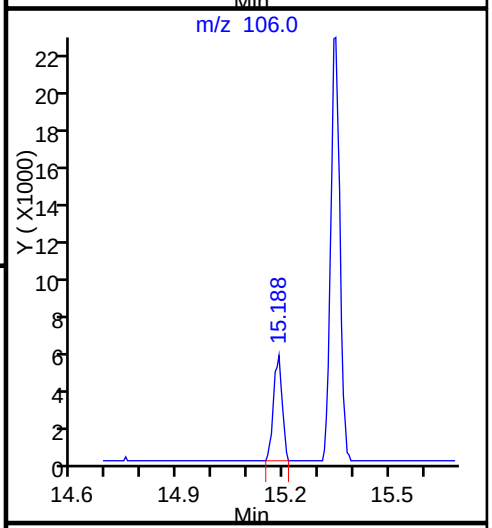
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

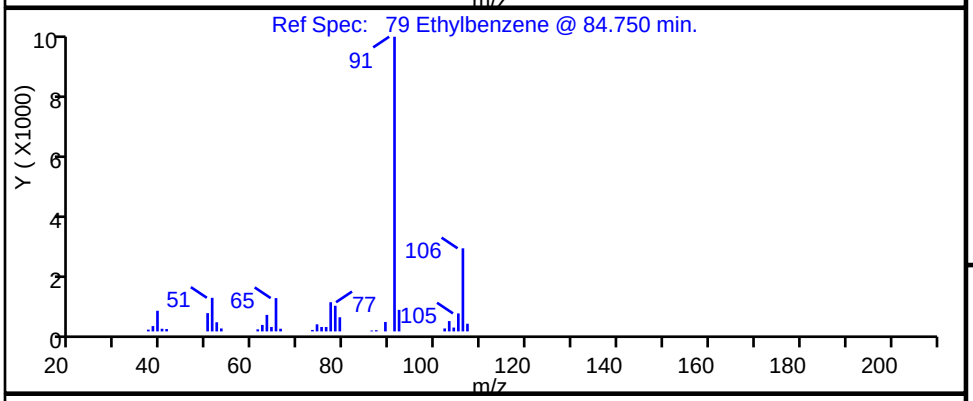
79 Ethylbenzene, CAS: 100-41-4

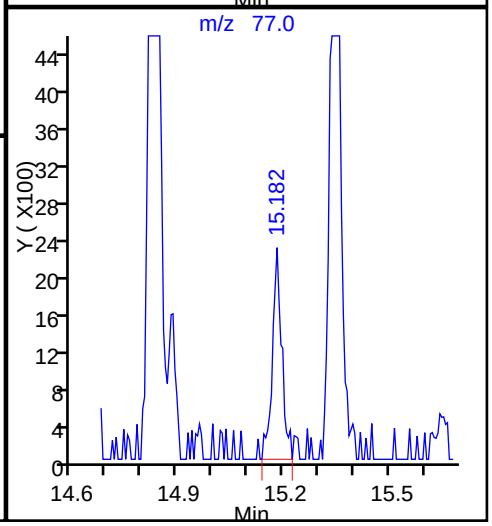


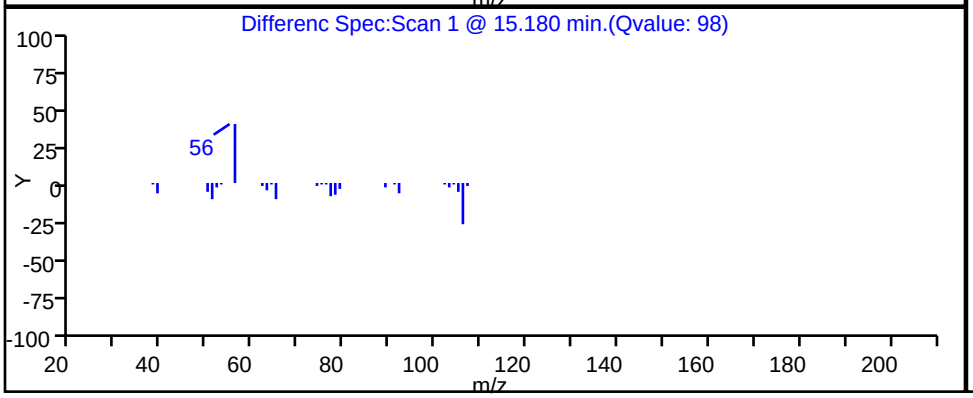










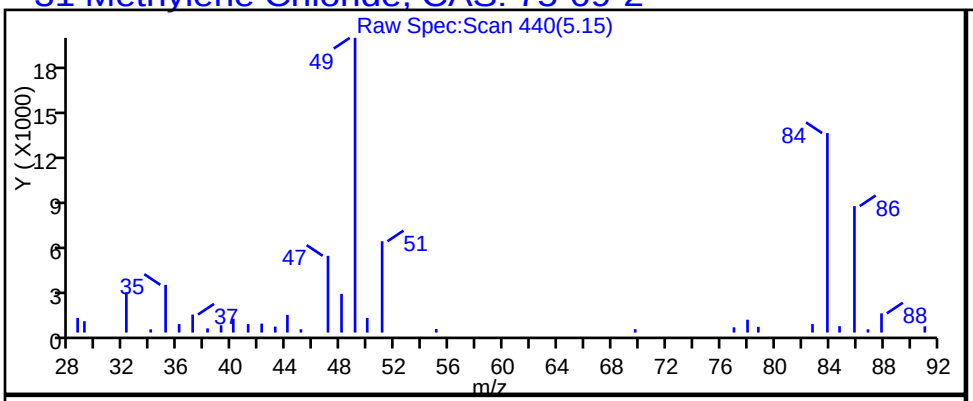


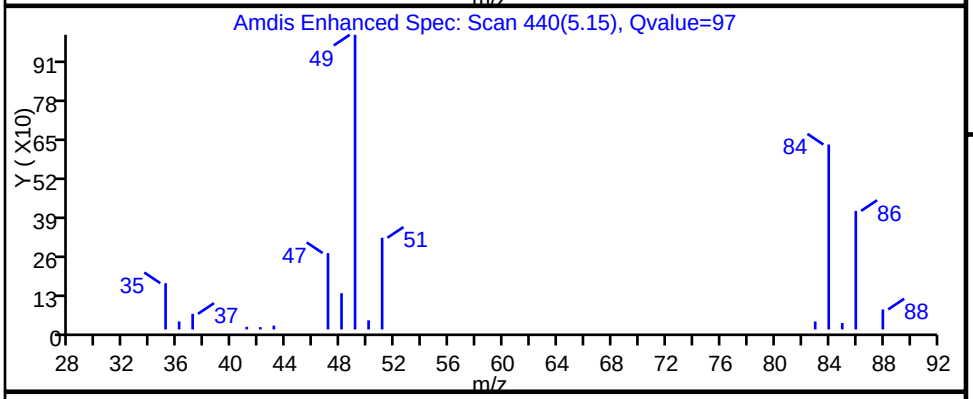
TestAmerica Knoxville

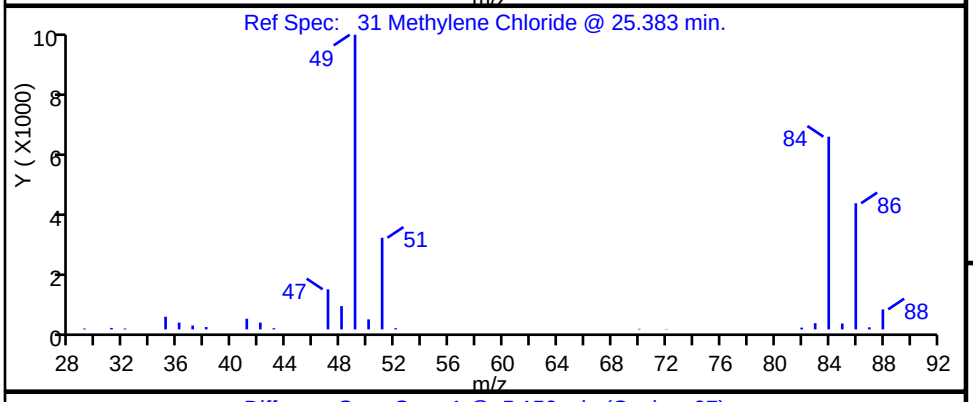
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

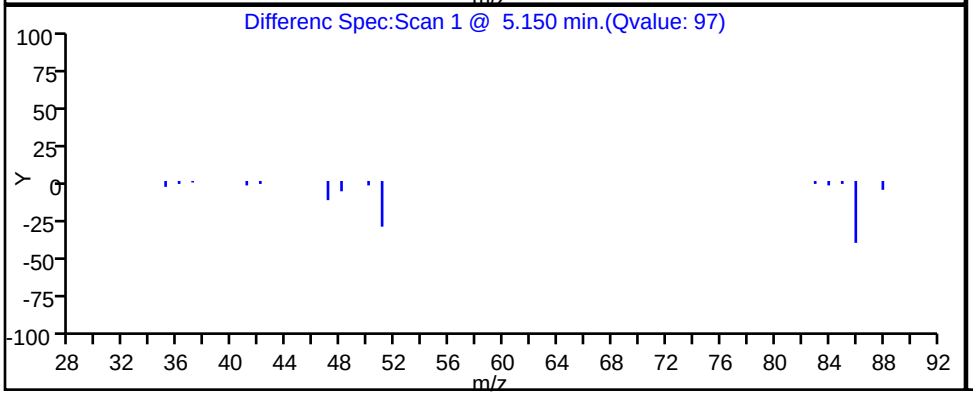
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

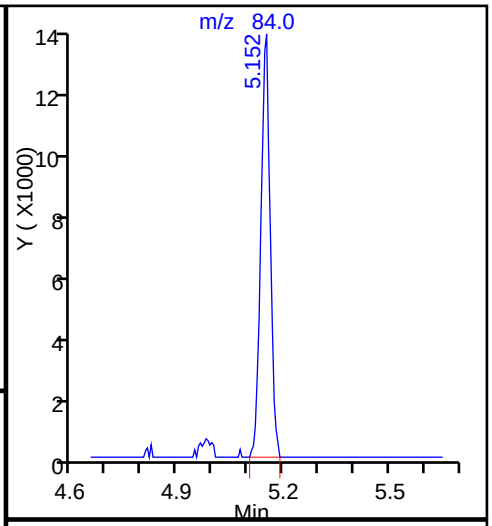
31 Methylene Chloride, CAS: 75-09-2

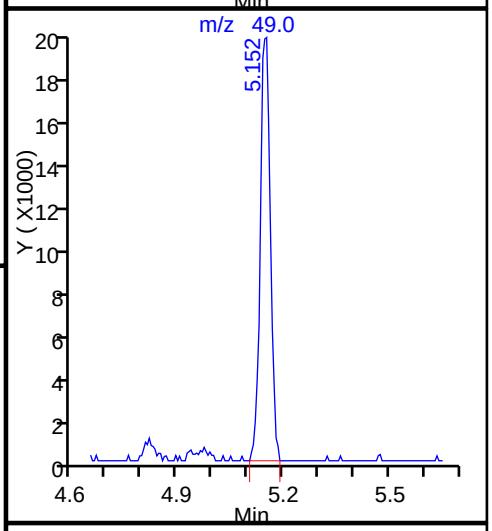


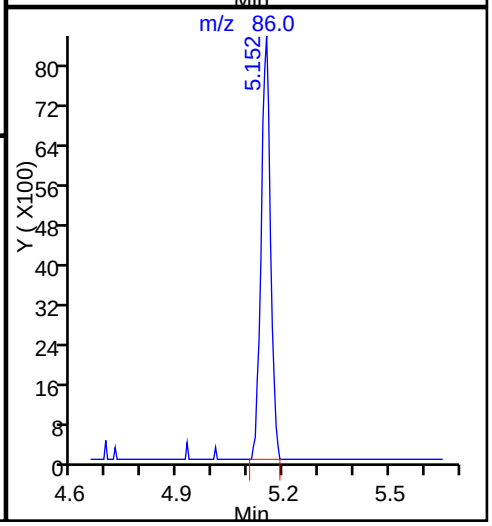






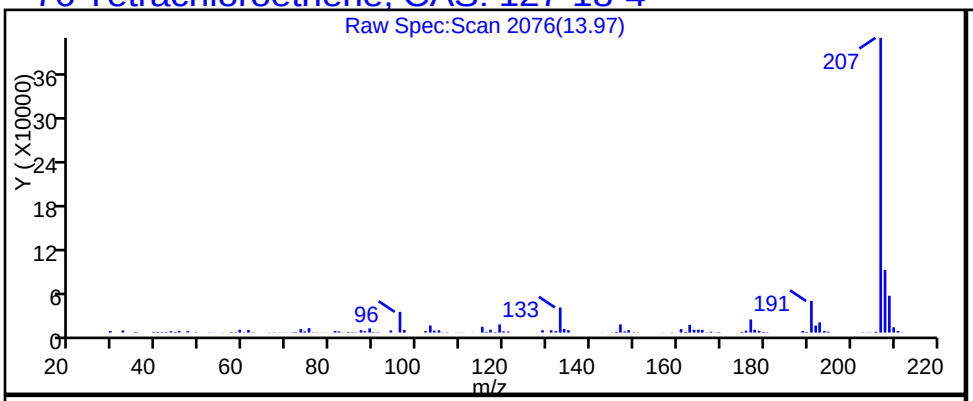


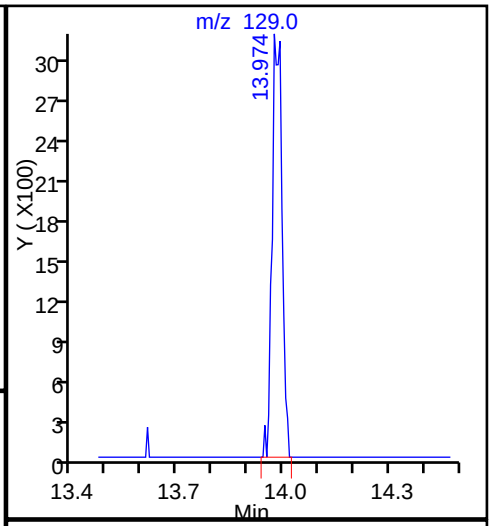


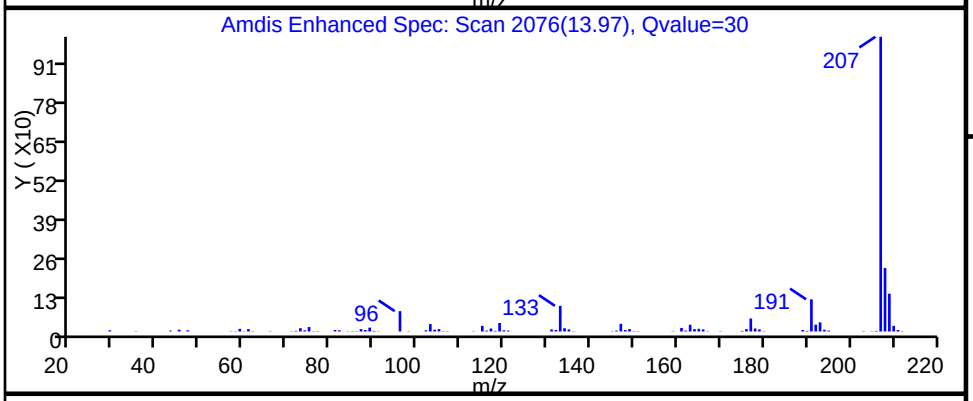


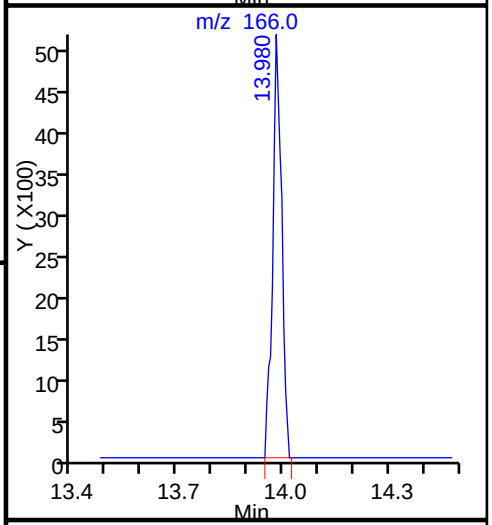
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D
Injection Date: 19-Jul-2016 20:34:30 Instrument ID: ME
Lims ID: 140-5356-A-4 Lab Sample ID: 140-5356-4
Client ID: C-INFLUENT
Operator ID: 007126 ALS Bottle#: 10 Worklist Smp#: 14
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

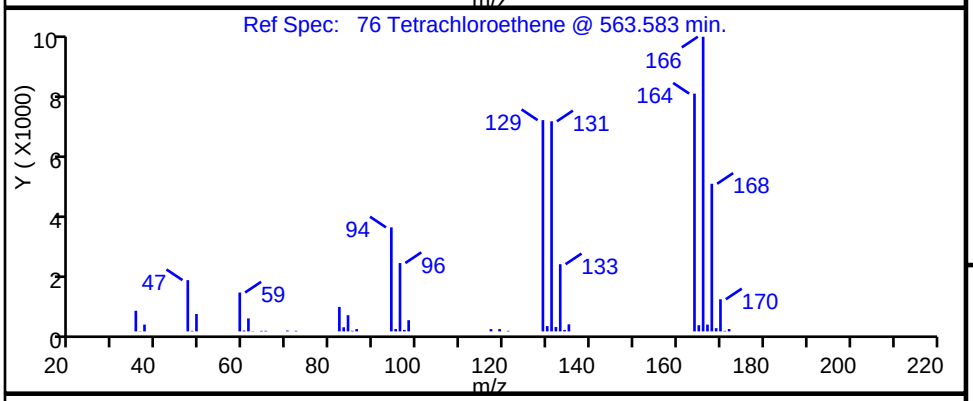
76 Tetrachloroethene, CAS: 127-18-4

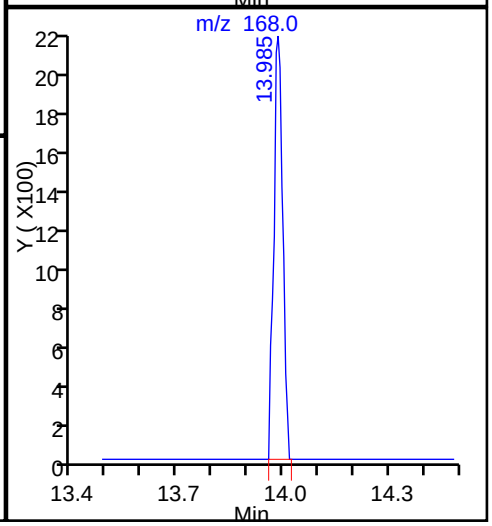


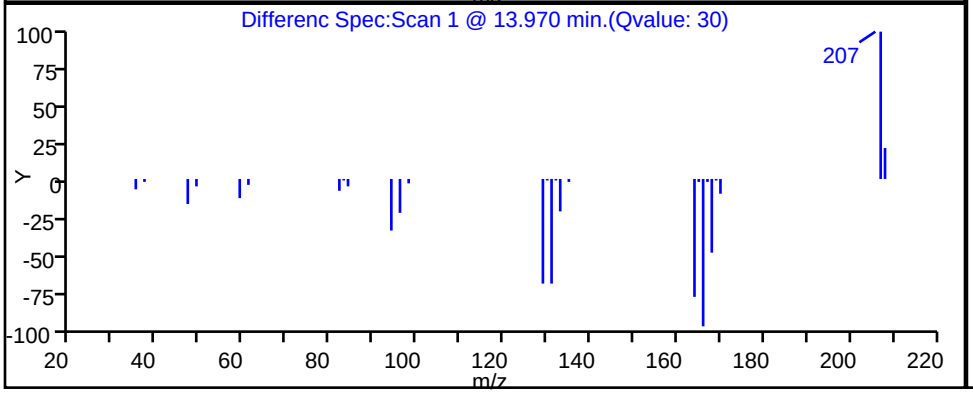








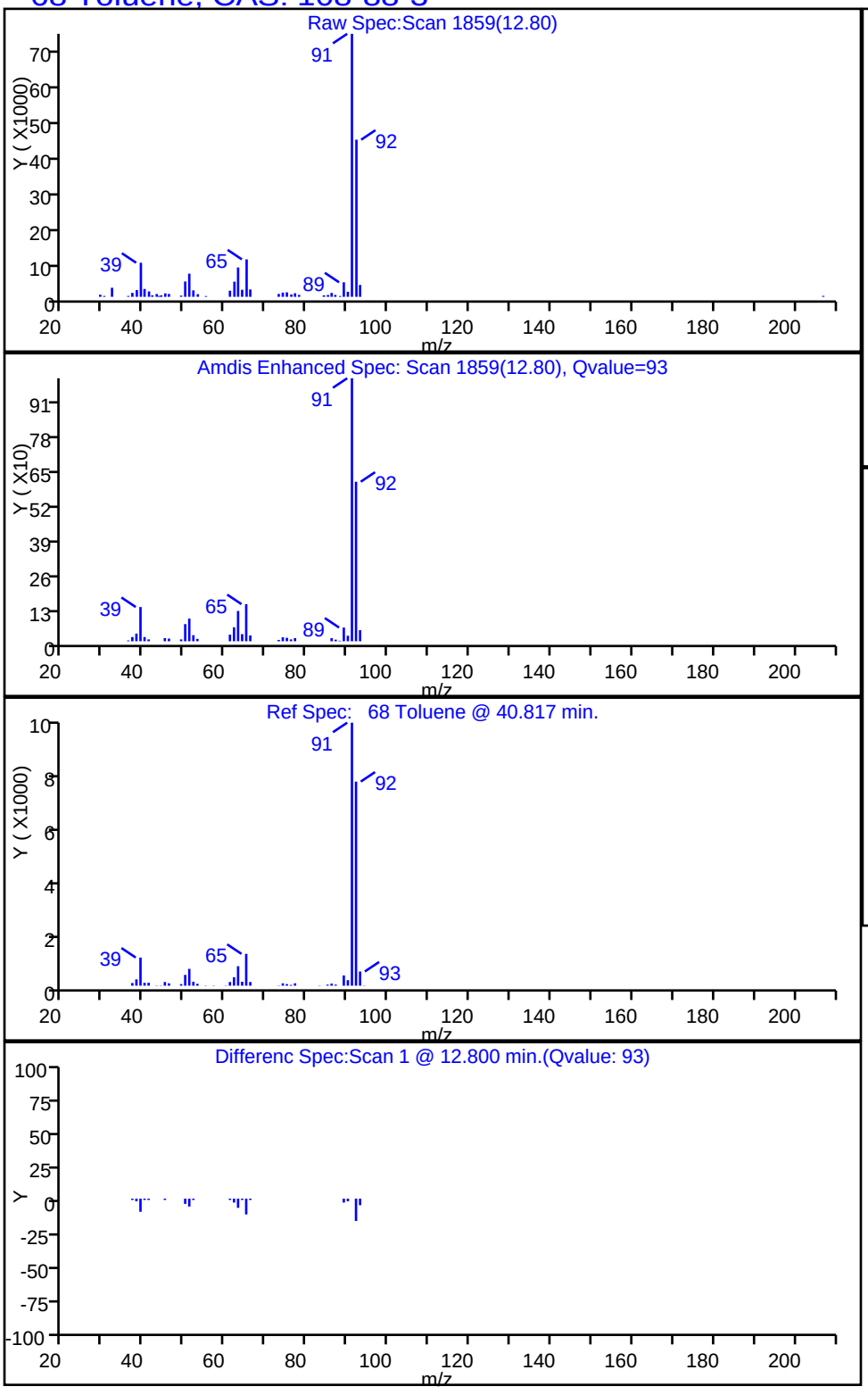


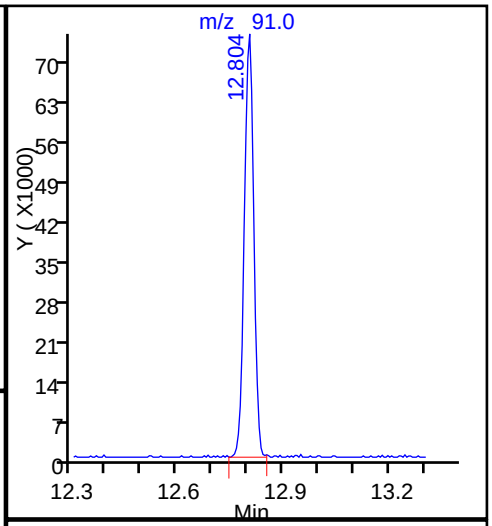


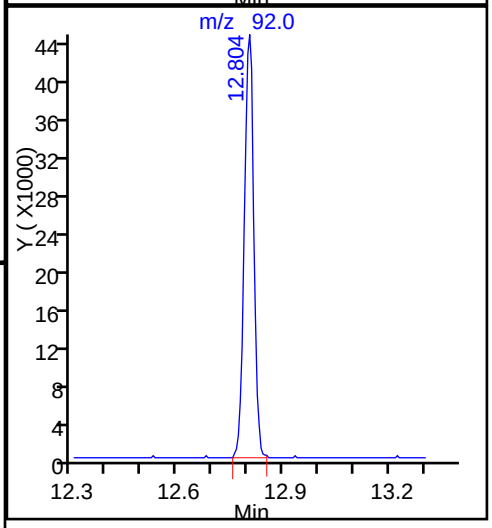
TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

68 Toluene, CAS: 108-88-3



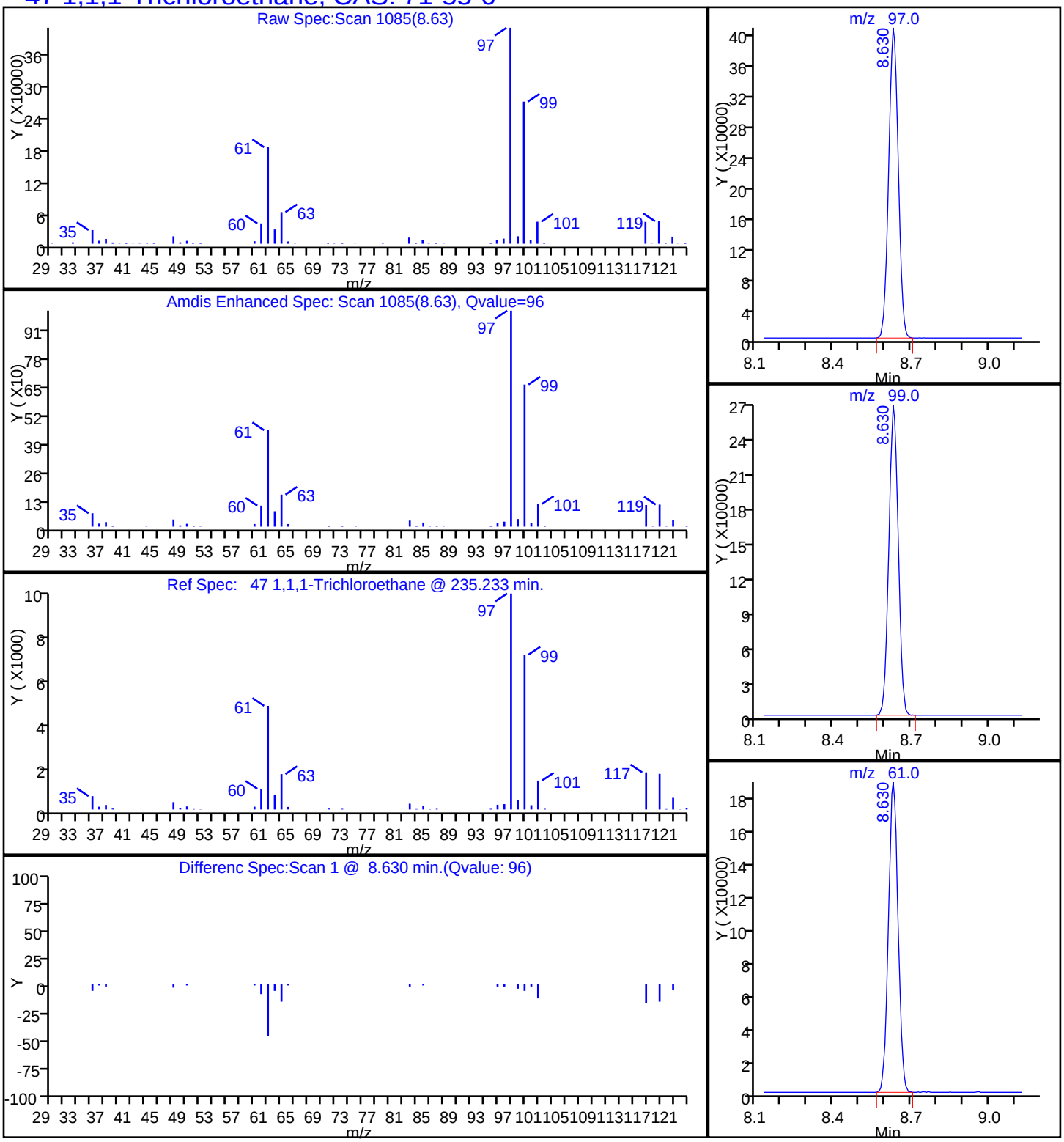




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

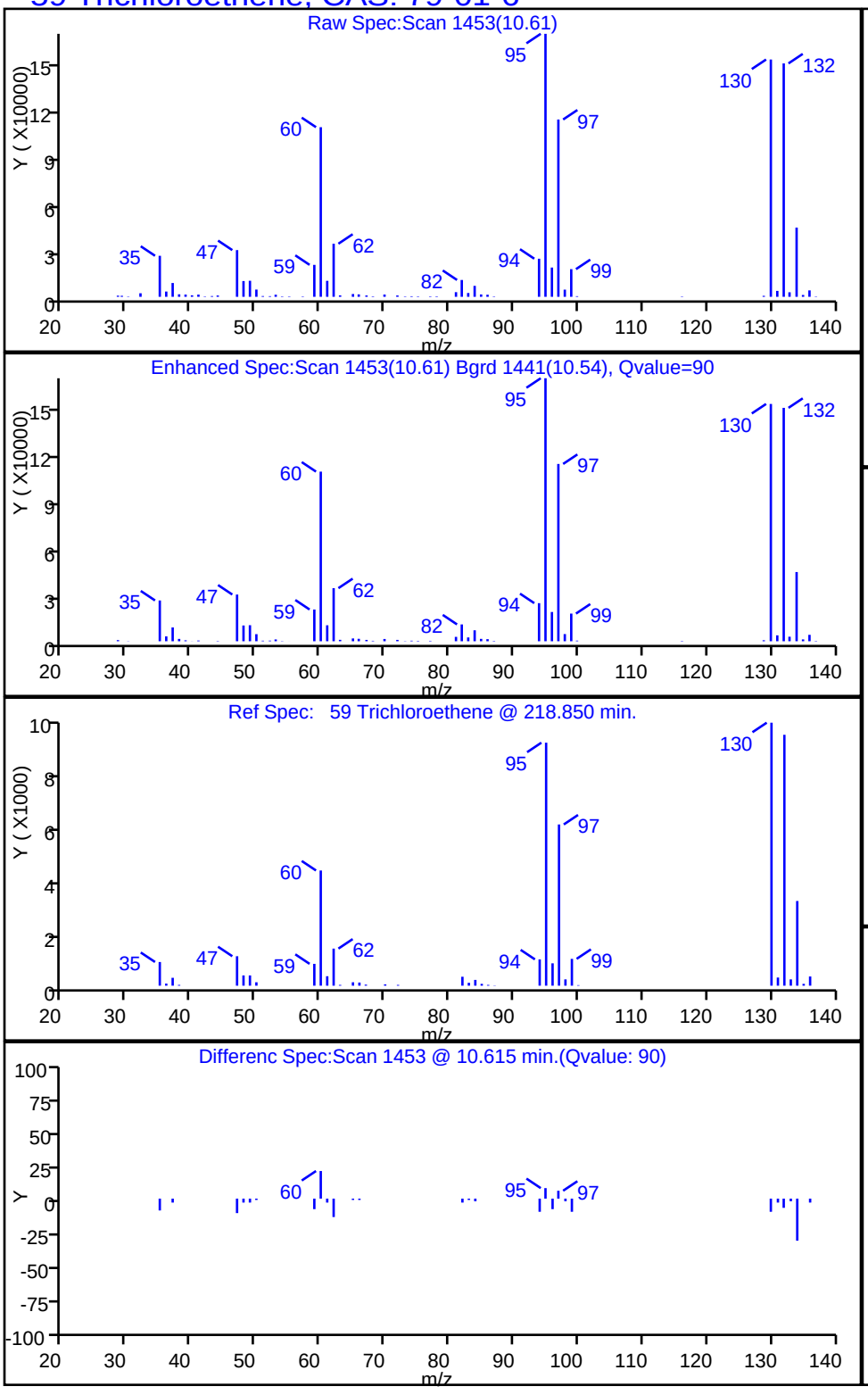
47 1,1,1-Trichloroethane, CAS: 71-55-6

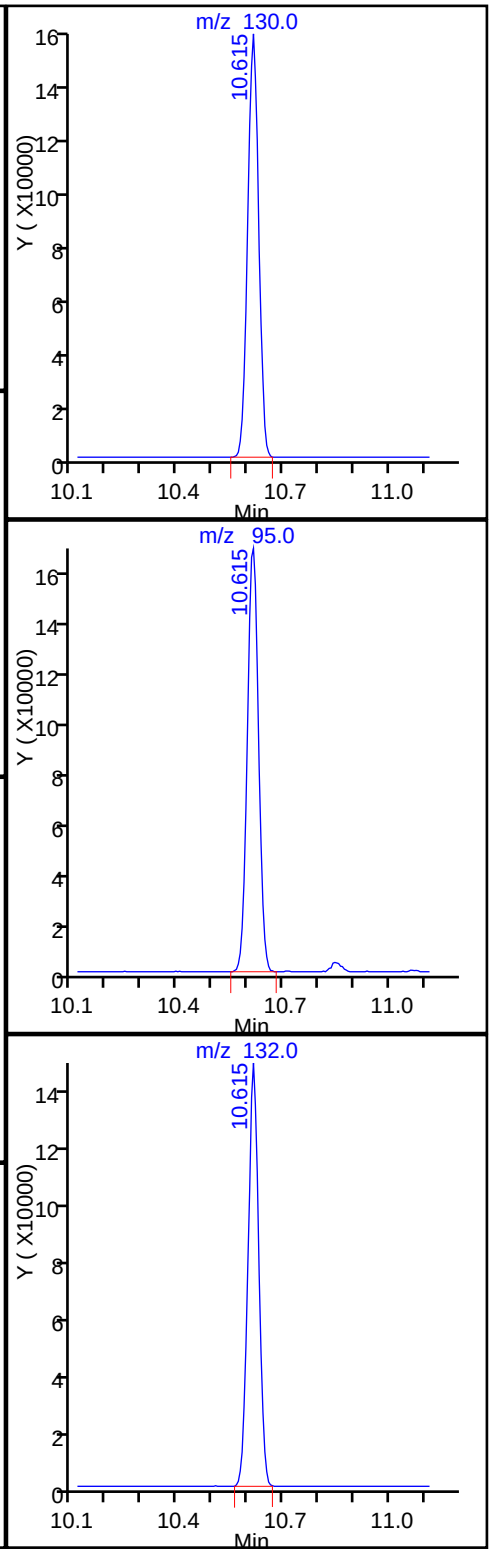


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

59 Trichloroethene, CAS: 79-01-6

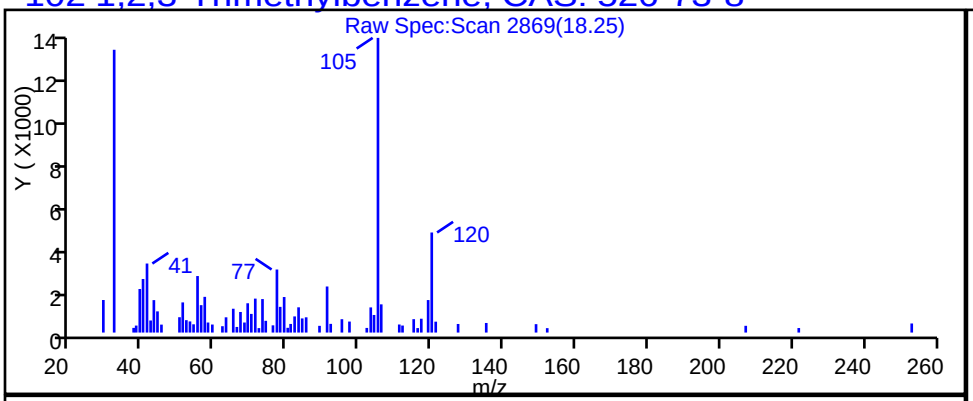


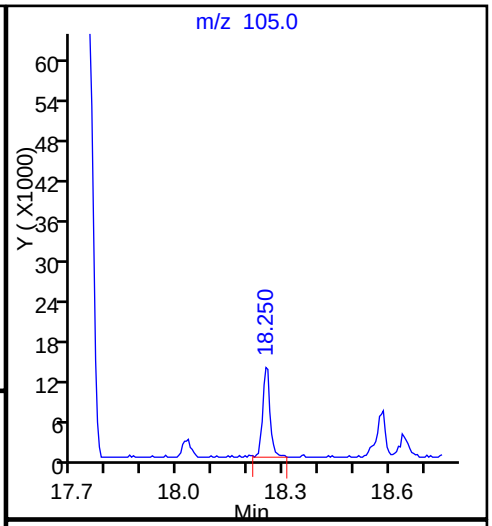


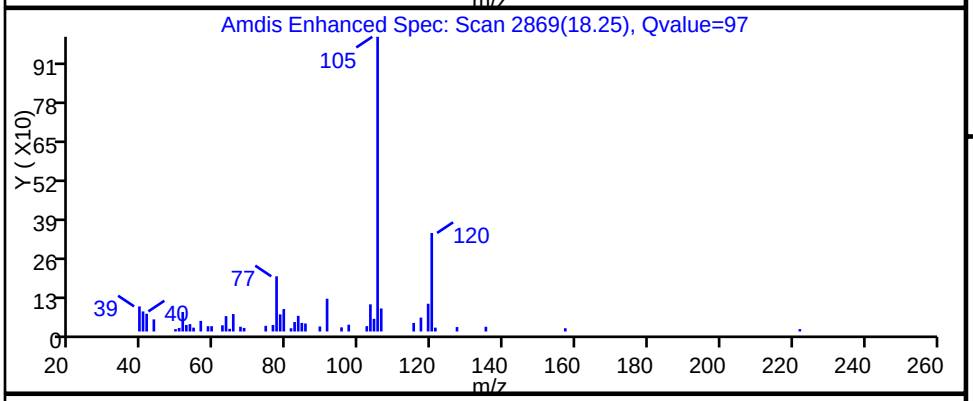
TestAmerica Knoxville

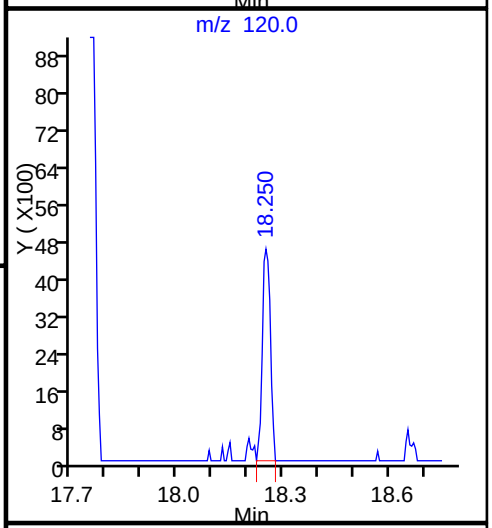
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

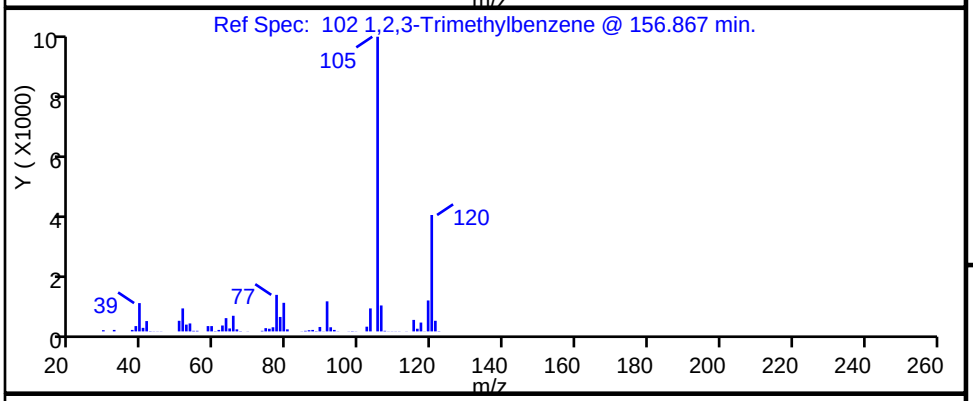
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

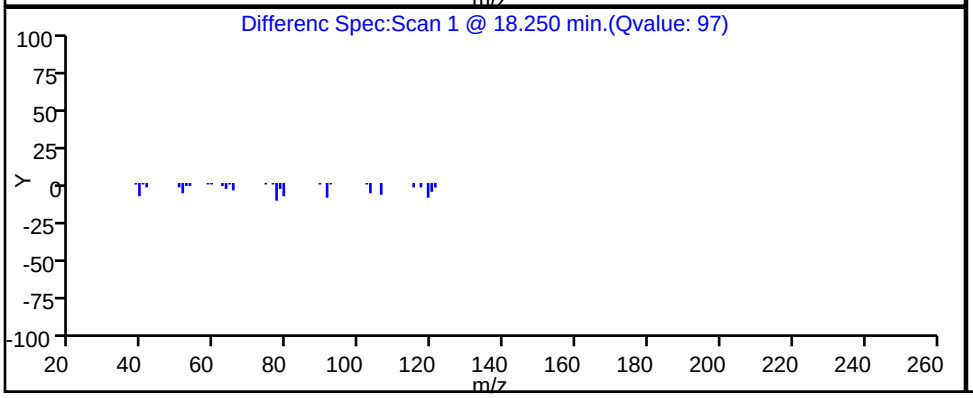


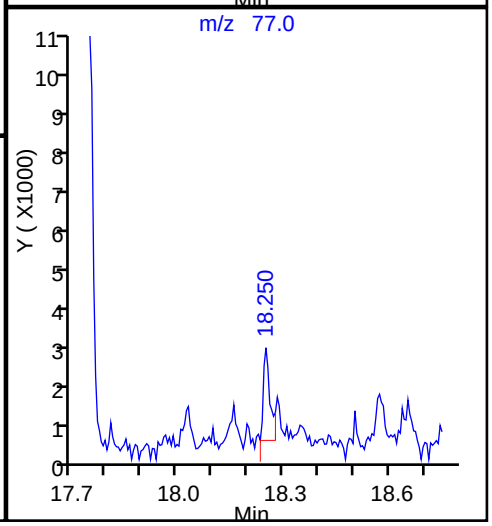








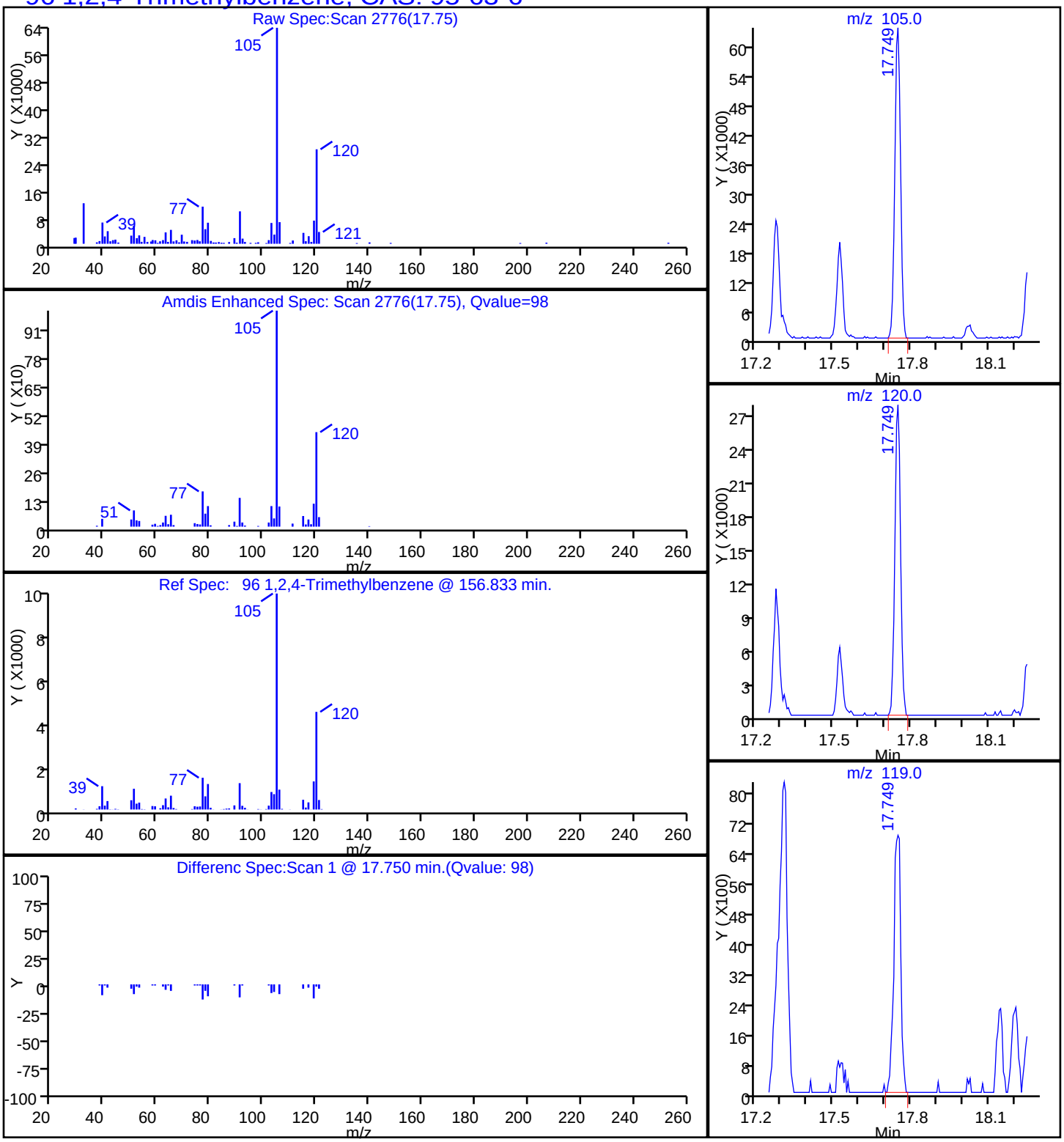




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6



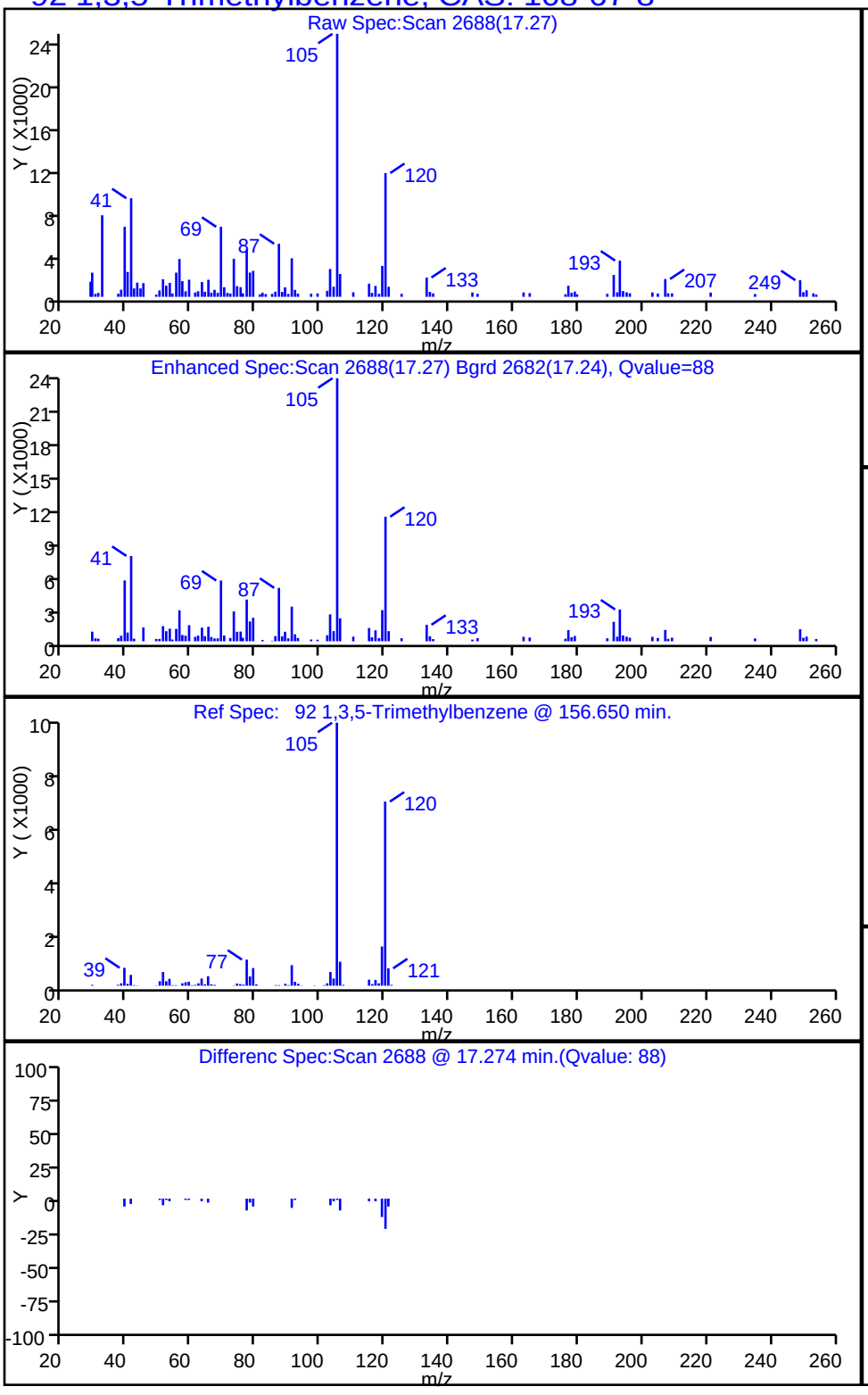
Report Date: 20-Jul-2016 12:49:09 Chrom Revision: 2.2 18-Jul-2016 15:30:42

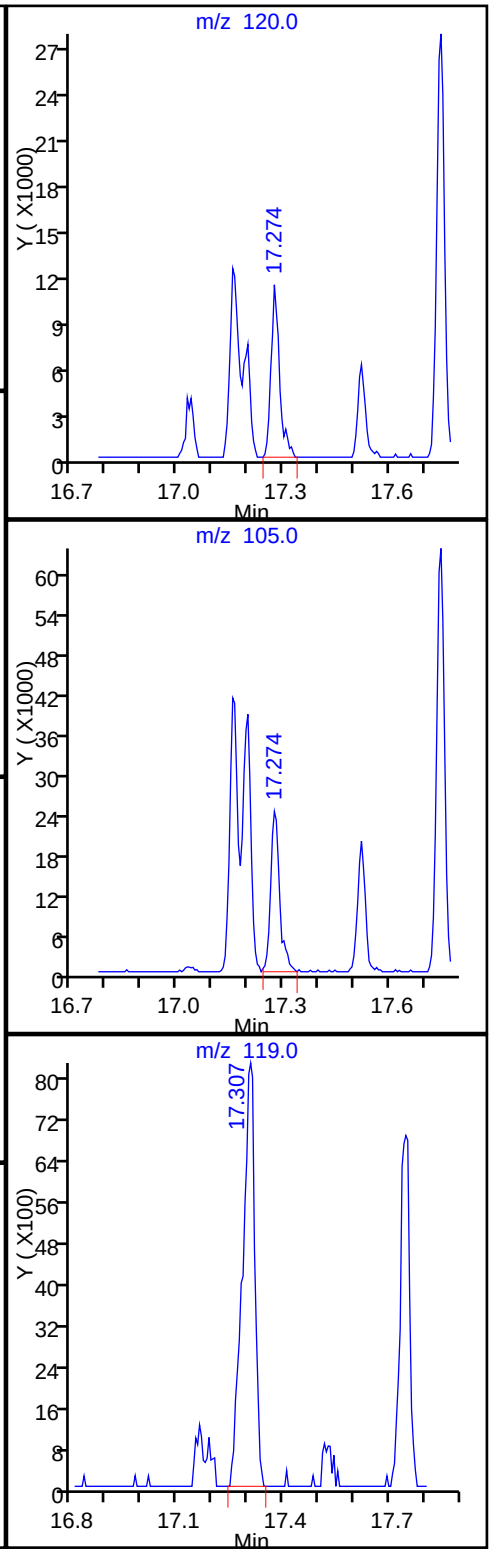
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D

Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

92 1,3,5-Trimethylbenzene, CAS: 108-67-8

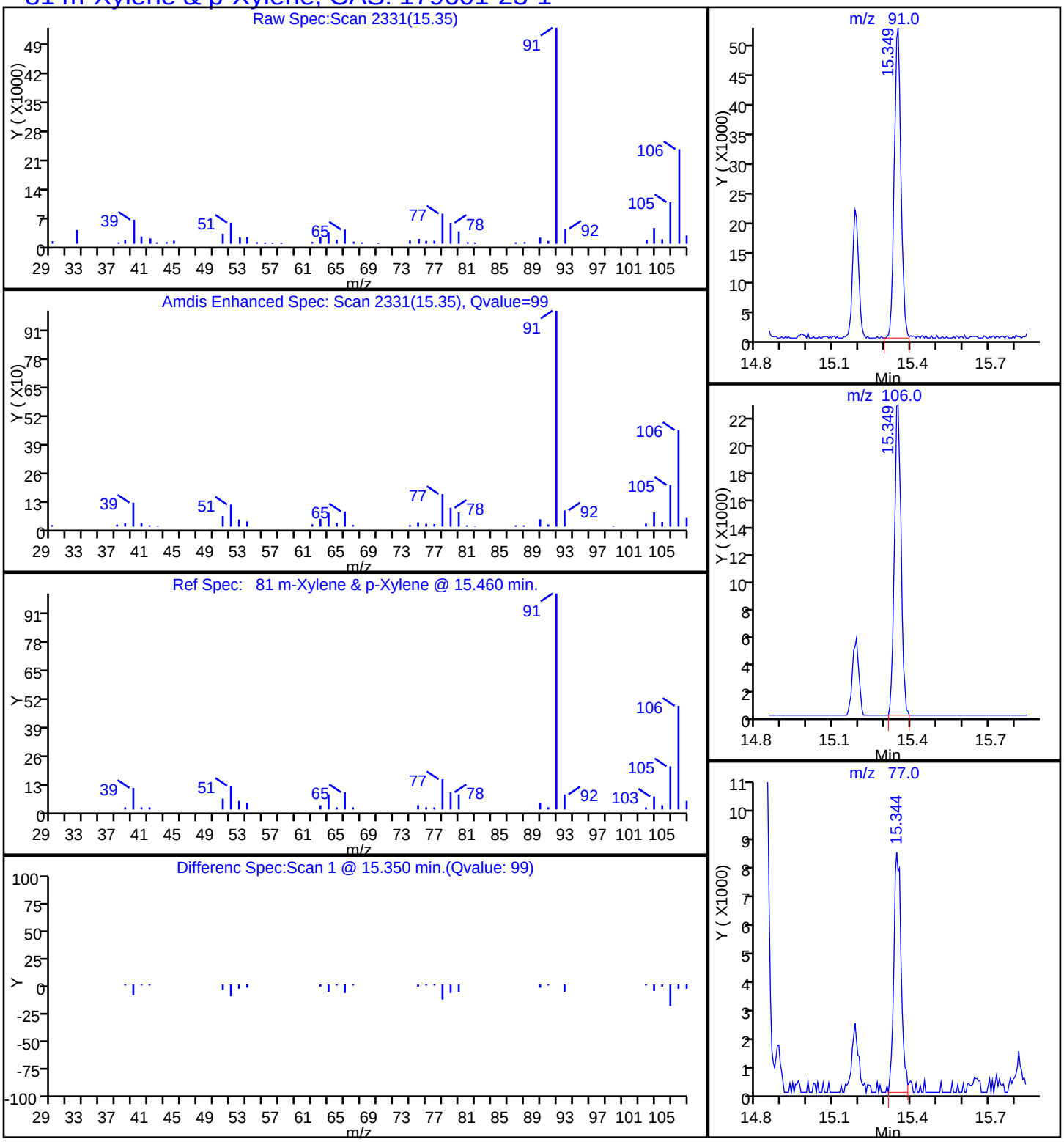




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

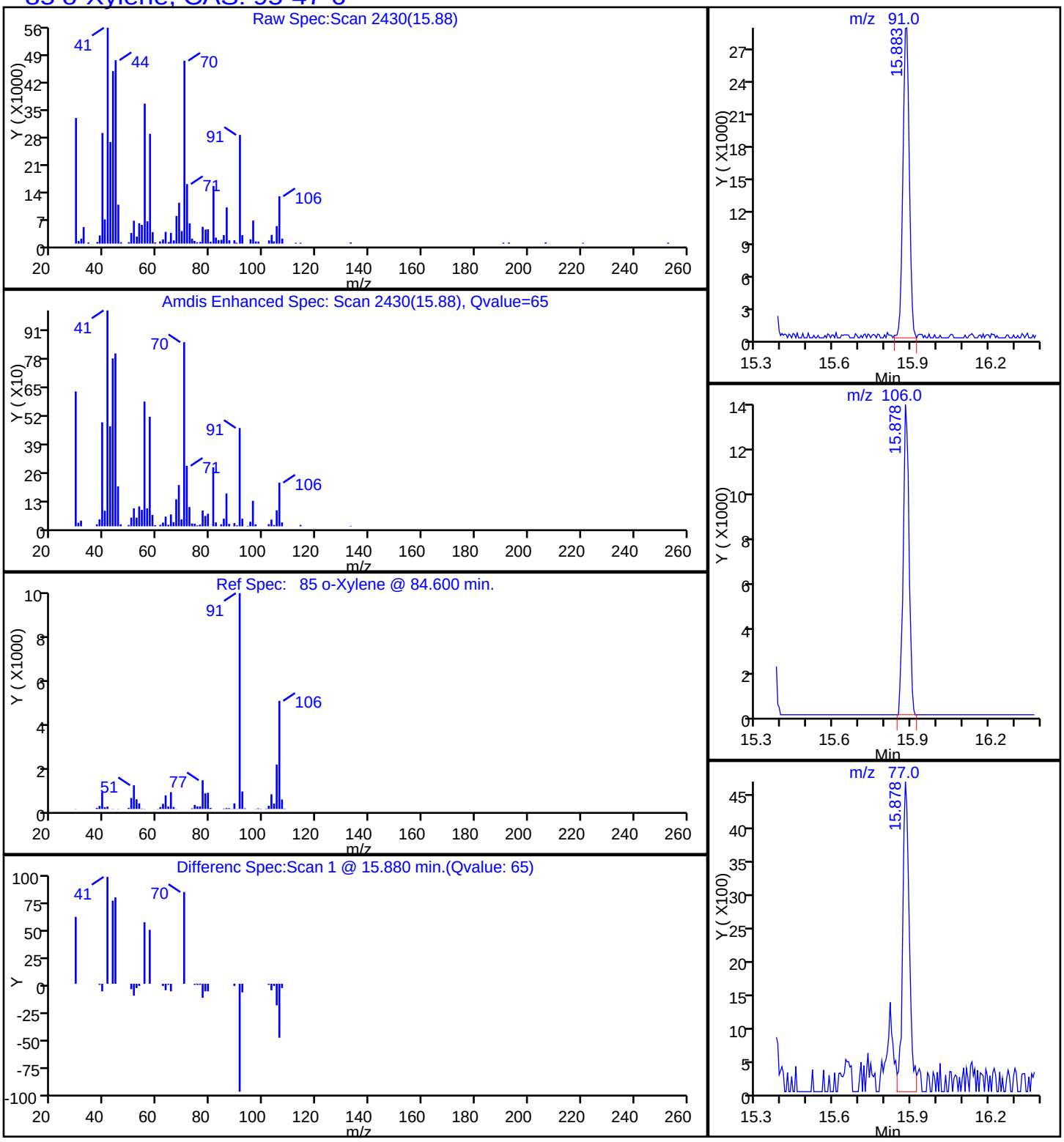
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P110.D				
Injection Date:	19-Jul-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5356-A-4	Lab Sample ID:	140-5356-4		
Client ID:	C-INFLUENT				
Operator ID:	007126	ALS Bottle#:	10	Worklist Smp#:	14
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: C-MID GAC Lab Sample ID: 140-5356-5

Matrix: Air Lab File ID: EG19P111.D

Analysis Method: TO 15 LL Date Collected: 07/14/2016 10:08

Sample wt/vol: 100(mL) Date Analyzed: 07/19/2016 21:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5859 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.9		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.087	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	2.8		0.40	0.075
67-66-3	Chloroform	119.38	0.29	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.86		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.55		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.81		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.67		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.8		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.21	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.0	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.32	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.12	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: C-MID GAC | Lab Sample ID: 140-5356-5

Matrix: Air | Lab File ID: EG19P111.D

Analysis Method: TO 15 LL | Date Collected: 07/14/2016 10:08

Sample wt/vol: 100(mL) | Date Analyzed: 07/19/2016 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5859 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	9.3		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.55	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	9.9		1.4	0.27
67-66-3	Chloroform	119.38	1.4	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	3.4		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.7		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	3.3		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	2.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	6.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.4	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	11	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.6	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	0.52	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	111		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Lims ID:	140-5356-A-5				
Client ID:	C-MID GAC				
Sample Type:	Client				
Inject. Date:	19-Jul-2016 21:19:30	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-015				
Misc. Info.:	140-5356-a-5				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				
First Level Reviewer: tajh		Date:	20-Jul-2016 09:01:56		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.611	7.605	0.006	89	426545	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.849	0.000	96	2040704	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	92	1968535	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.503	16.503	0.000	87	1670535	4.44	
6 Chlorodifluoromethane	67	2.925	2.925	0.000	96	33206	0.5616	
8 Dichlorodifluoromethane	85	2.979	2.973	0.006	100	54016	0.1090	
27 1,1-Dichloroethene	96	4.828	4.818	0.010	95	15879	0.1339	
31 Methylene Chloride	84	5.152	5.141	0.011	96	41722	0.3621	
37 1,1-Dichloroethane	63	6.322	6.317	0.005	99	40285	0.1612	
42 cis-1,2-Dichloroethene	96	7.287	7.282	0.005	98	23476	0.1726	
44 Chloroform	83	7.622	7.622	0.000	28	19760	0.0580	
47 1,1,1-Trichloroethane	97	8.635	8.635	0.000	95	172419	0.4100	
51 Benzene	78	9.239	9.239	0.000	99	225060	0.5843	
52 Carbon tetrachloride	117	9.266	9.261	0.005	36	8454	0.0174	
68 Toluene	91	12.804	12.804	0.000	94	53317	0.1140	
76 Tetrachloroethene	129	13.974	13.985	-0.011	34	9025	0.0418	
85 o-Xylene	91	15.877	15.883	-0.006	79	13279	0.0248	
96 1,2,4-Trimethylbenzene	105	17.749	17.748	0.001	97	38578	0.0647	
S 126 Xylenes, Total	100				0		0.0248	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

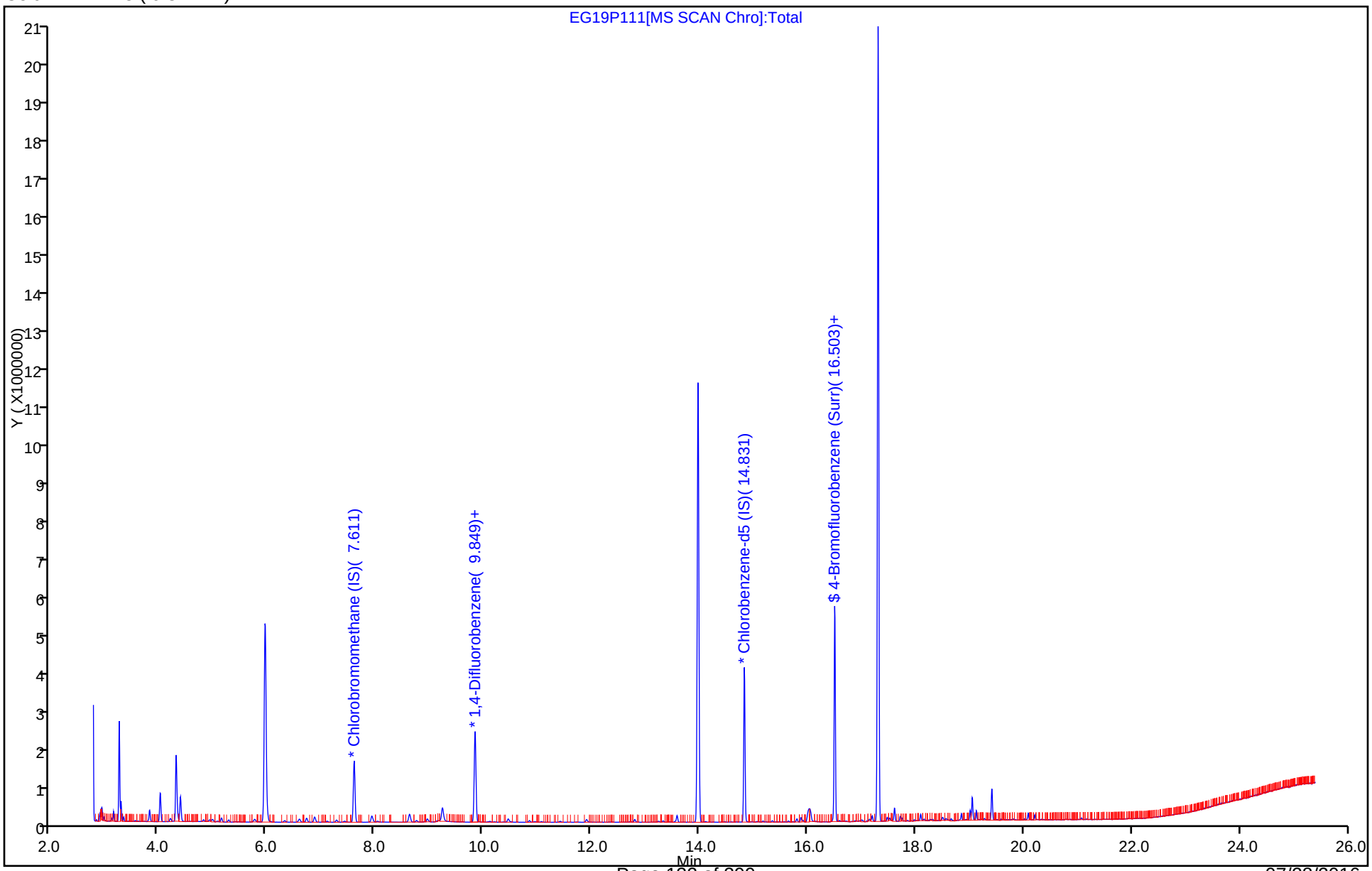
Report Date: 20-Jul-2016 12:49:13 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D

Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5	Worklist Smp#:	15
Client ID:	C-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Lims ID:	140-5356-A-5				
Client ID:	C-MID GAC				
Sample Type:	Client				
Inject. Date:	19-Jul-2016 21:19:30	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-015				
Misc. Info.:	140-5356-a-5				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				

First Level Reviewer: tajh Date: 20-Jul-2016 09:01:56

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.44	110.98

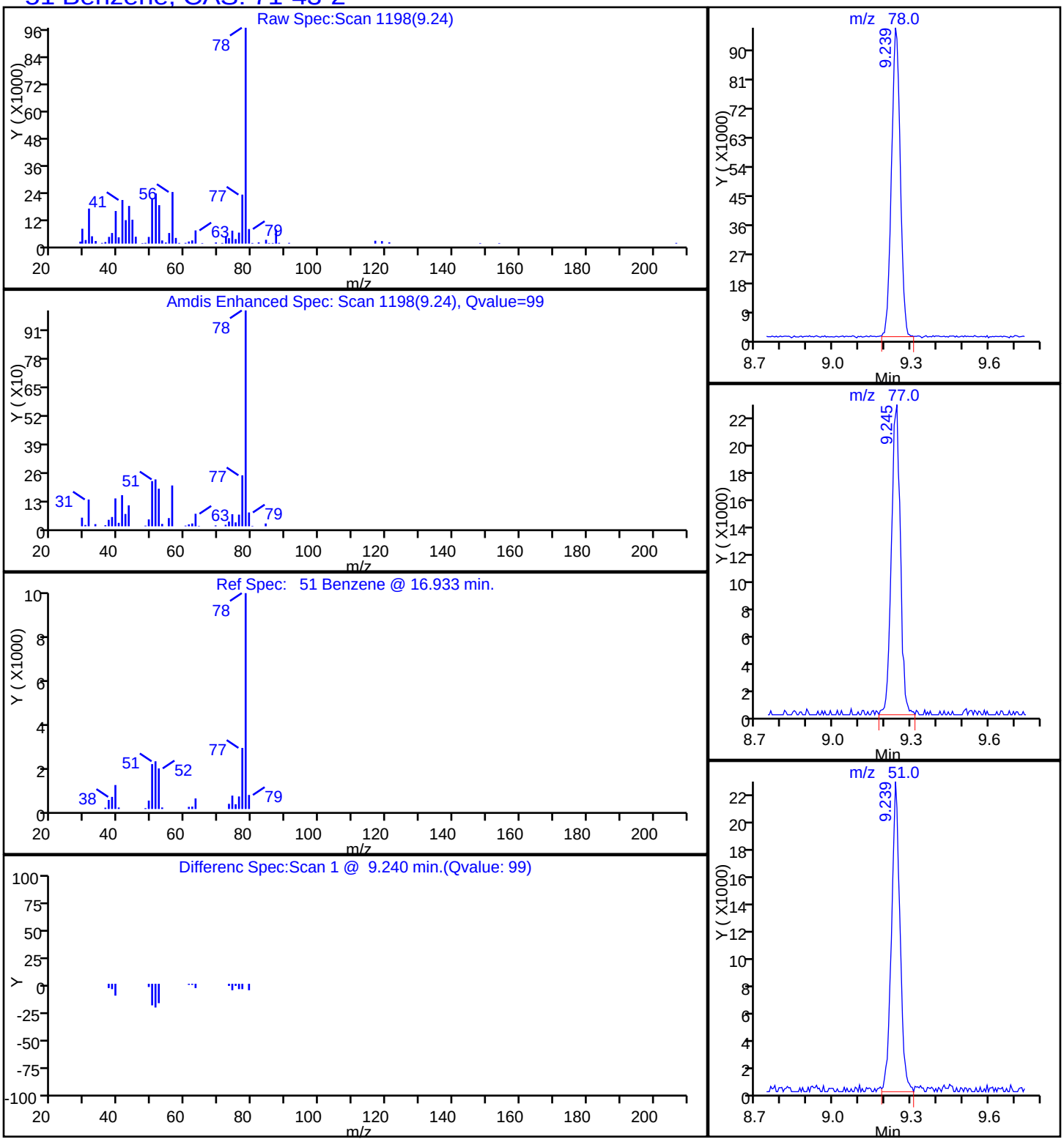
Report Date: 20-Jul-2016 12:49:14 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D

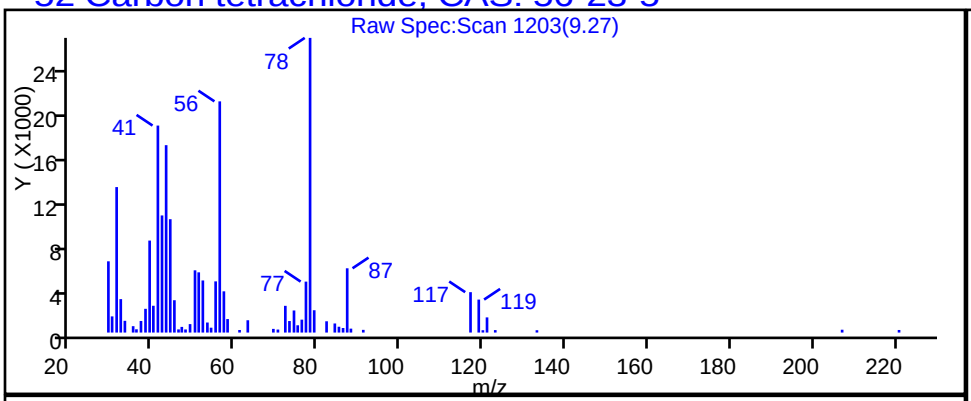
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5
Client ID:	C-MID GAC		
Operator ID:	007126	ALS Bottle#:	11 Worklist Smp#: 15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

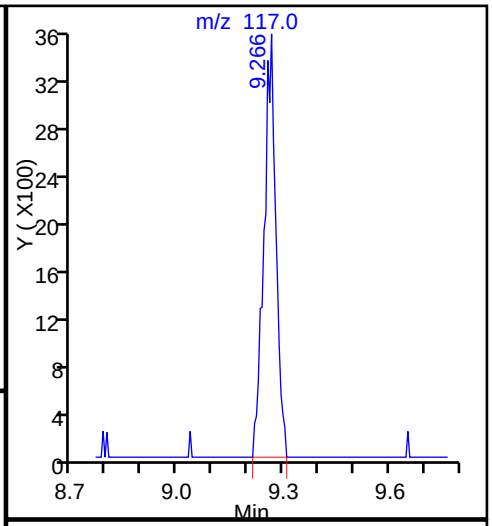
51 Benzene, CAS: 71-43-2

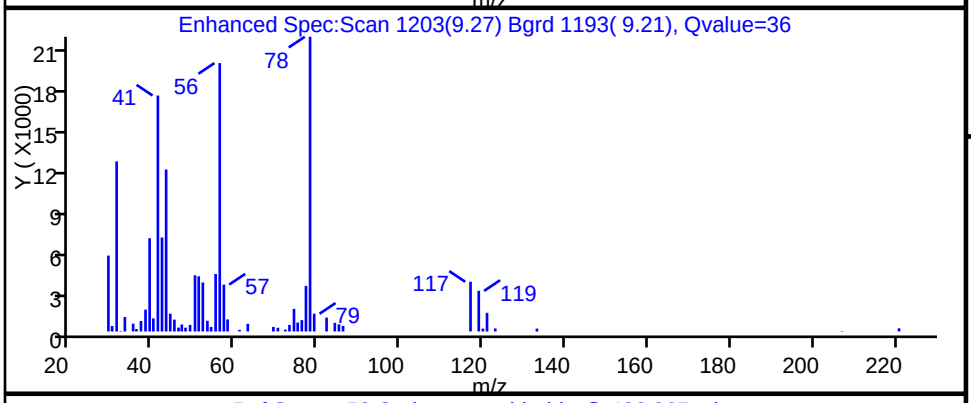


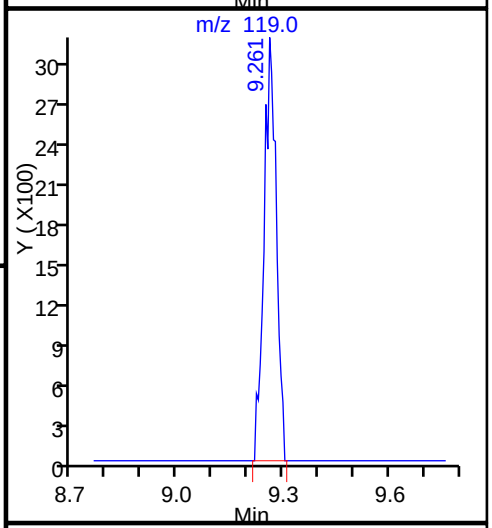
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D
Injection Date: 19-Jul-2016 21:19:30 Instrument ID: ME
Lims ID: 140-5356-A-5 Lab Sample ID: 140-5356-5
Client ID: C-MID GAC
Operator ID: 007126 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

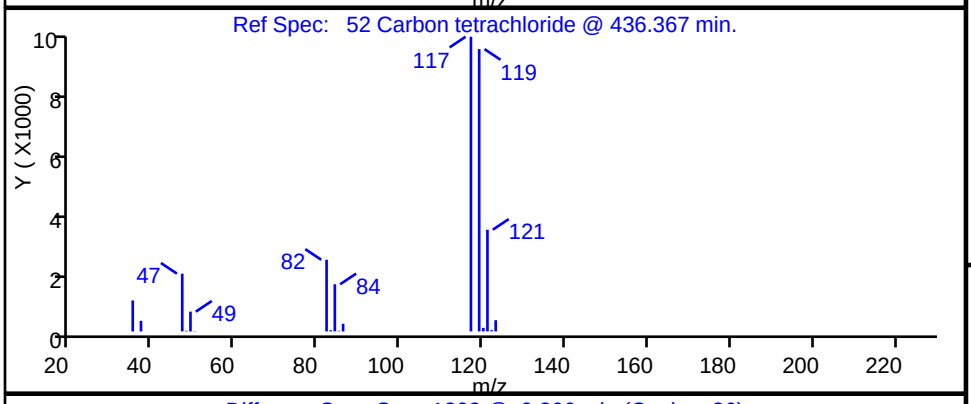
52 Carbon tetrachloride, CAS: 56-23-5

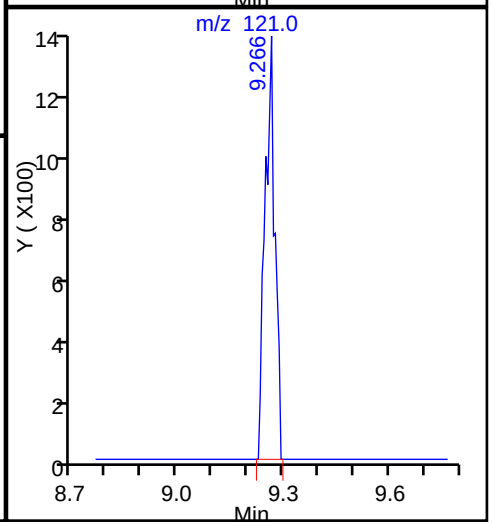


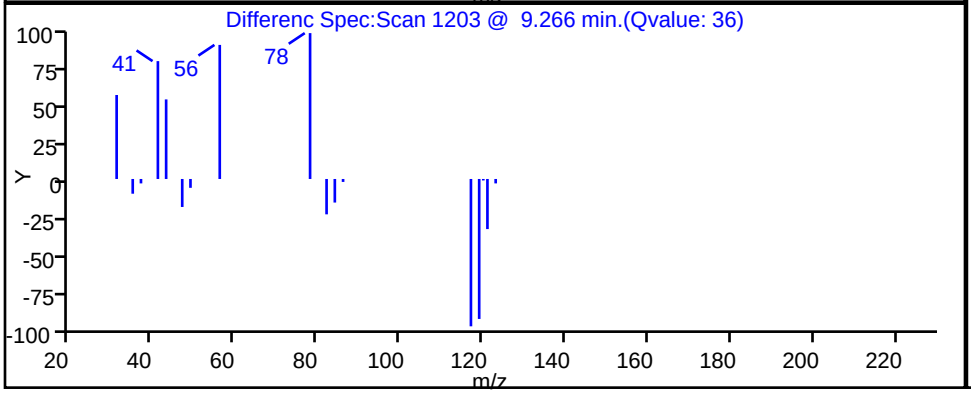








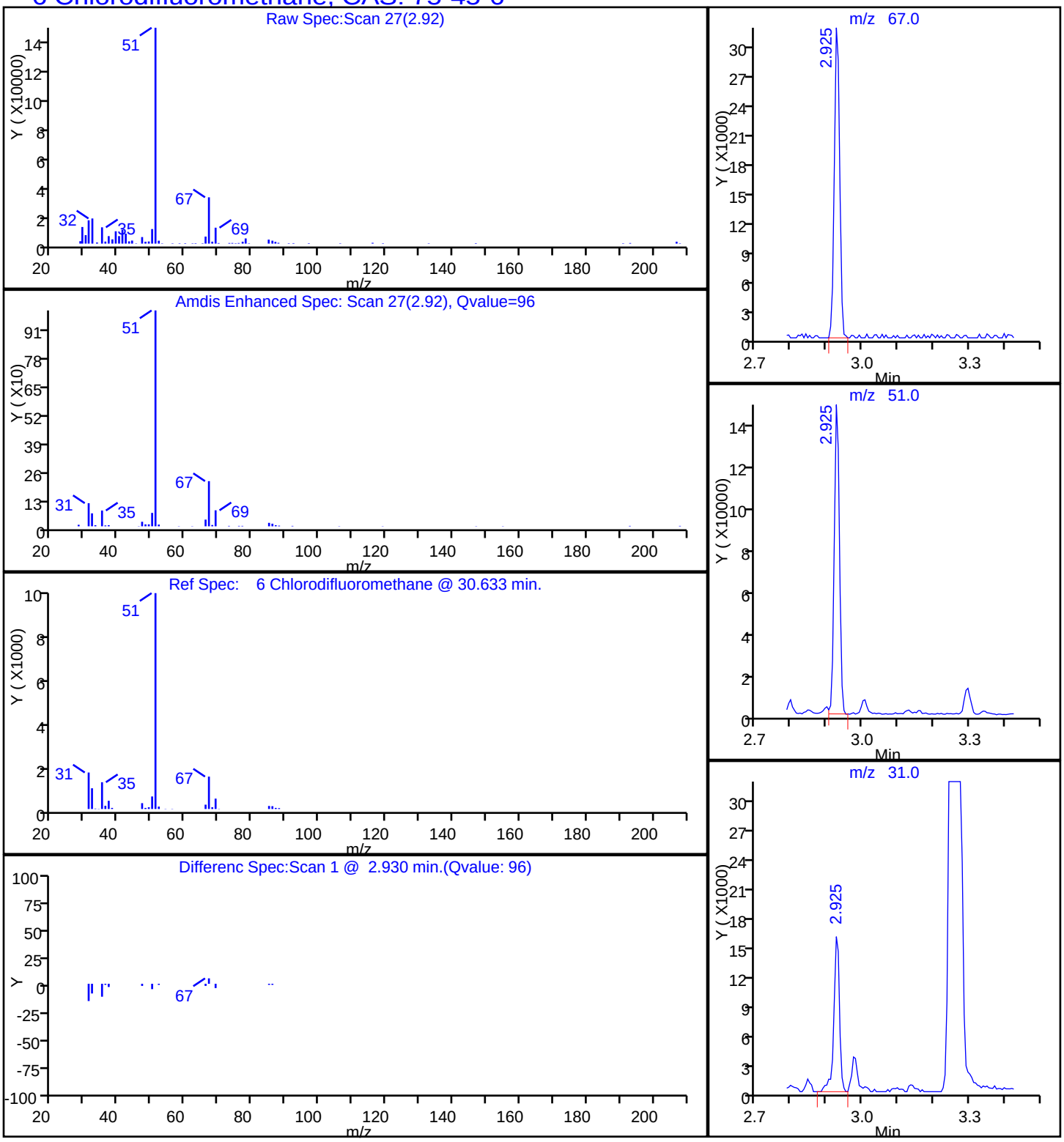




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6

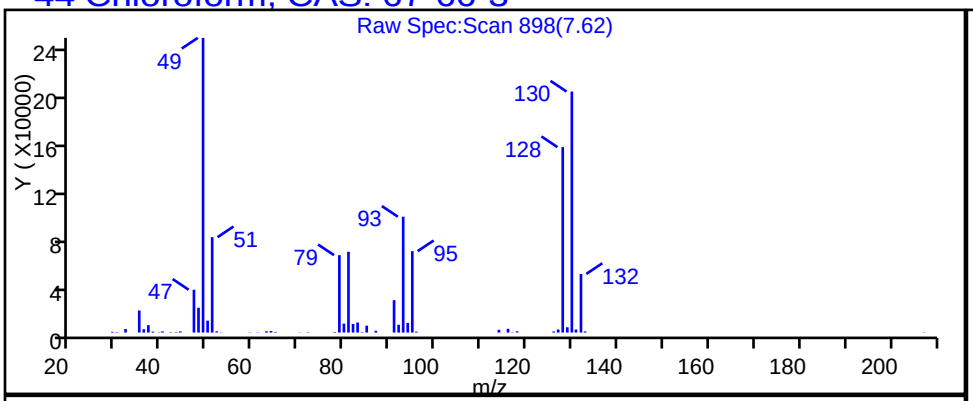


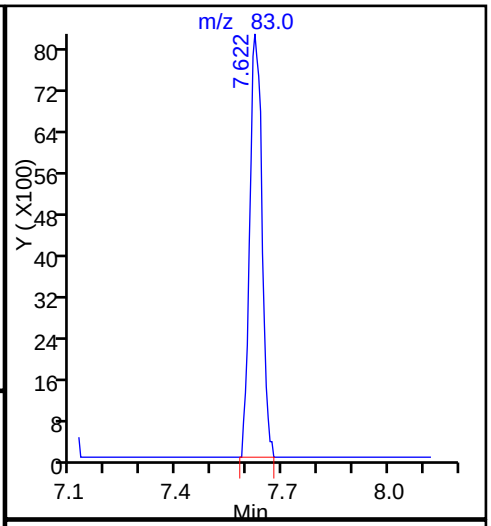
TestAmerica Knoxville

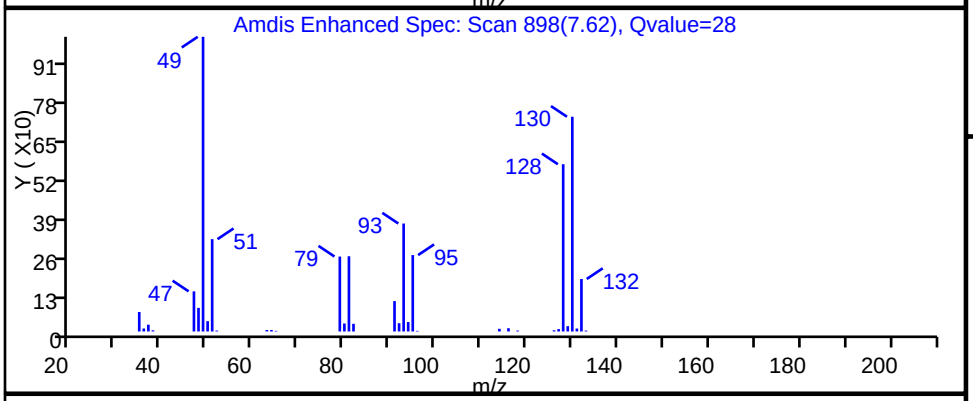
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D

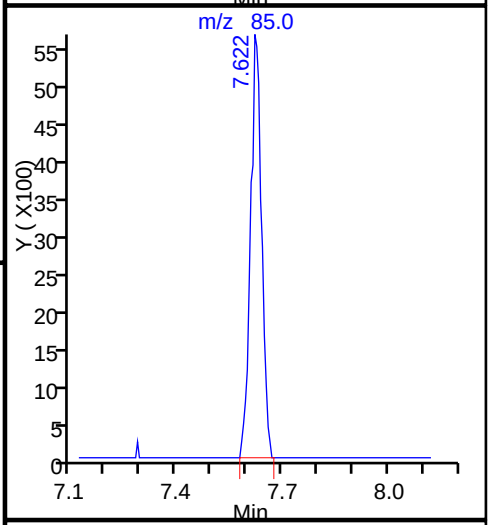
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

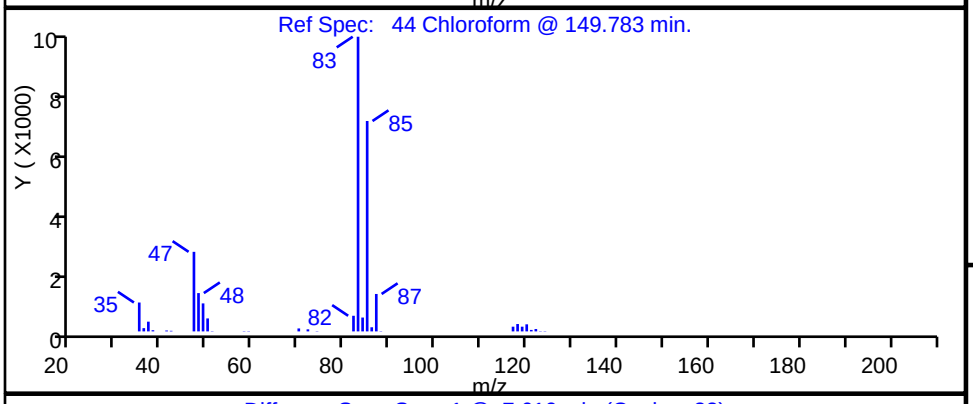
44 Chloroform, CAS: 67-66-3

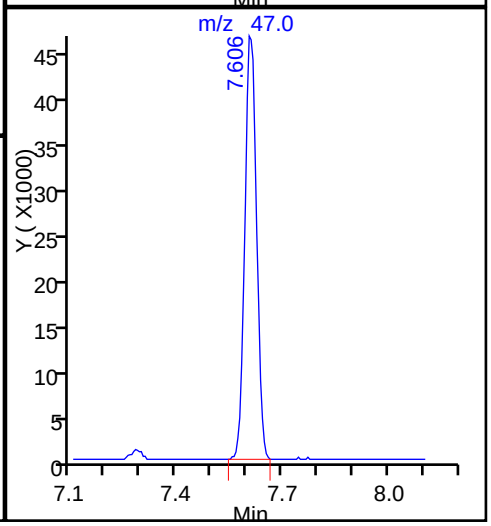


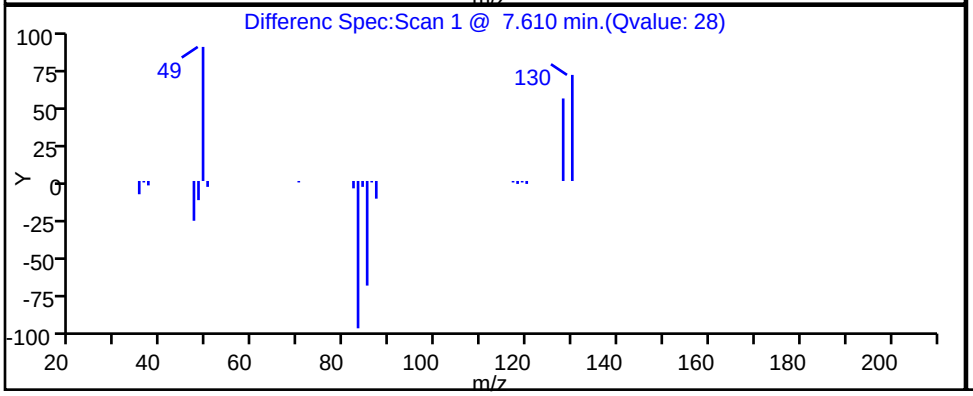












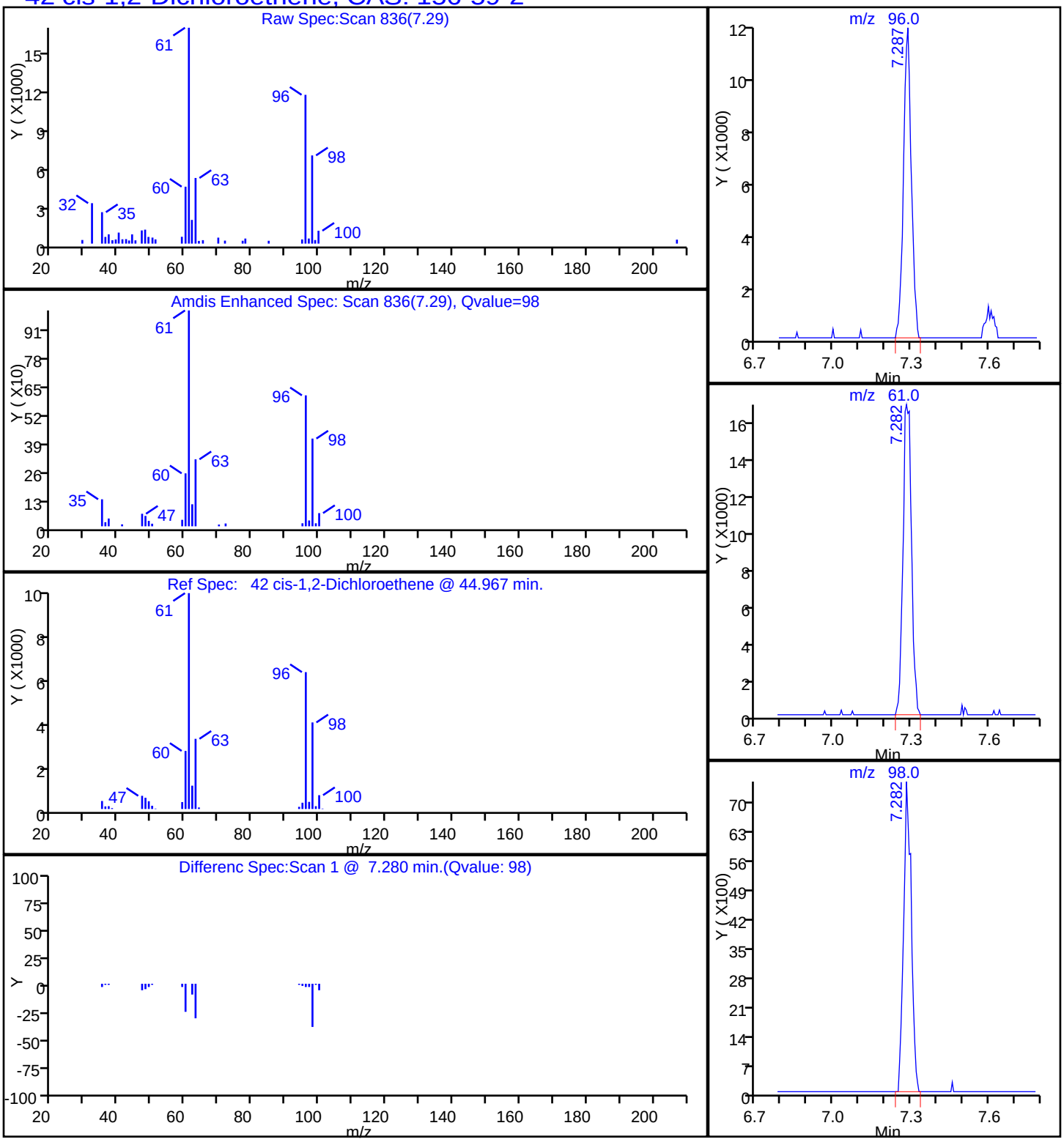
Report Date: 20-Jul-2016 12:49:14 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D

Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

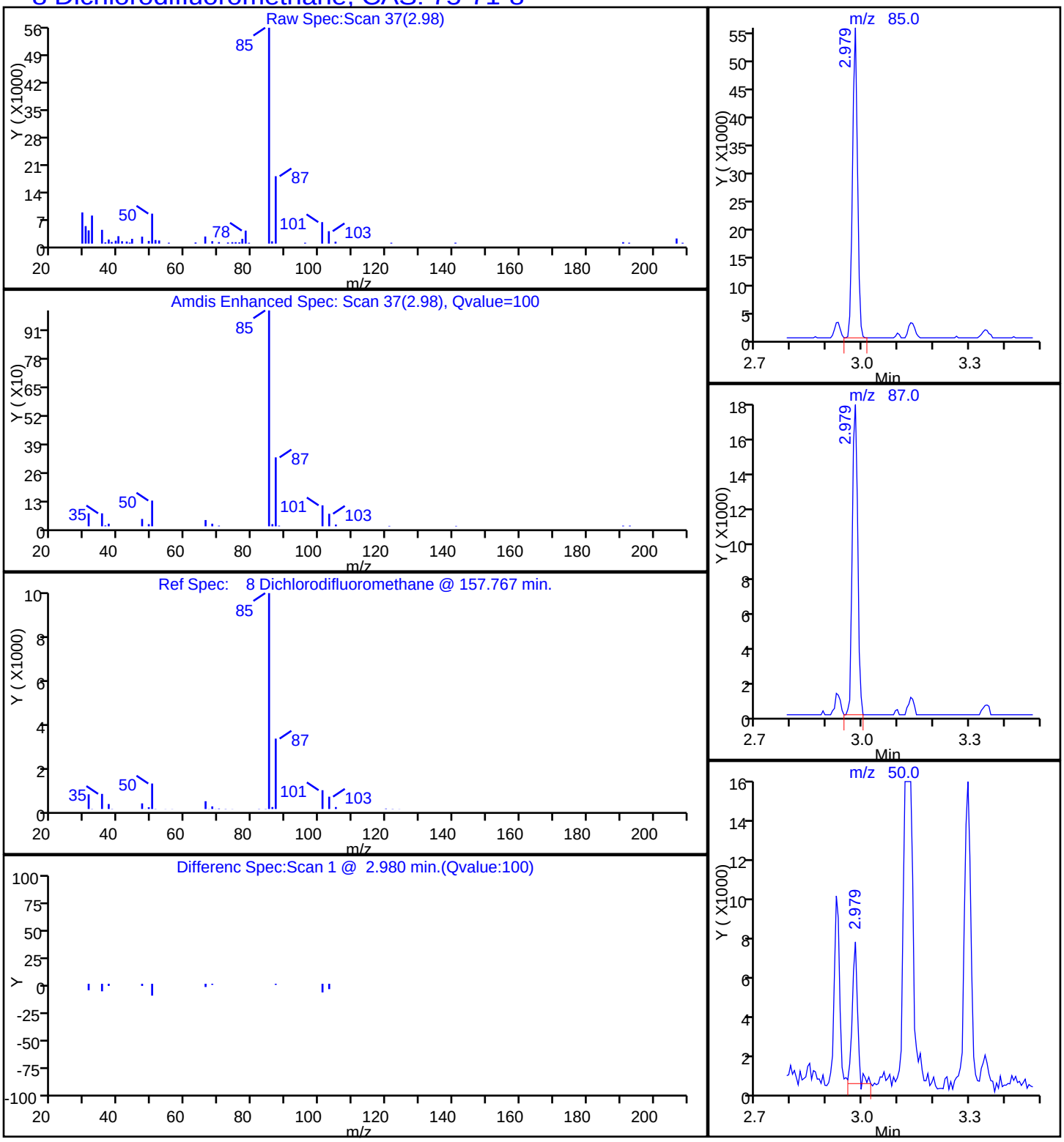
42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

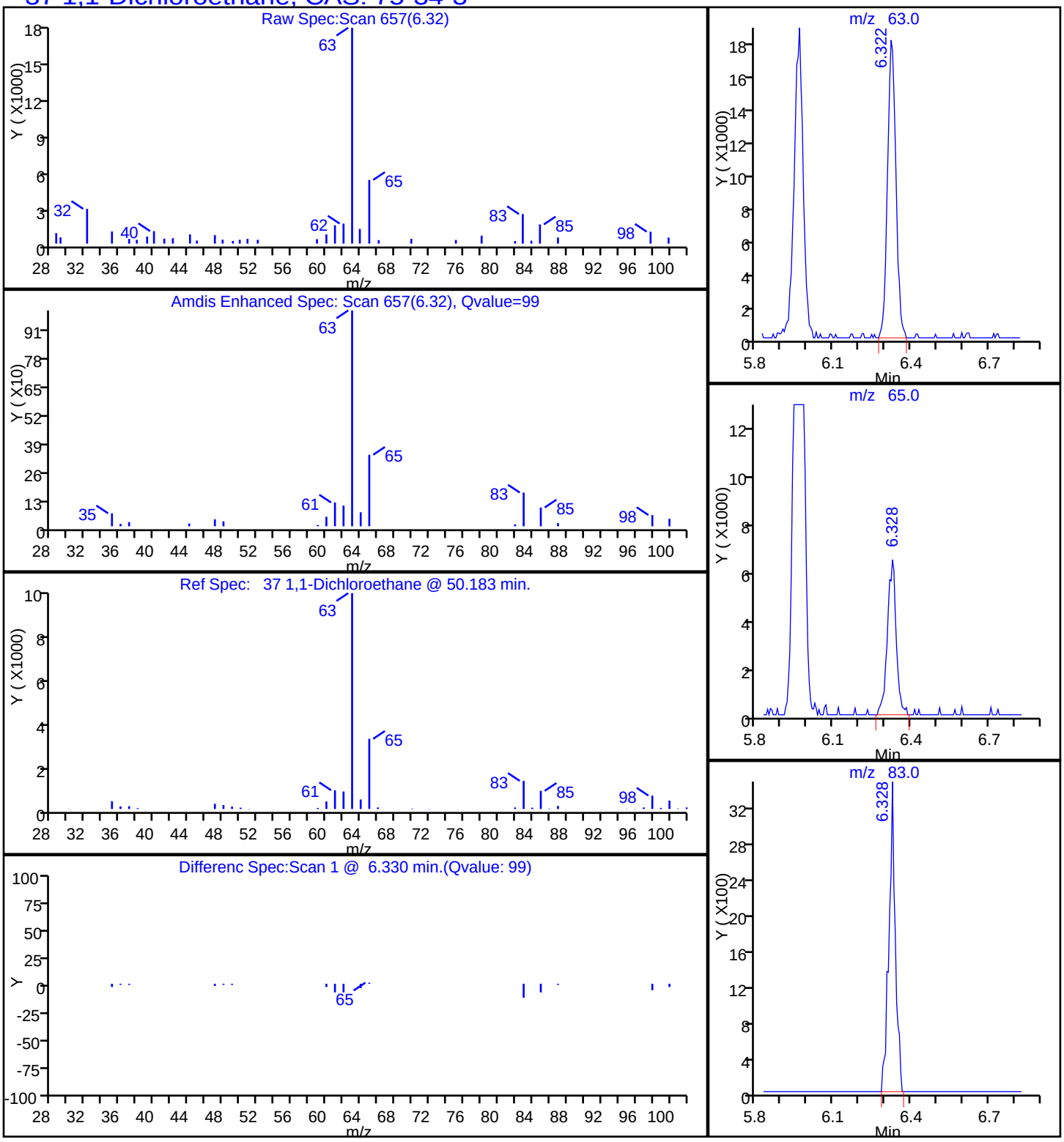
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D
Injection Date: 19-Jul-2016 21:19:30 Instrument ID: ME
Lims ID: 140-5356-A-5 Lab Sample ID: 140-5356-5
Client ID: C-MID GAC
Operator ID: 007126 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

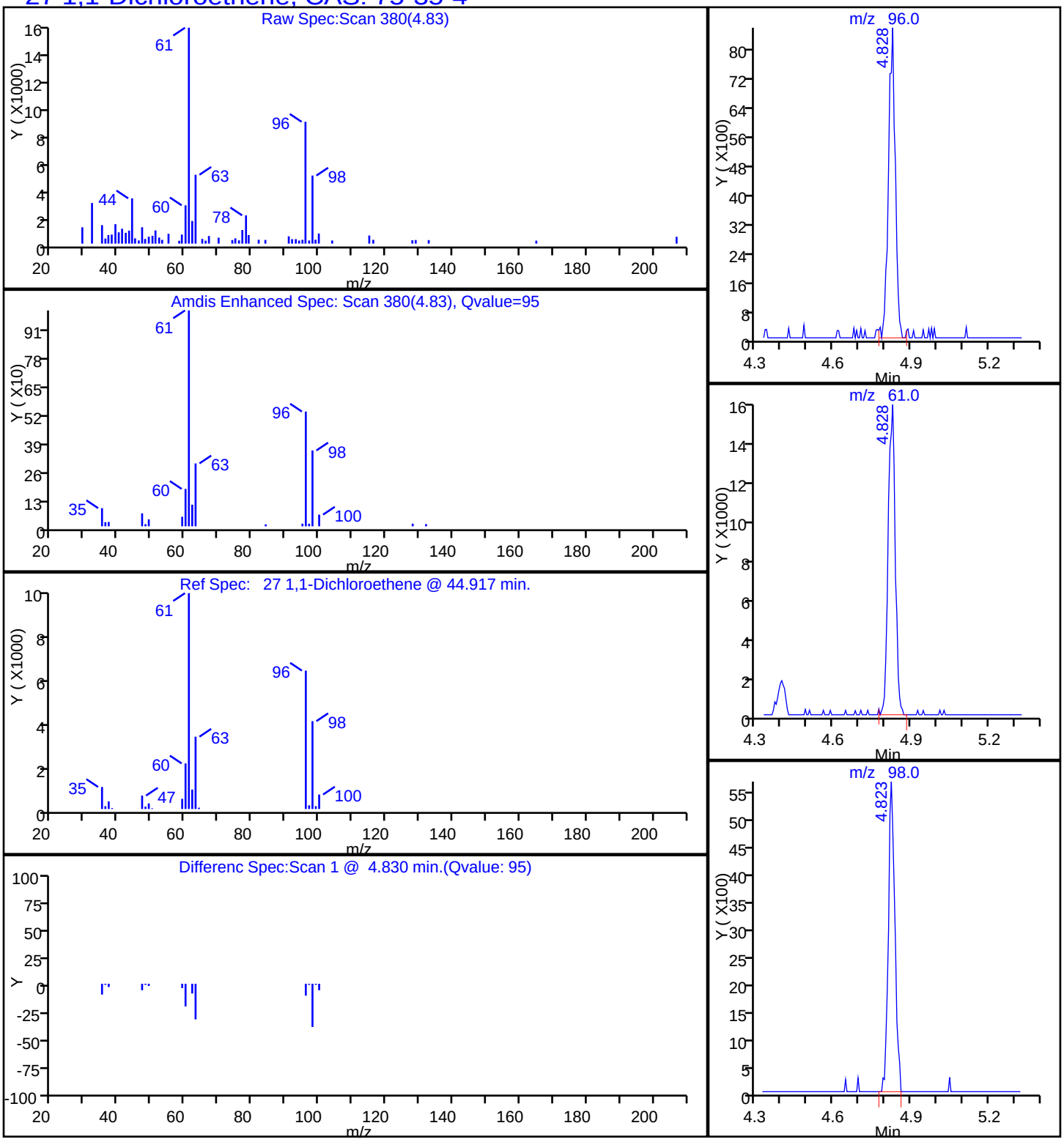
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

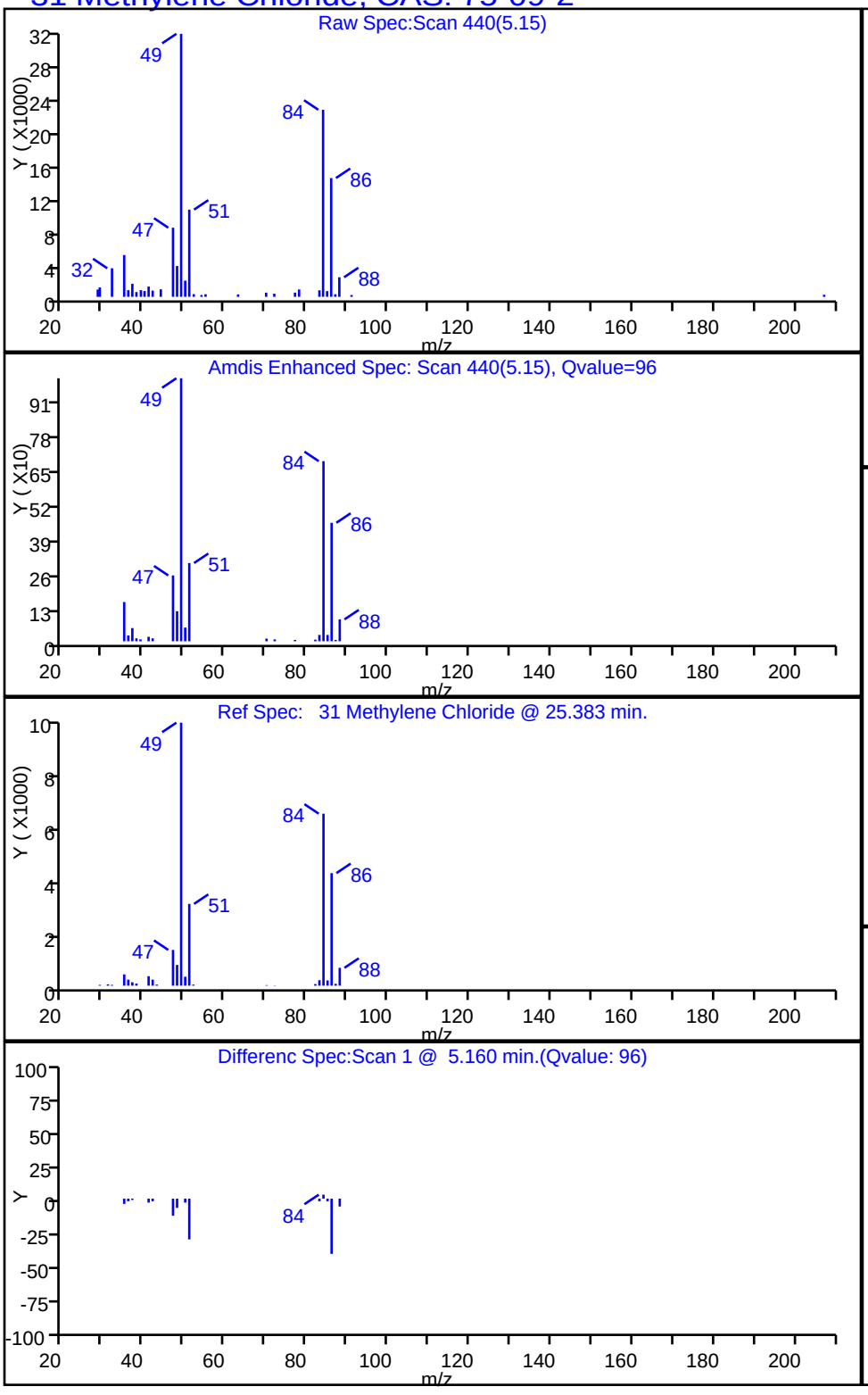
27 1,1-Dichloroethene, CAS: 75-35-4

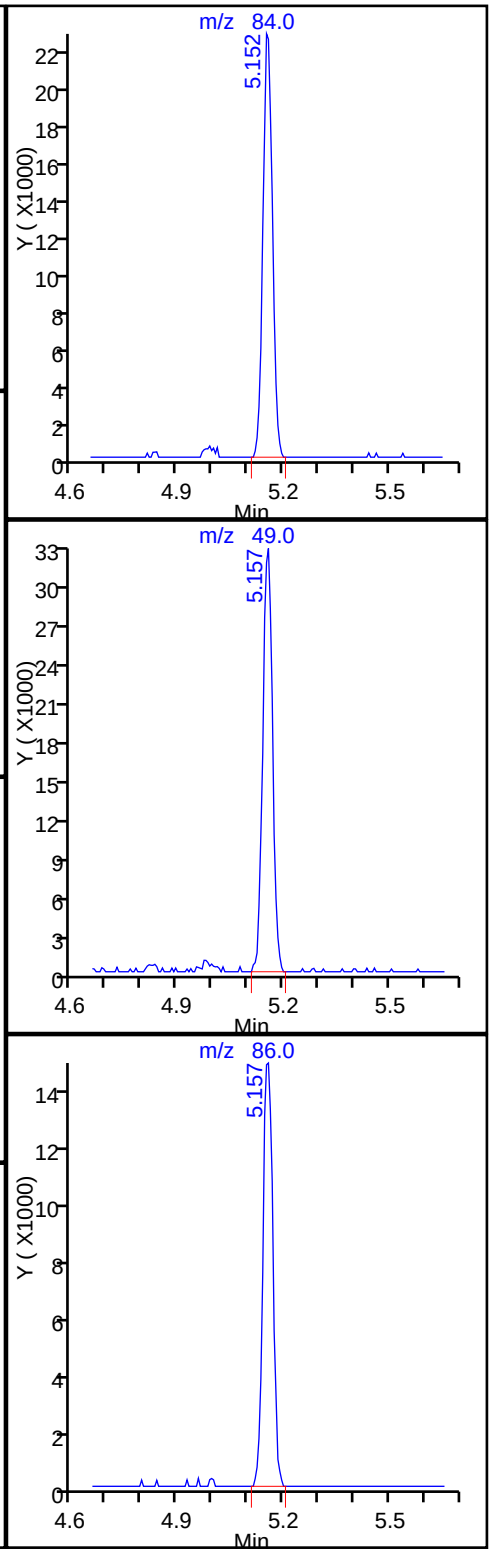


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

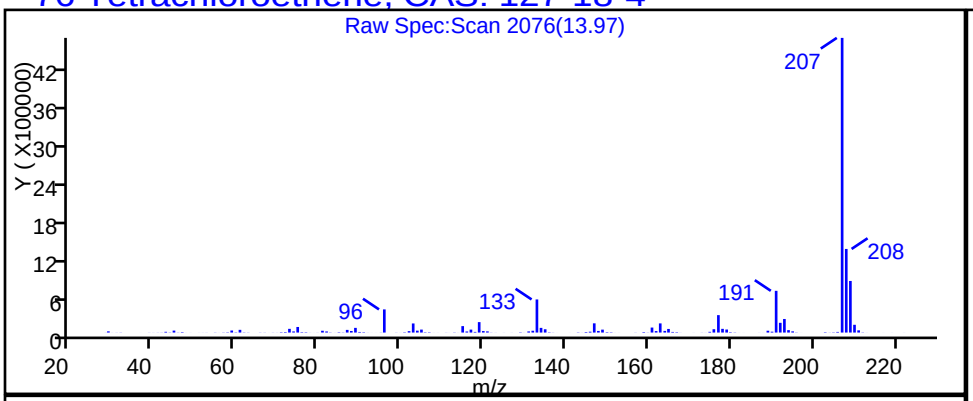
31 Methylene Chloride, CAS: 75-09-2

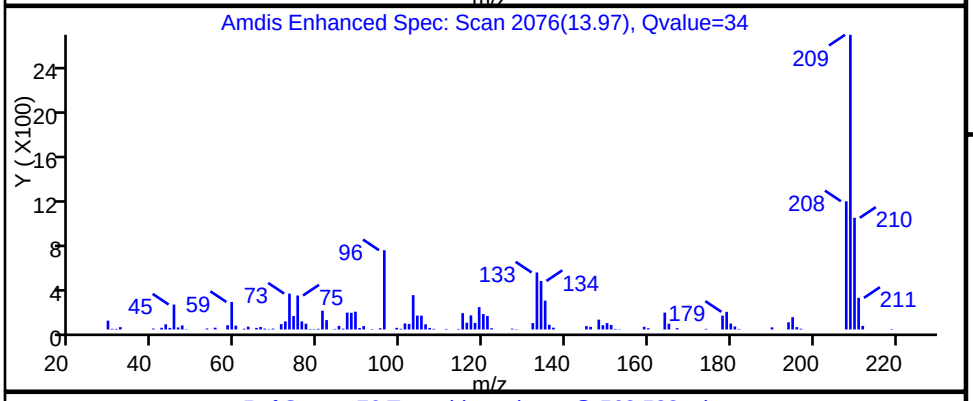


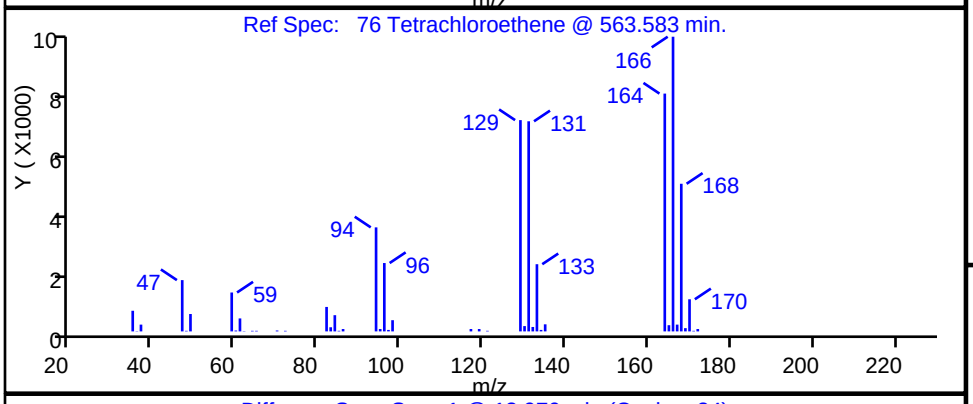


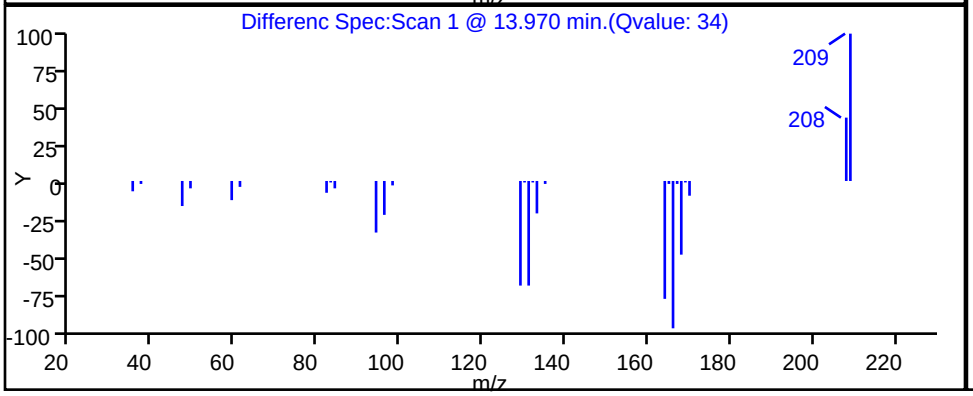
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D
Injection Date: 19-Jul-2016 21:19:30 Instrument ID: ME
Lims ID: 140-5356-A-5 Lab Sample ID: 140-5356-5
Client ID: C-MID GAC
Operator ID: 007126 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

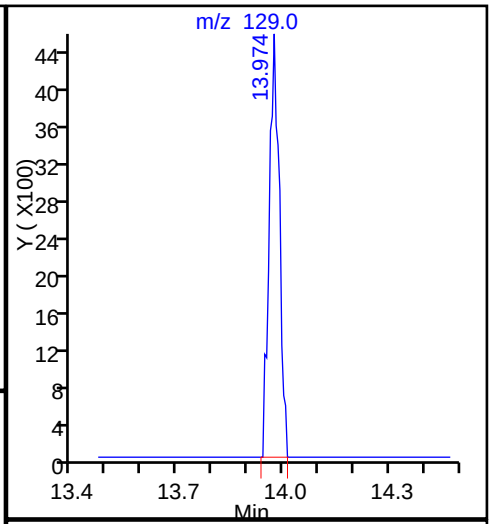
76 Tetrachloroethene, CAS: 127-18-4

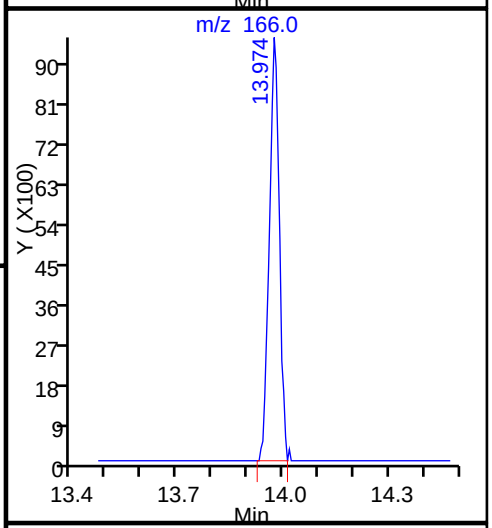


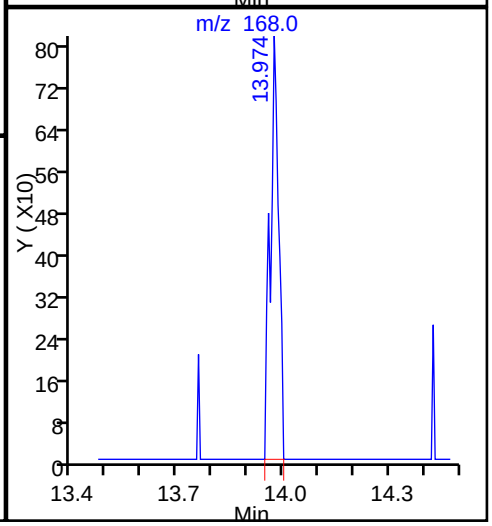








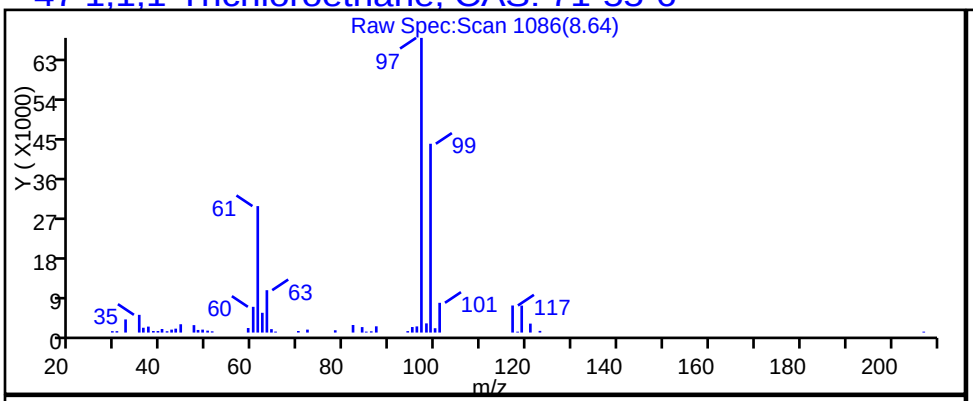


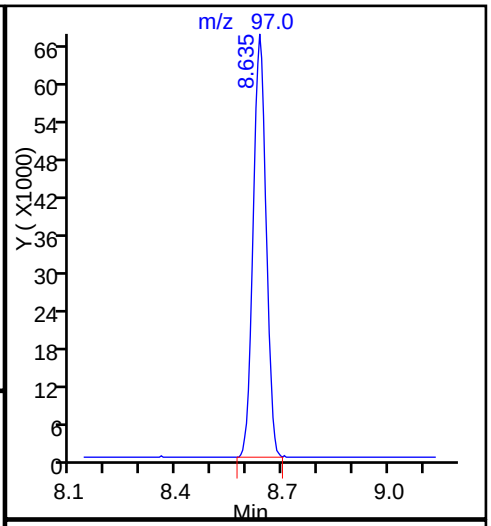


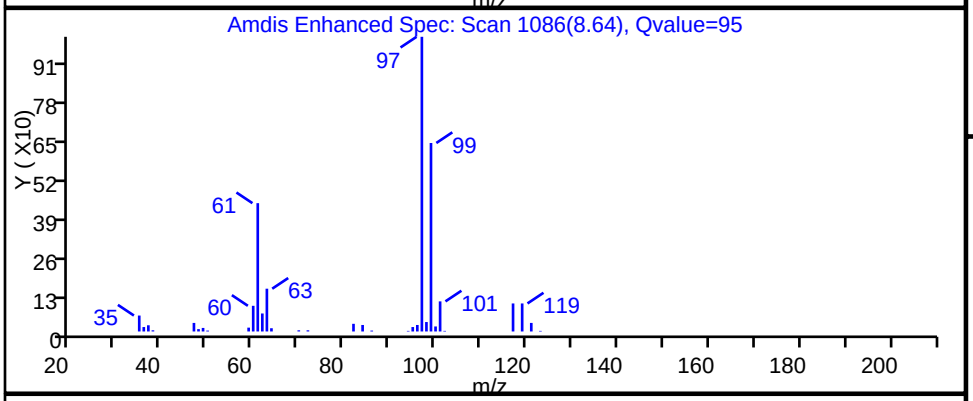
TestAmerica Knoxville

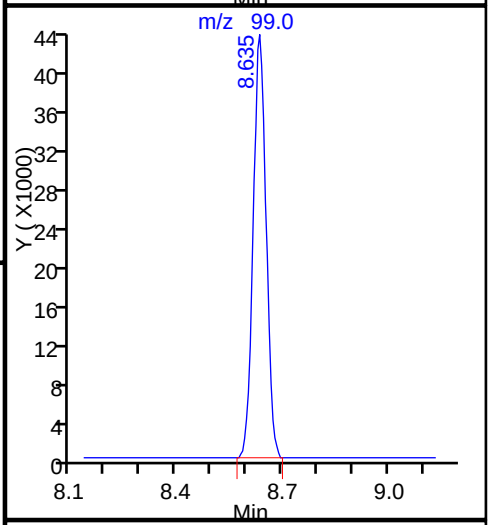
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

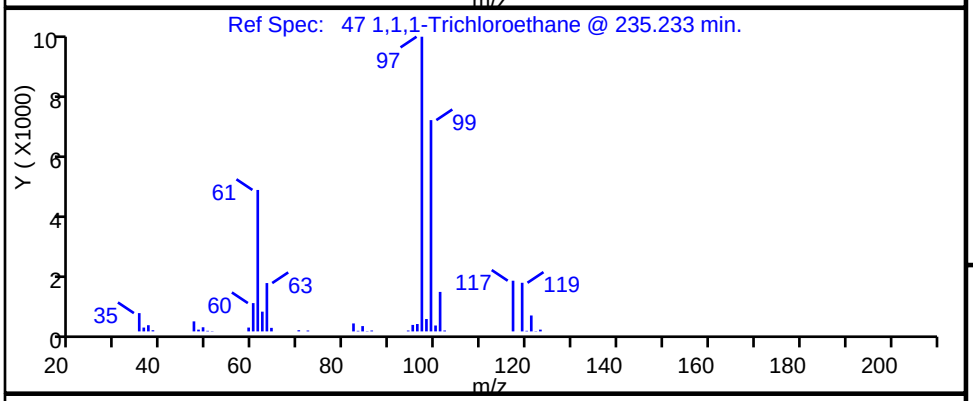
47 1,1,1-Trichloroethane, CAS: 71-55-6

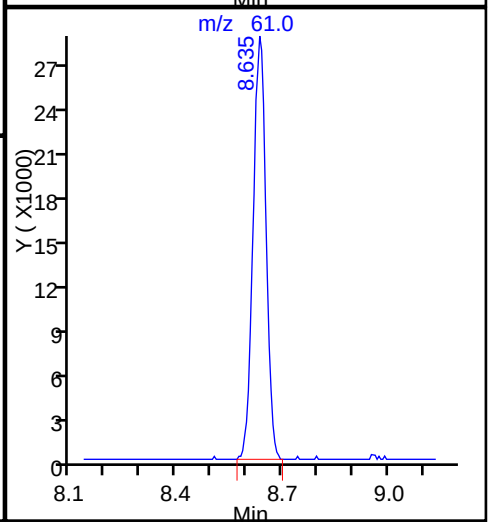


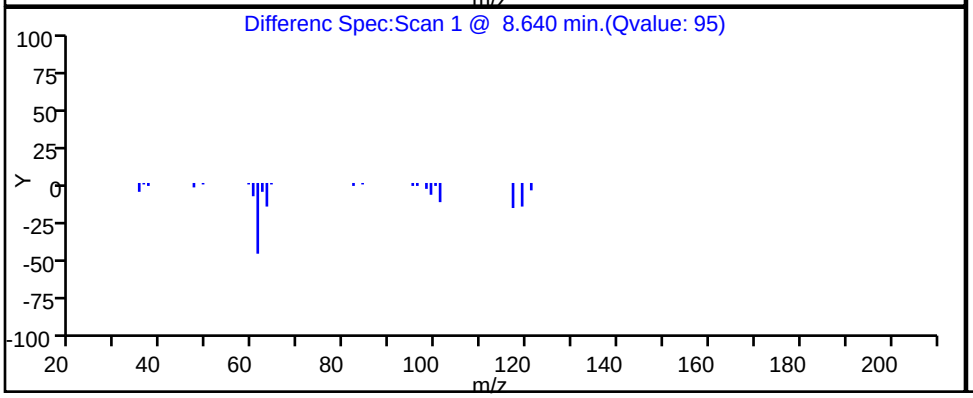








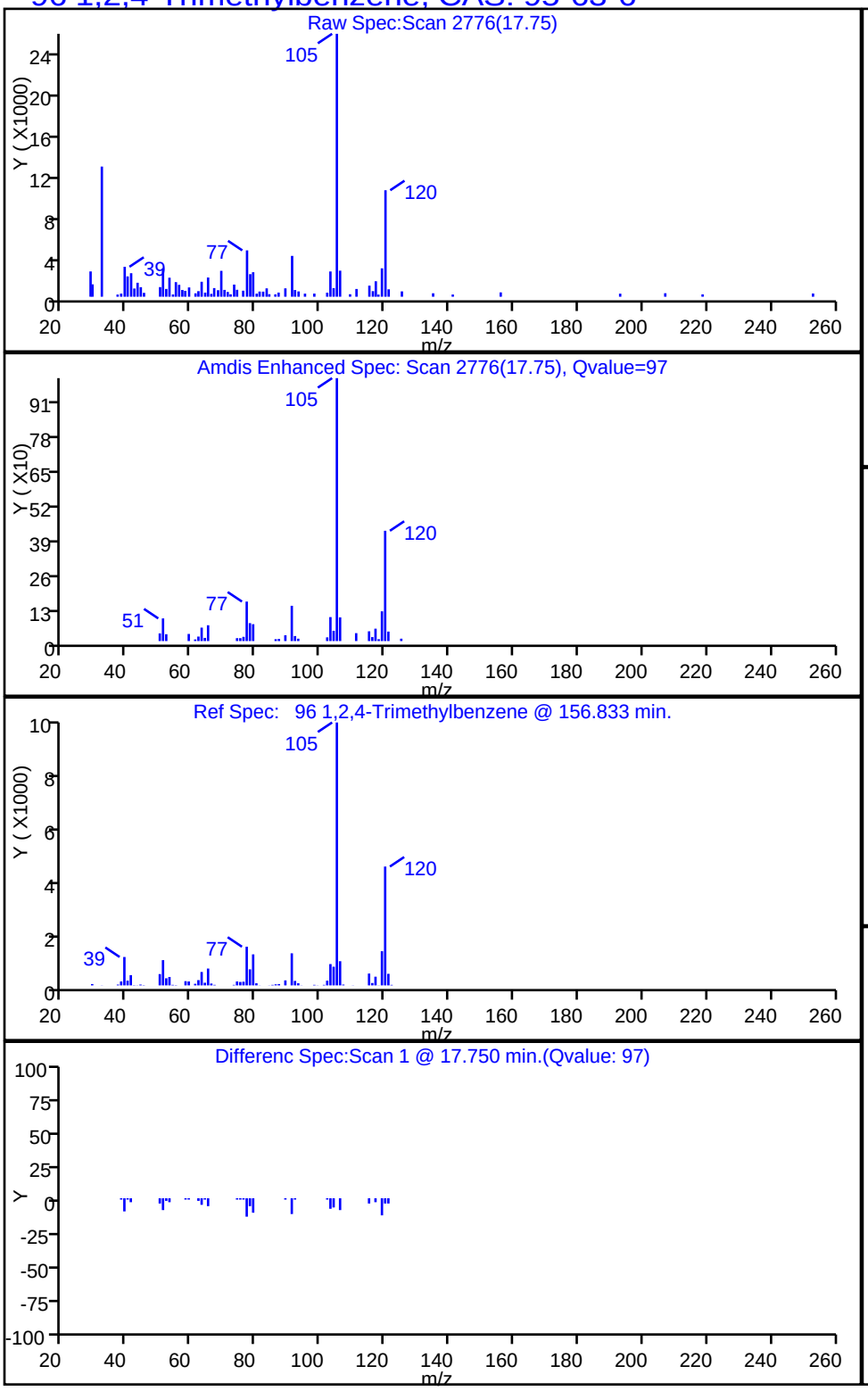


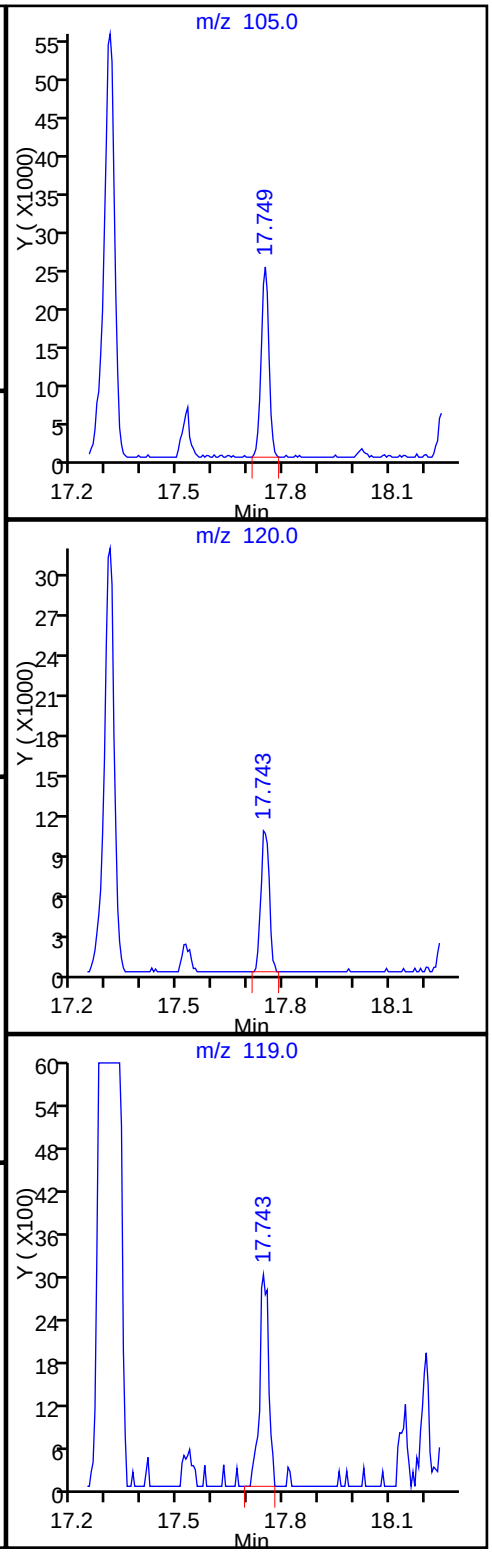


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D				
Injection Date:	19-Jul-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5356-A-5	Lab Sample ID:	140-5356-5		
Client ID:	C-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	15
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6

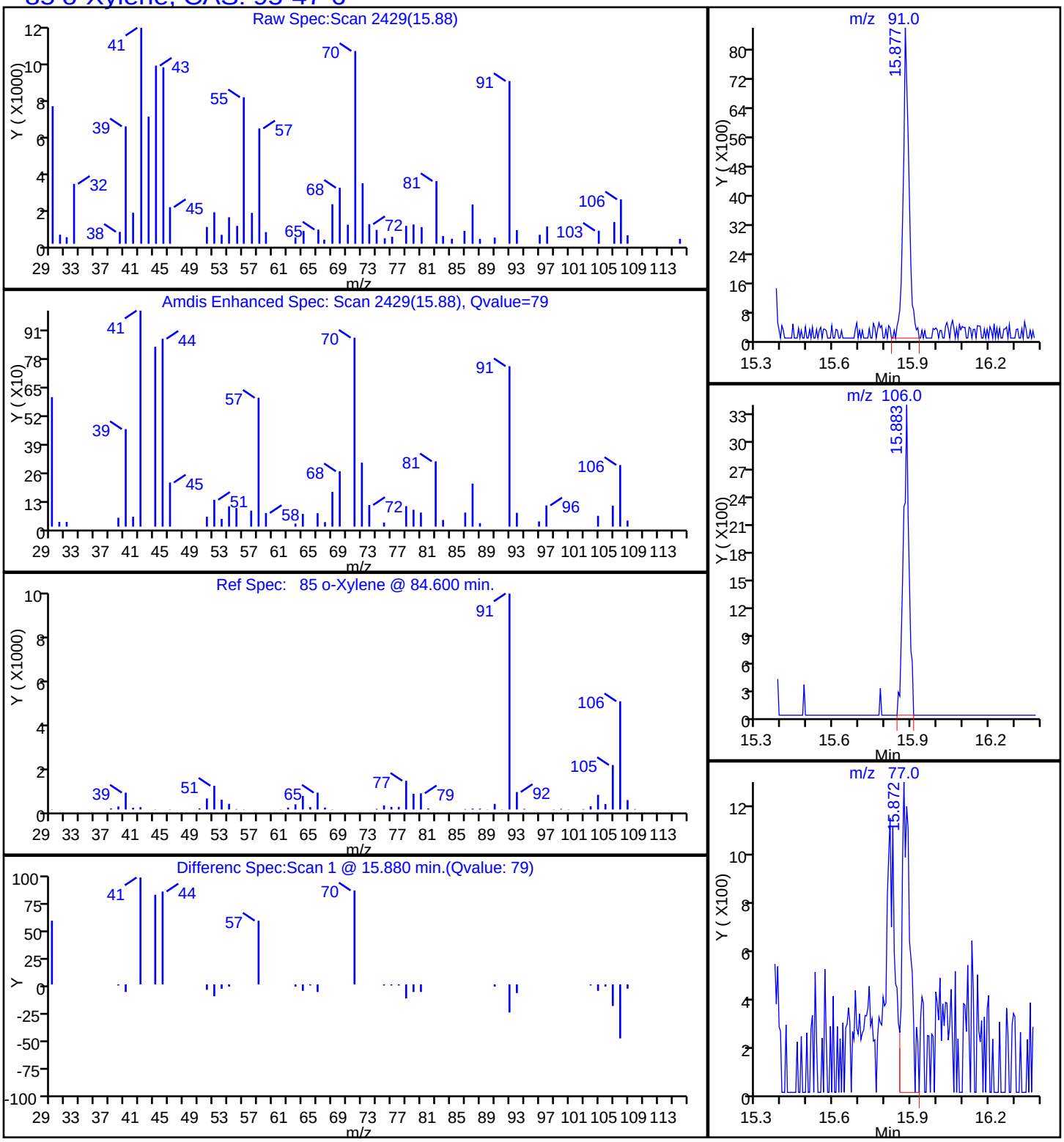




TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P111.D
Injection Date: 19-Jul-2016 21:19:30 Instrument ID: ME
Lims ID: 140-5356-A-5 Lab Sample ID: 140-5356-5
Client ID: C-MID GAC
Operator ID: 007126 ALS Bottle#: 11 Worklist Smp#: 15
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-5356-6

Matrix: Air | Lab File ID: EG19P112.D

Analysis Method: TO 15 LL | Date Collected: 07/14/2016 10:06

Sample wt/vol: 100(mL) | Date Analyzed: 07/19/2016 22:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5859 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	3.0		0.40	0.075
67-66-3	Chloroform	119.38	0.22	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.31	J	0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.66		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	0.35	J	0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.25	J	0.40	0.070
100-41-4	Ethylbenzene	106.17	0.21	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	2.1		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	1.5		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.4	B	0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	ND		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.34	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.4		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.50		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.56	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-5356-6

Matrix: Air | Lab File ID: EG19P112.D

Analysis Method: TO 15 LL | Date Collected: 07/14/2016 10:06

Sample wt/vol: 100(mL) | Date Analyzed: 07/19/2016 22:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5859 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	10		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	11		1.4	0.27
67-66-3	Chloroform	119.38	1.1	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	1.2	J	1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	1.4	J	1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.0	J	1.6	0.28
100-41-4	Ethylbenzene	106.17	0.90	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	7.4		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	5.8		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	13	B	2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	ND		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.7	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	6.7		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	2.4		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	2.4	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Lims ID:	140-5356-A-6				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jul-2016 22:05:30	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-016				
Misc. Info.:	140-5356-a-6				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				
First Level Reviewer: tajh		Date:	20-Jul-2016 09:02:34		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.605	7.605	0.000	88	384342	4.00	
* 2 1,4-Difluorobenzene	114	9.843	9.849	-0.006	96	1807041	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	91	1849701	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.503	16.503	0.000	87	1553745	4.39	
6 Chlorodifluoromethane	67	2.920	2.925	-0.005	95	32060	0.6018	
8 Dichlorodifluoromethane	85	2.973	2.973	0.000	100	59074	0.1323	
27 1,1-Dichloroethene	96	4.818	4.818	0.000	93	5390	0.0504	
31 Methylene Chloride	84	5.152	5.141	0.011	97	44076	0.4245	
37 1,1-Dichloroethane	63	6.317	6.317	0.000	98	15555	0.0691	
42 cis-1,2-Dichloroethene	96	7.277	7.282	-0.005	99	7607	0.0621	
44 Chloroform	83	7.622	7.622	0.000	28	13383	0.0436	
47 1,1,1-Trichloroethane	97	8.635	8.635	0.000	95	180077	0.4752	
51 Benzene	78	9.234	9.239	-0.005	82	222004	0.6509	
68 Toluene	91	12.804	12.804	0.000	92	135107	0.3073	
79 Ethylbenzene	91	15.182	15.187	-0.005	99	24836	0.0414	
81 m-Xylene & p-Xylene	91	15.349	15.354	-0.005	99	36025	0.0757	
85 o-Xylene	91	15.877	15.883	-0.006	87	18235	0.0363	
92 1,3,5-Trimethylbenzene	120	17.274	17.279	-0.005	88	31116	0.0993	
96 1,2,4-Trimethylbenzene	105	17.749	17.748	0.001	98	153163	0.2734	
102 1,2,3-Trimethylbenzene	105	18.250	18.250	0.000	98	28918	0.0681	
S 126 Xylenes, Total	100				0		0.1120	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

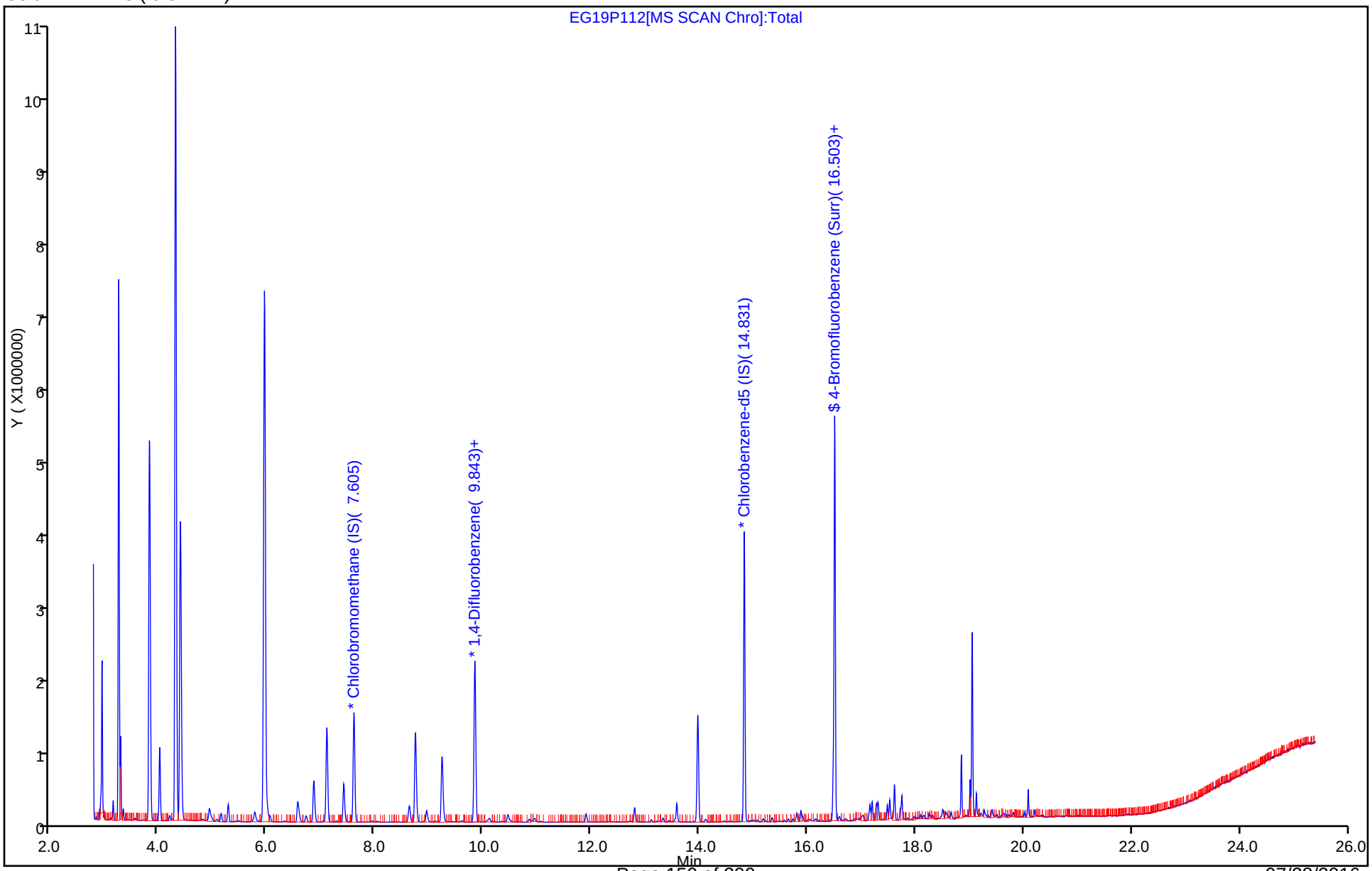
Report Date: 20-Jul-2016 12:49:17 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D

Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6	Worklist Smp#:	16
Client ID:	C-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Lims ID:	140-5356-A-6				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	19-Jul-2016 22:05:30	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-016				
Misc. Info.:	140-5356-a-6				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				

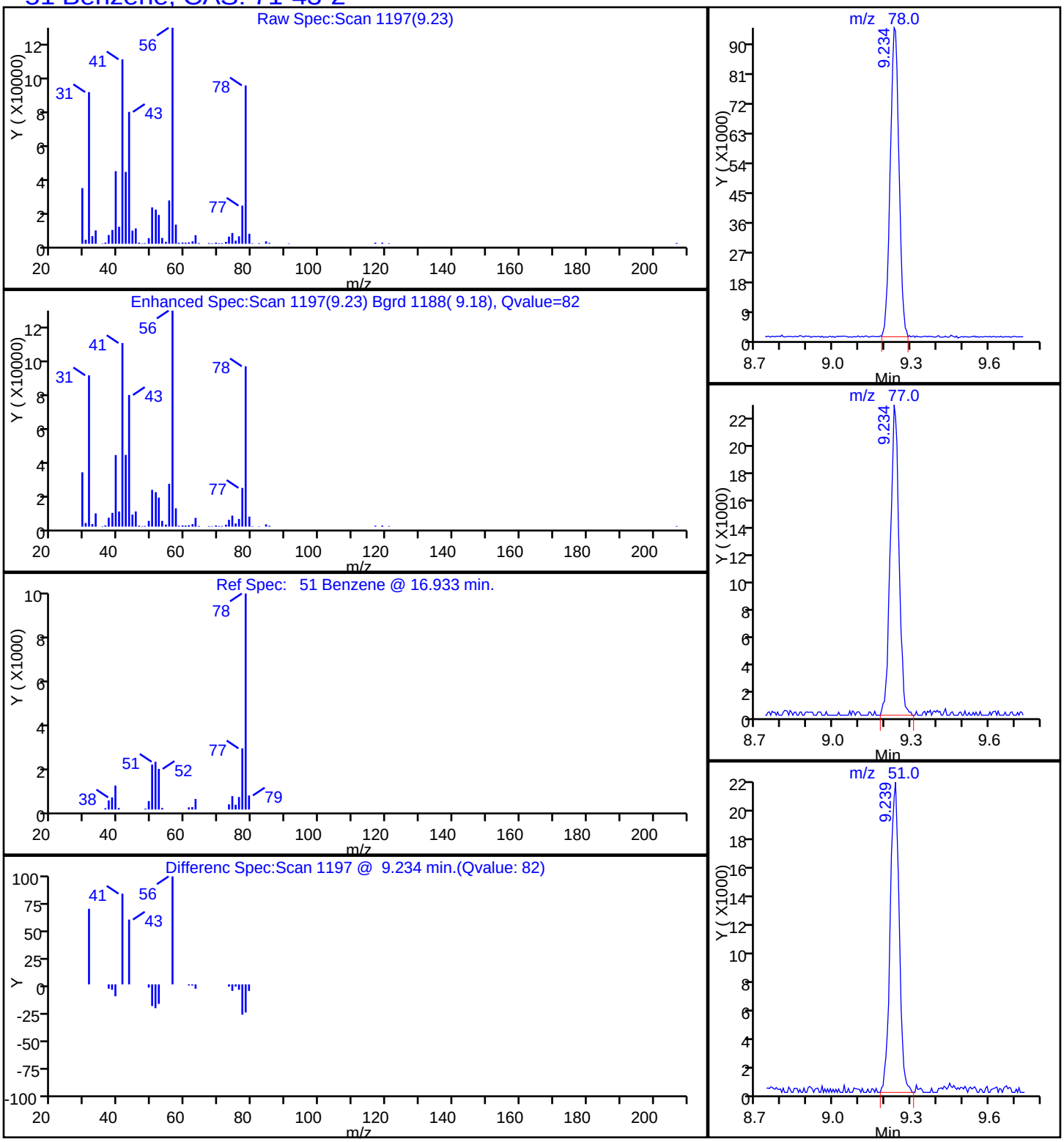
First Level Reviewer: tajh Date: 20-Jul-2016 09:02:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.39	109.85

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D		
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6
Client ID:	C-EFFLUENT		
Operator ID:	007126	ALS Bottle#:	12 Worklist Smp#: 16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

51 Benzene, CAS: 71-43-2



Report Date: 20-Jul-2016 12:49:17 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D

Injection Date: 19-Jul-2016 22:05:30 Instrument ID: ME

Lims ID: 140-5356-A-6 Lab Sample ID: 140-5356-6

Client ID: C-EFFLUENT

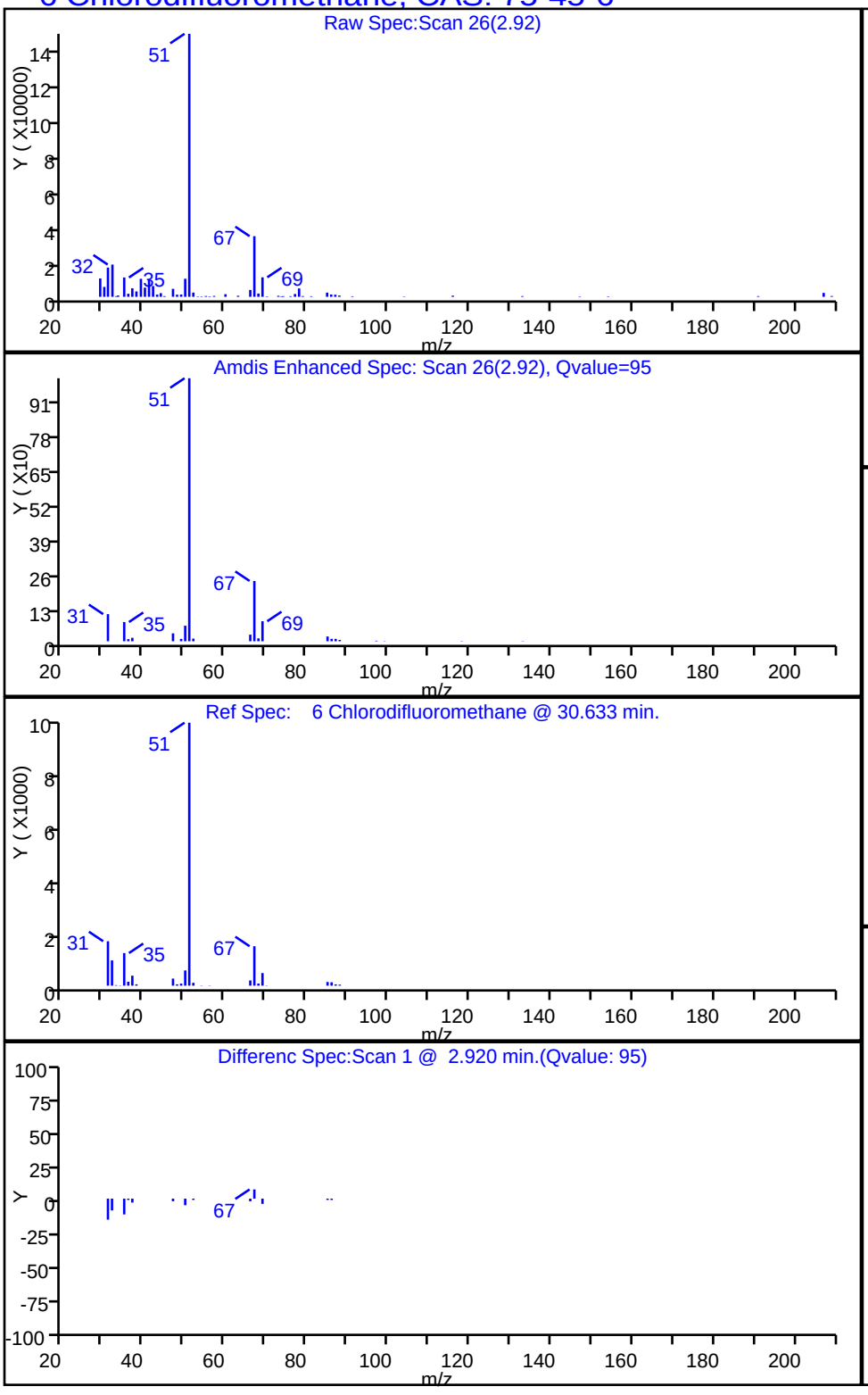
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 16

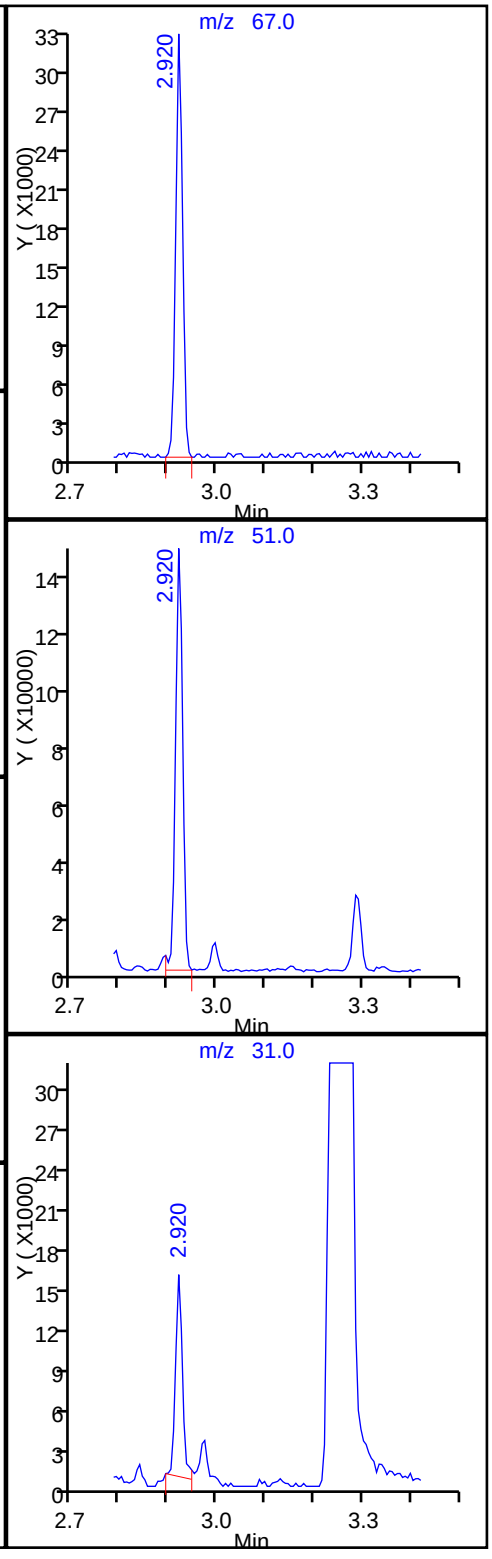
Purge Vol: 500.000 mL Dil. Factor: 1.0000

Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL

Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6

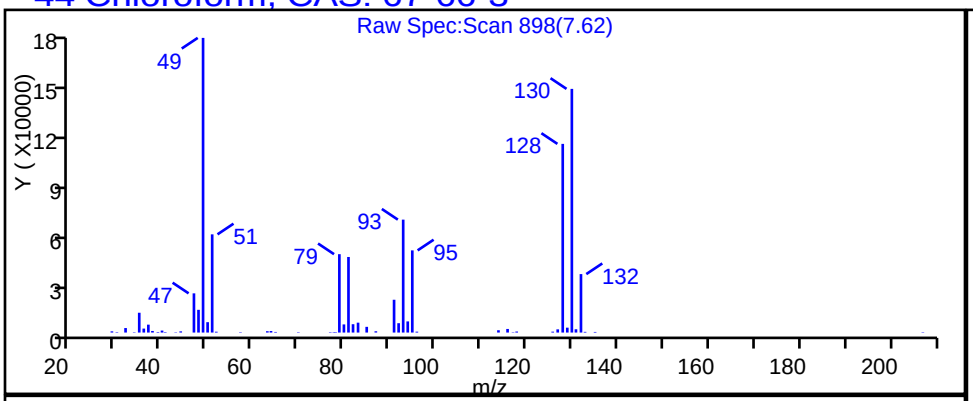


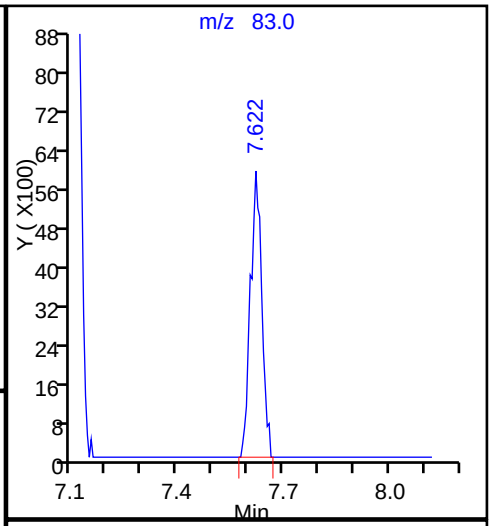


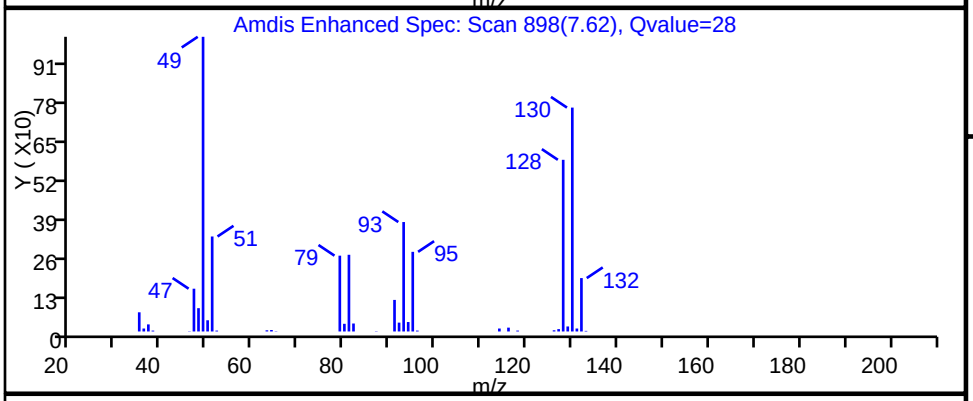
TestAmerica Knoxville

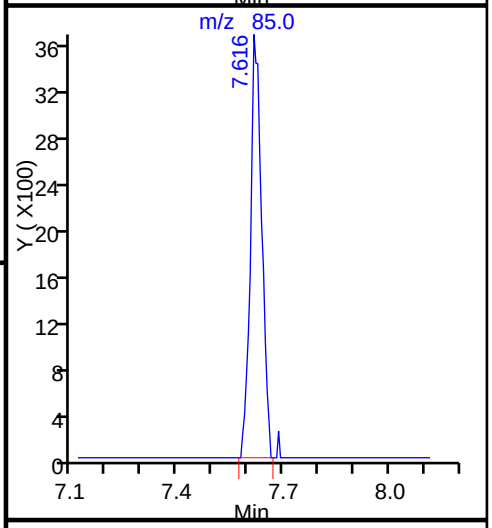
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

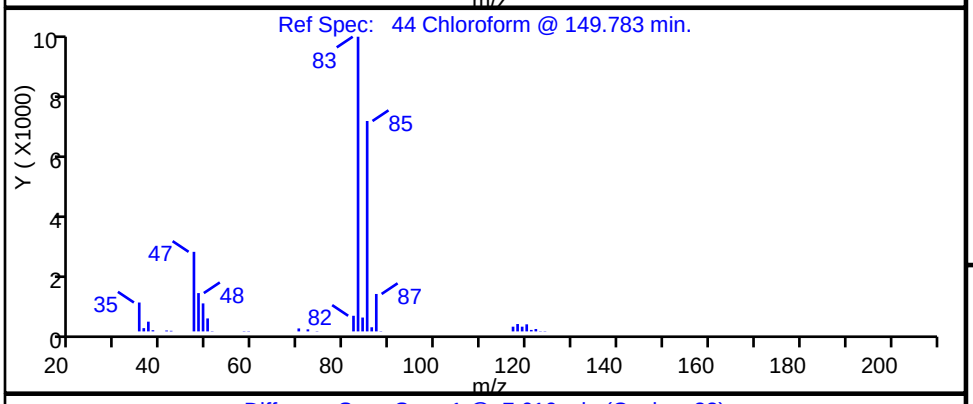
44 Chloroform, CAS: 67-66-3

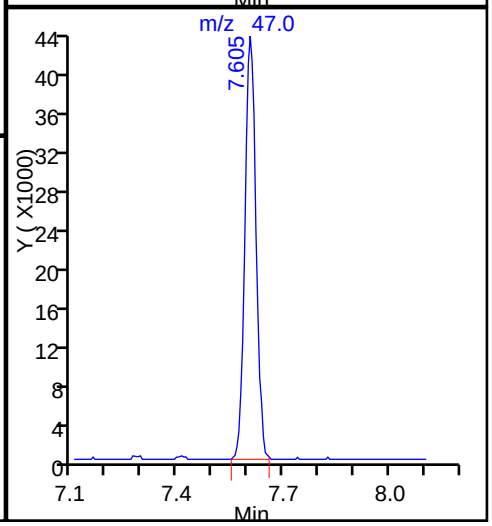


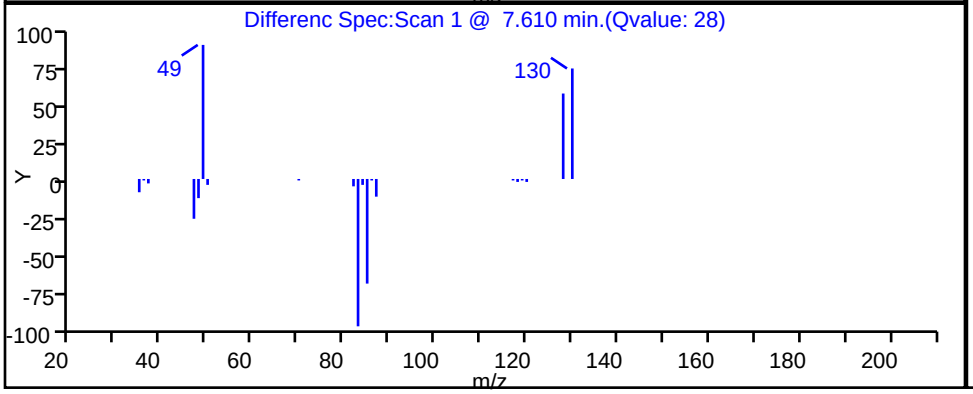








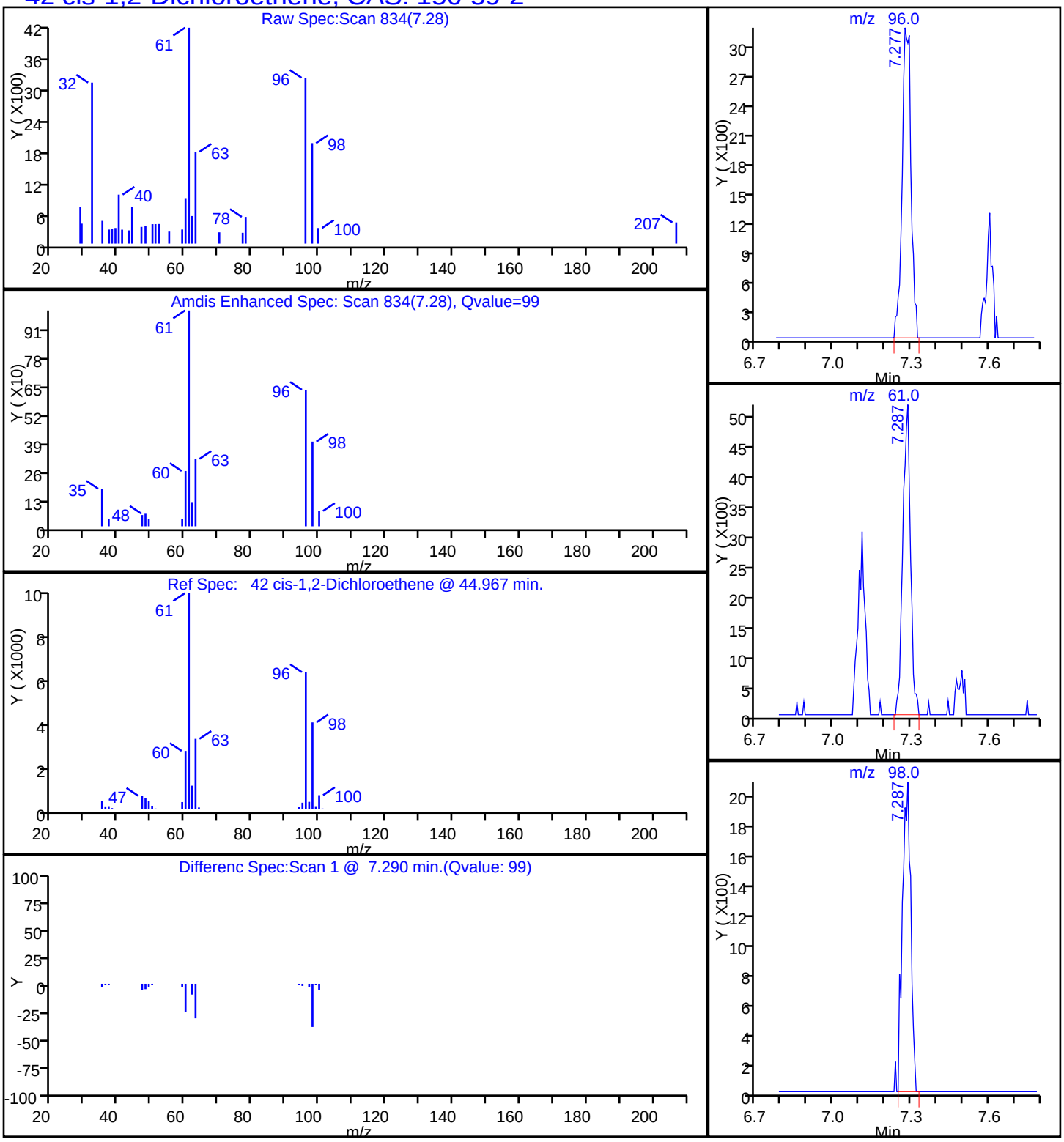




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 cis-1,2-Dichloroethene, CAS: 156-59-2



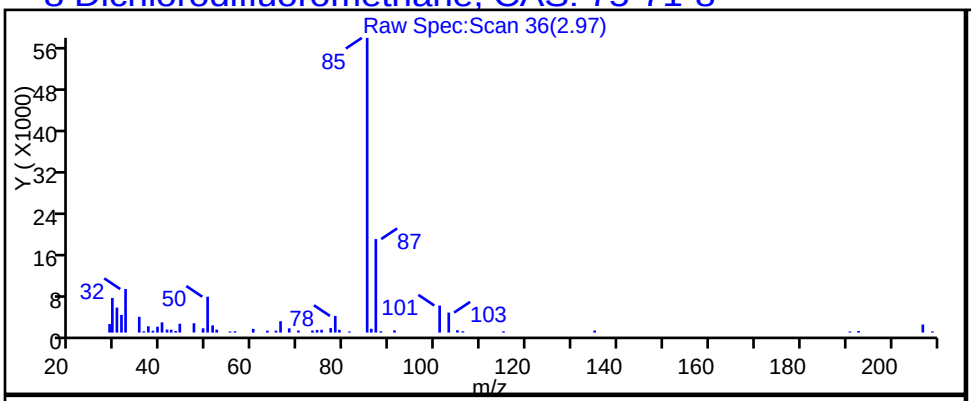
Report Date: 20-Jul-2016 12:49:17 Chrom Revision: 2.2 18-Jul-2016 15:30:42

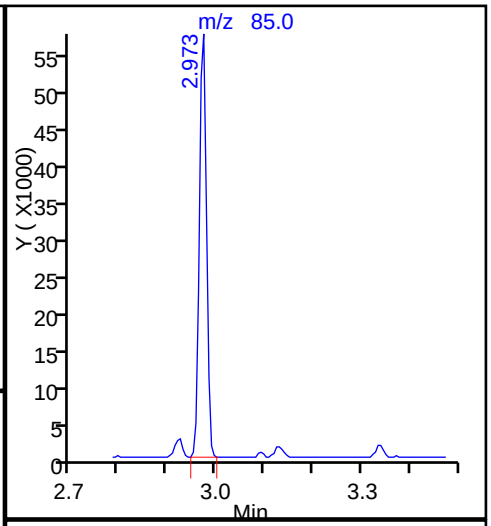
TestAmerica Knoxville

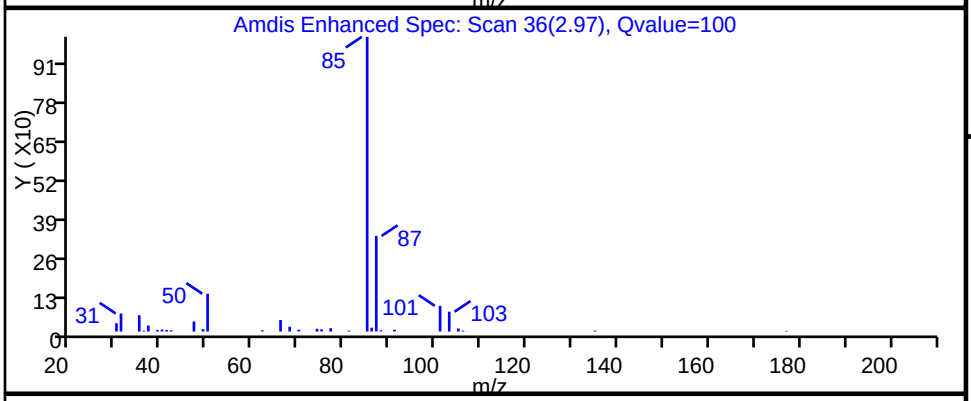
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D

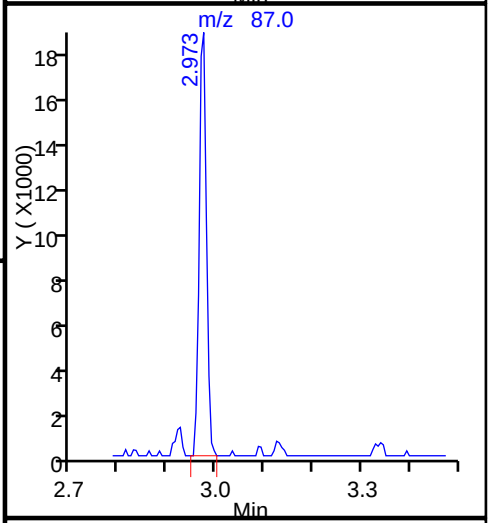
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

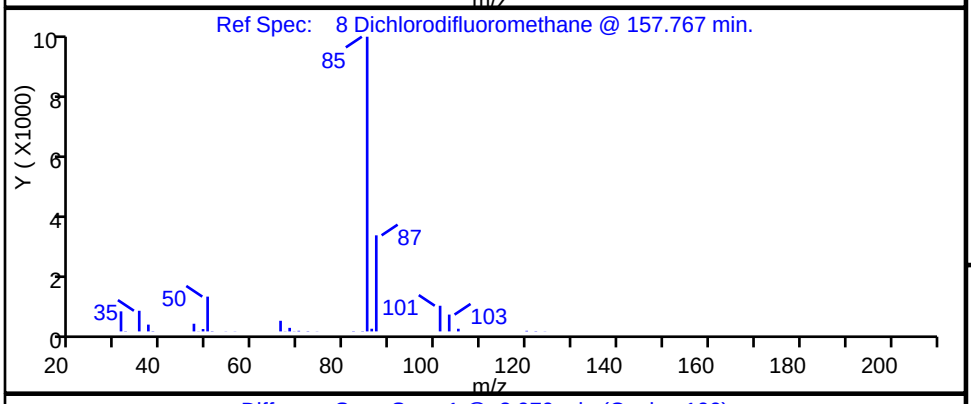
8 Dichlorodifluoromethane, CAS: 75-71-8

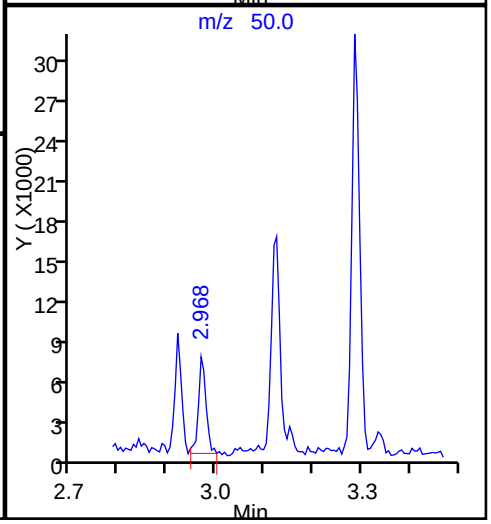


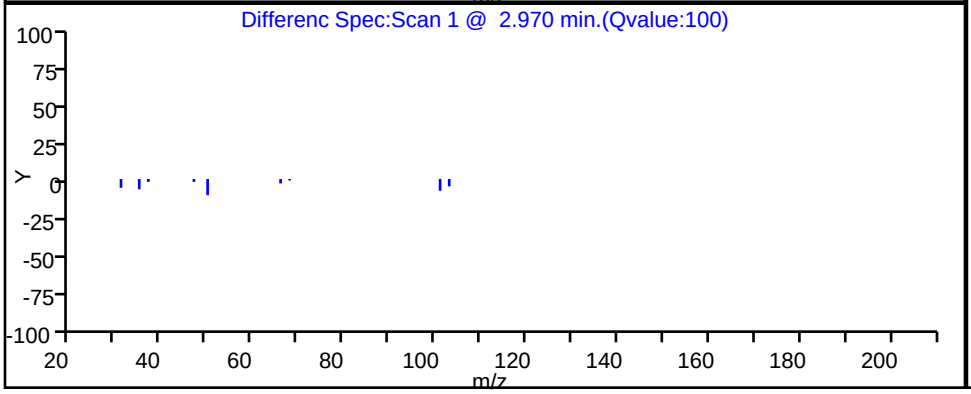








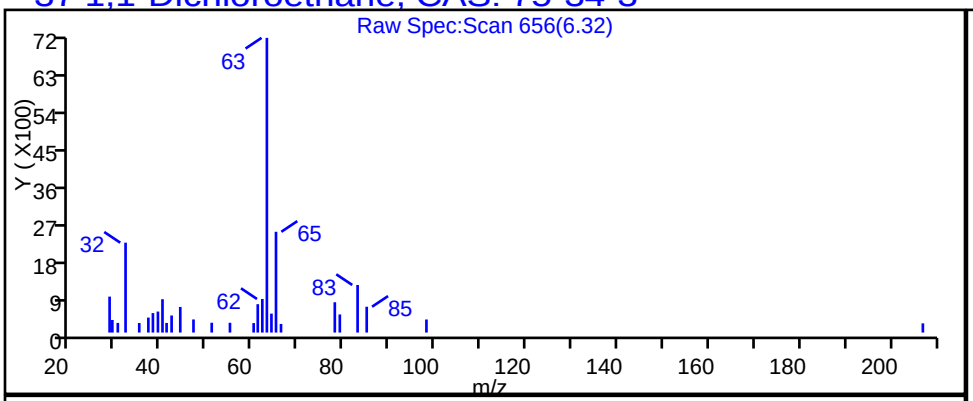


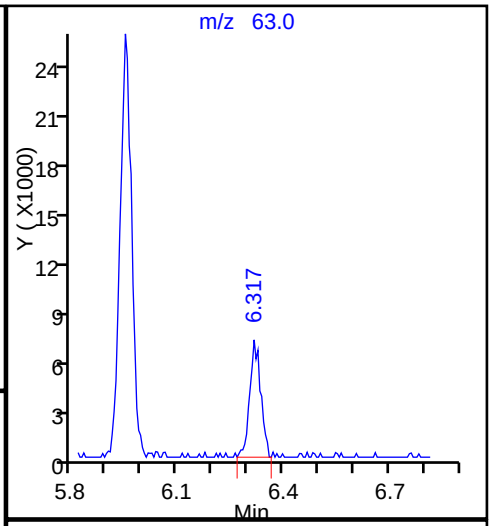


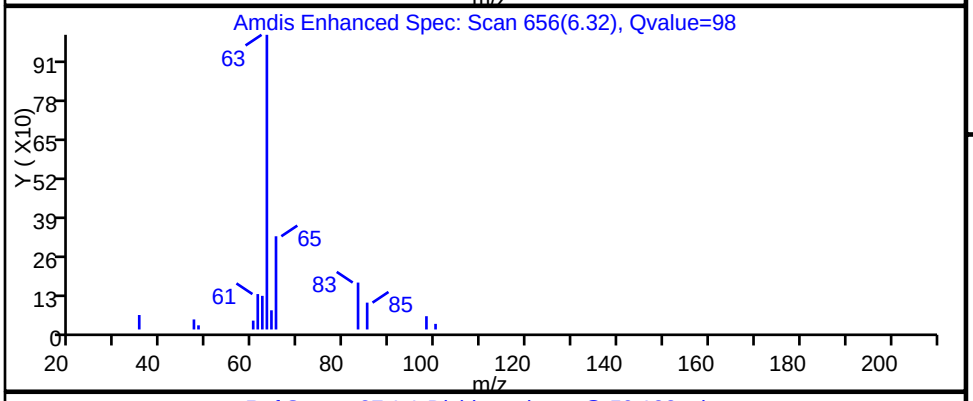
TestAmerica Knoxville

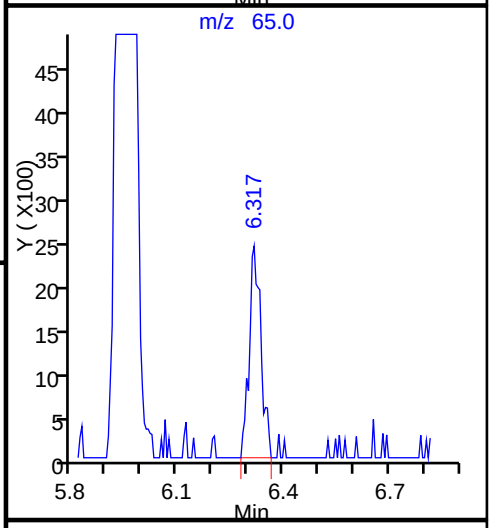
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

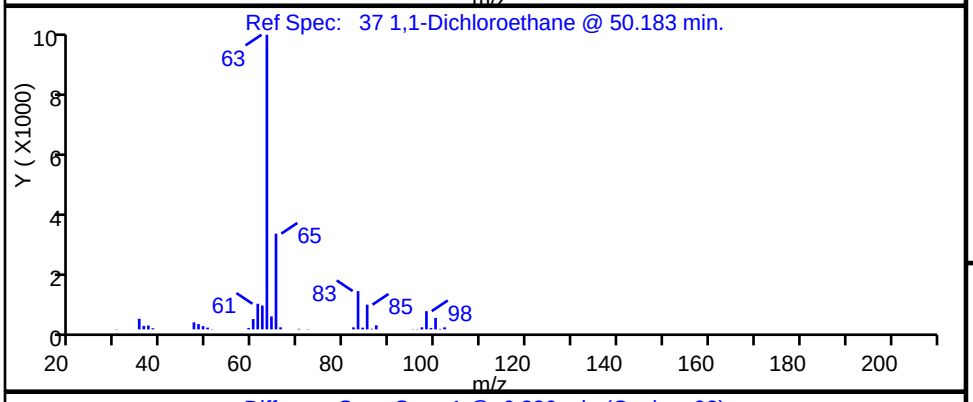
37 1,1-Dichloroethane, CAS: 75-34-3

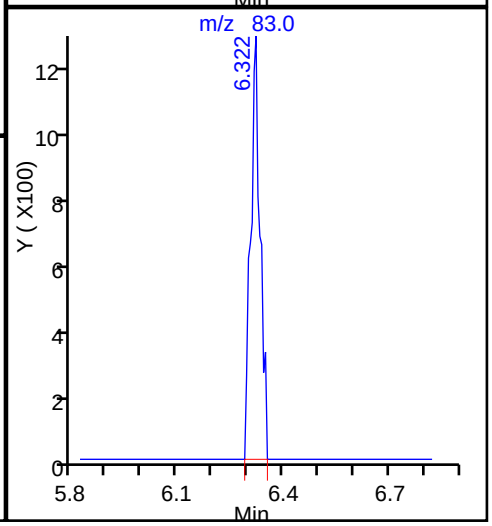


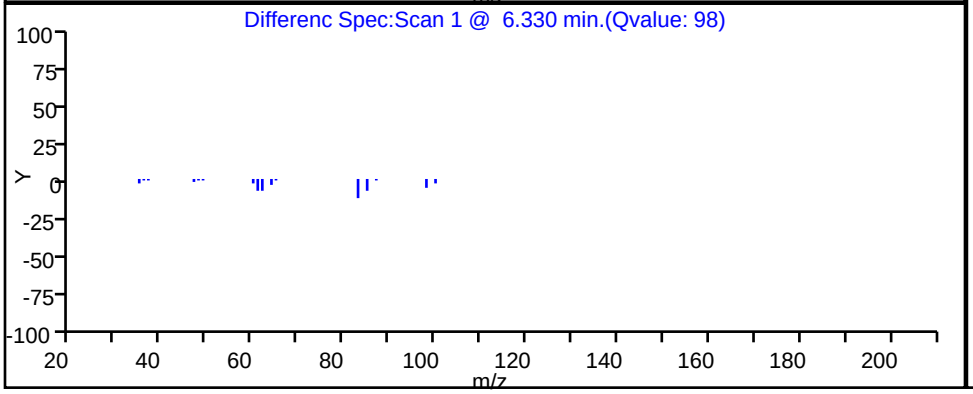








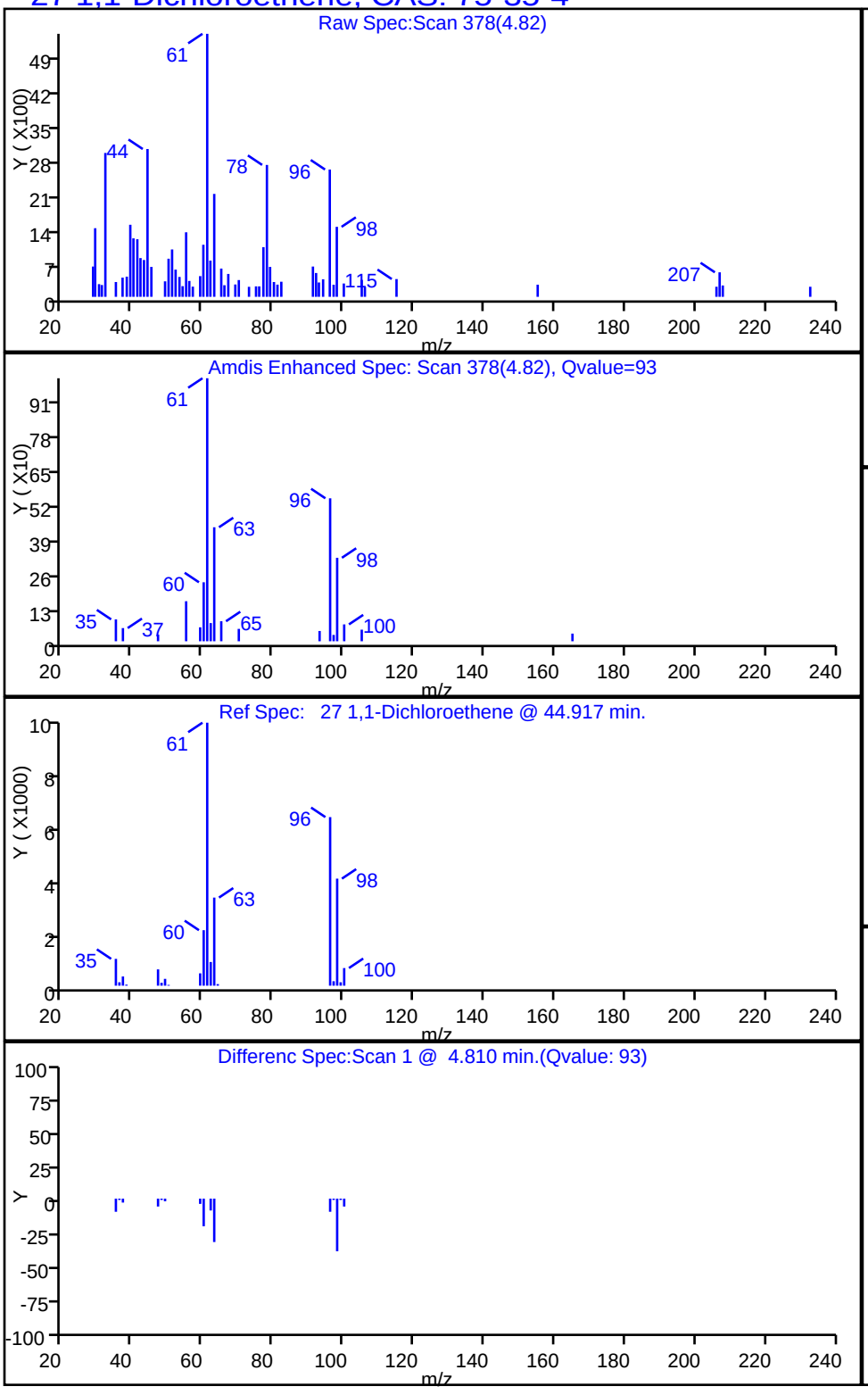


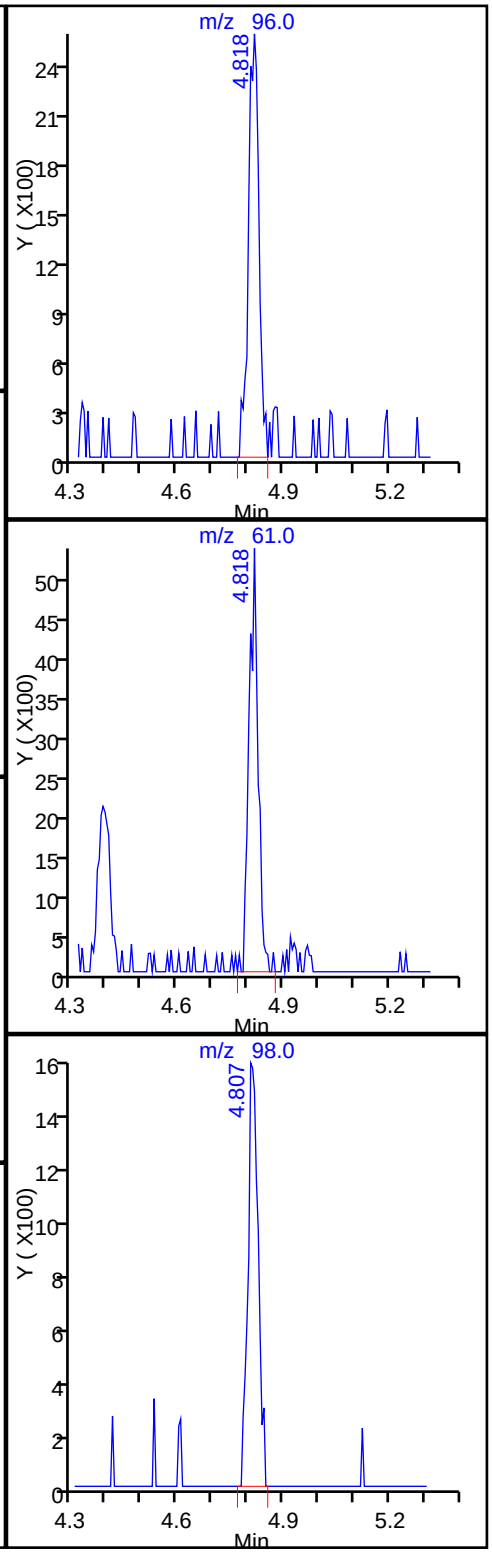


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4

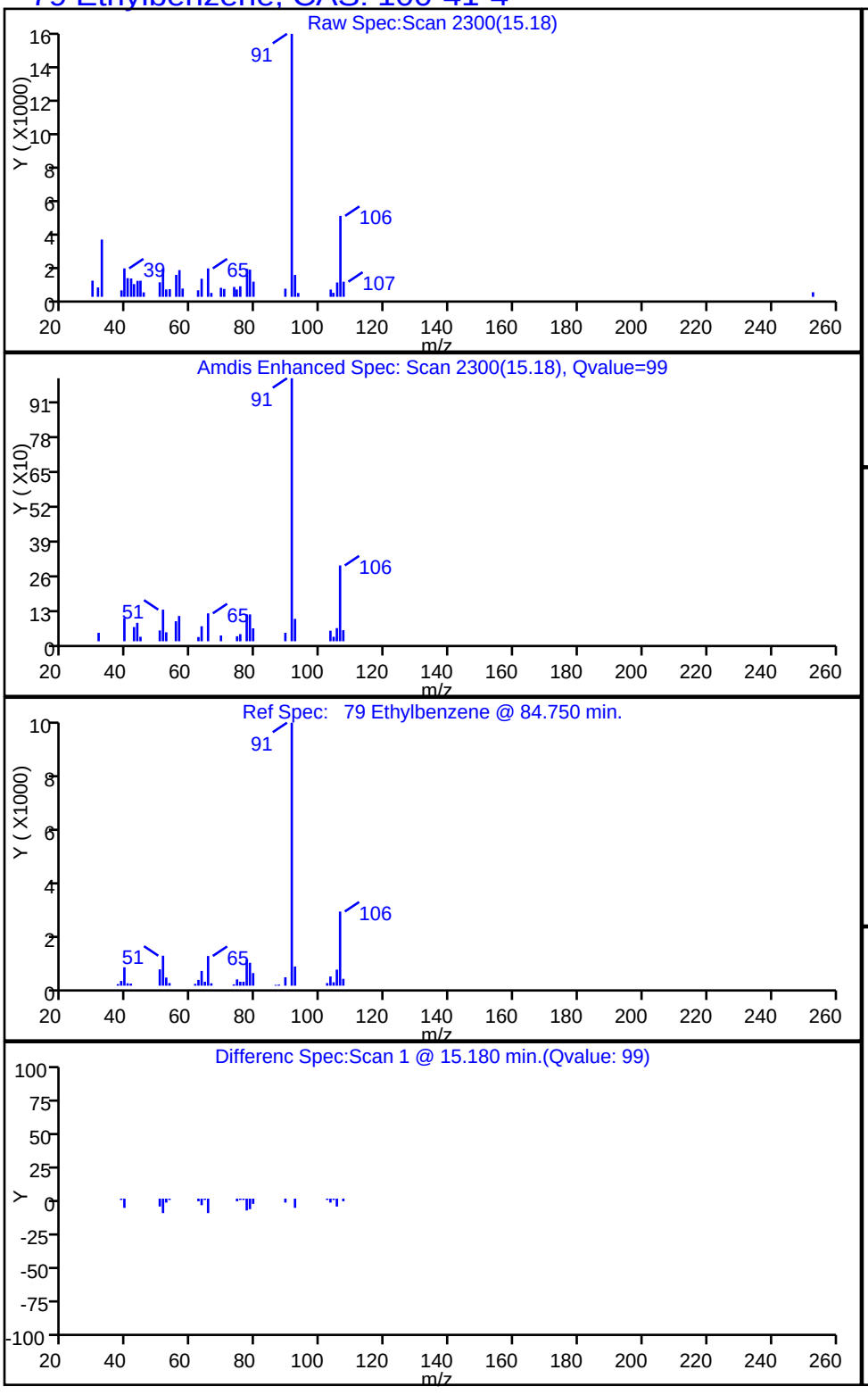


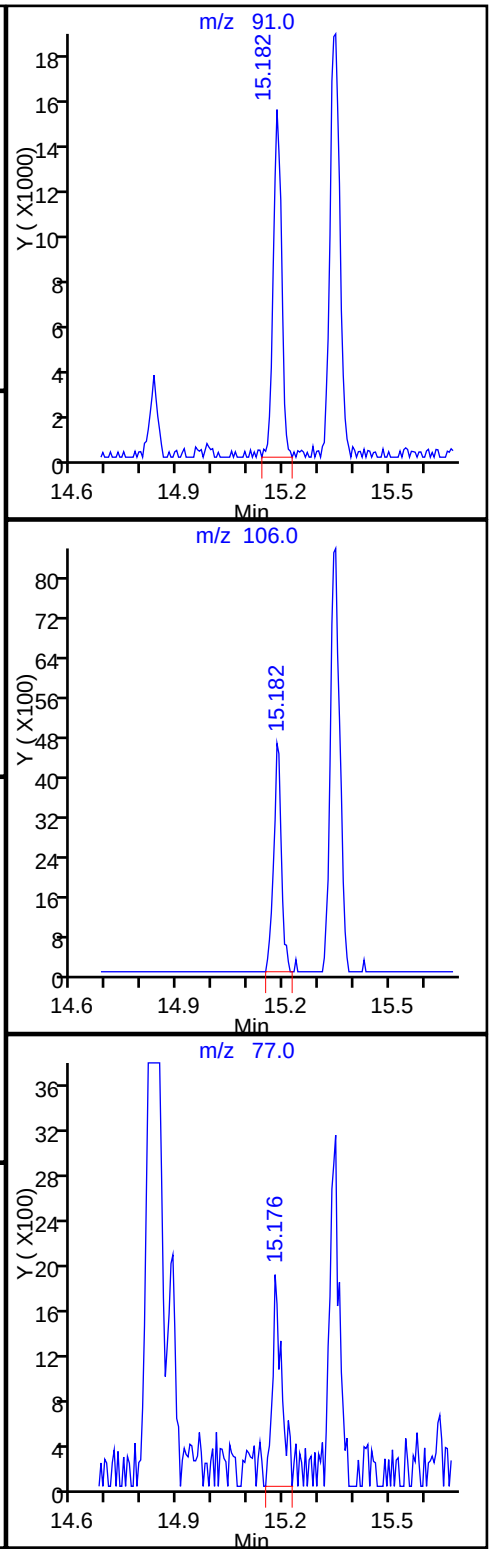


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

79 Ethylbenzene, CAS: 100-41-4

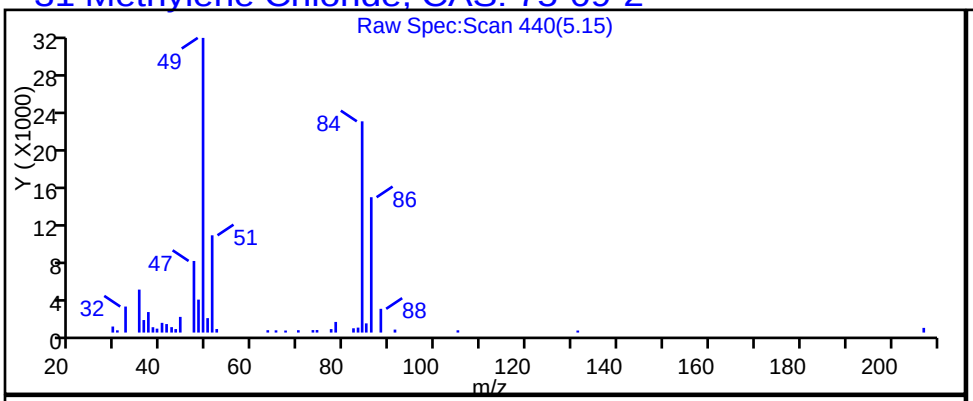


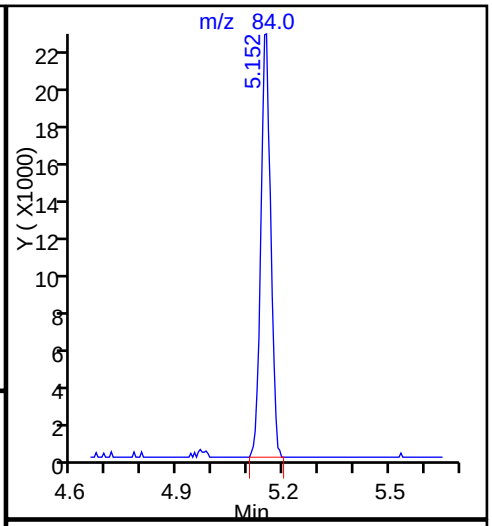


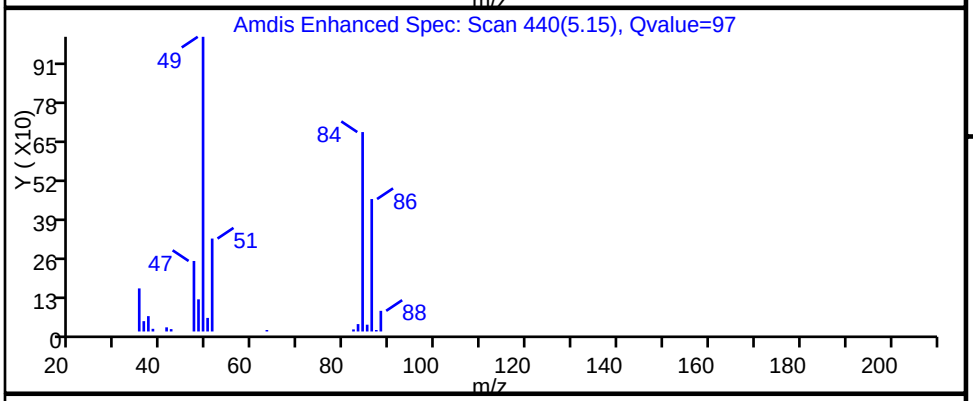
TestAmerica Knoxville

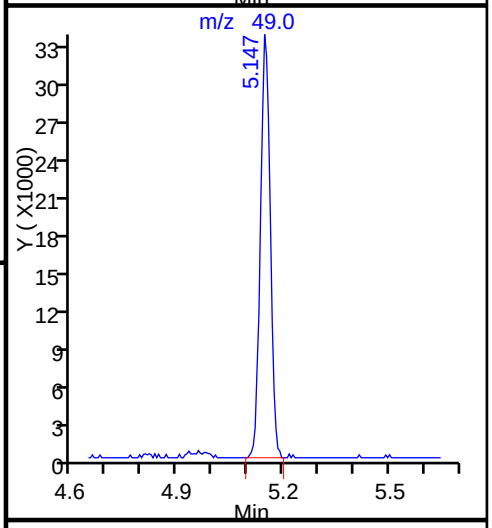
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D
Injection Date: 19-Jul-2016 22:05:30 Instrument ID: ME
Lims ID: 140-5356-A-6 Lab Sample ID: 140-5356-6
Client ID: C-EFFLUENT
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

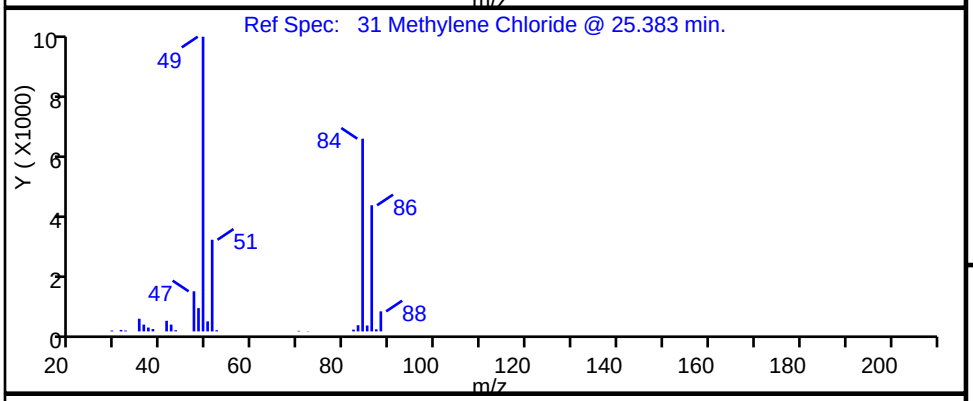
31 Methylene Chloride, CAS: 75-09-2

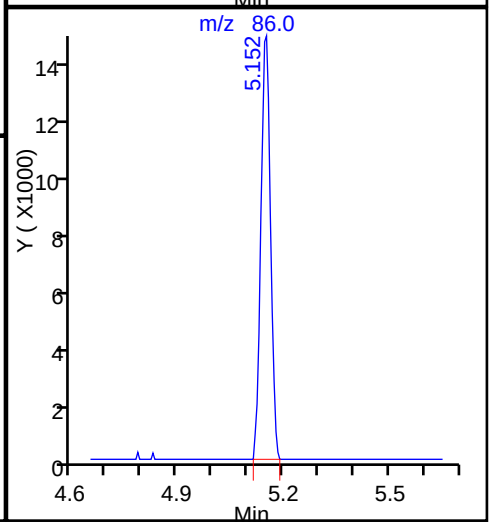


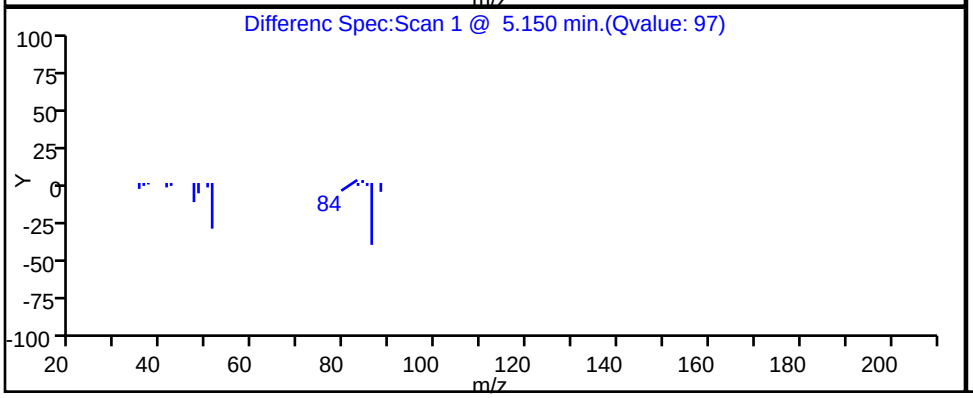












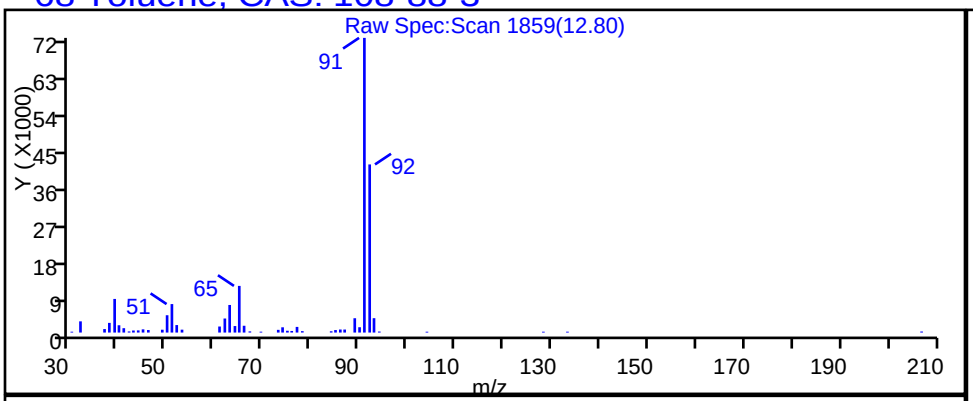
Report Date: 20-Jul-2016 12:49:18 Chrom Revision: 2.2 18-Jul-2016 15:30:42

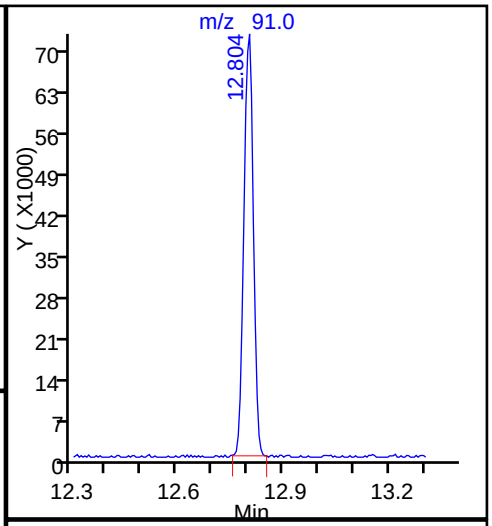
TestAmerica Knoxville

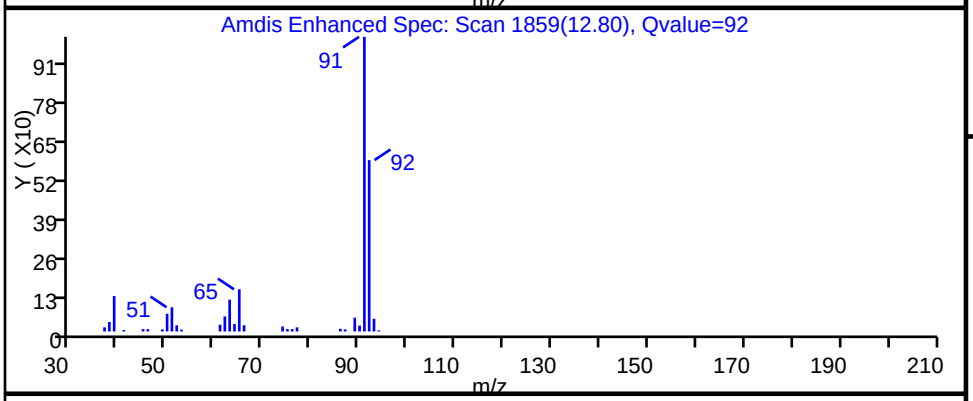
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D

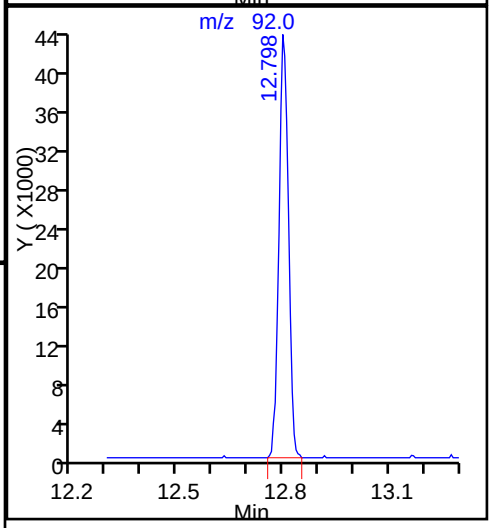
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

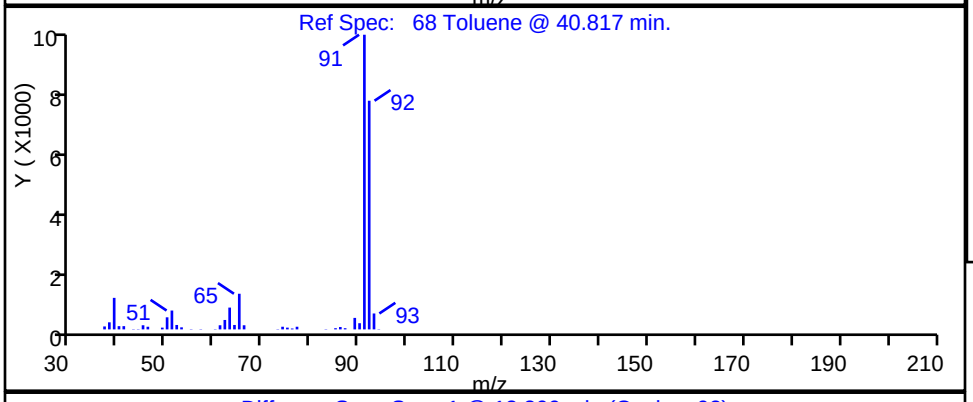
68 Toluene, CAS: 108-88-3

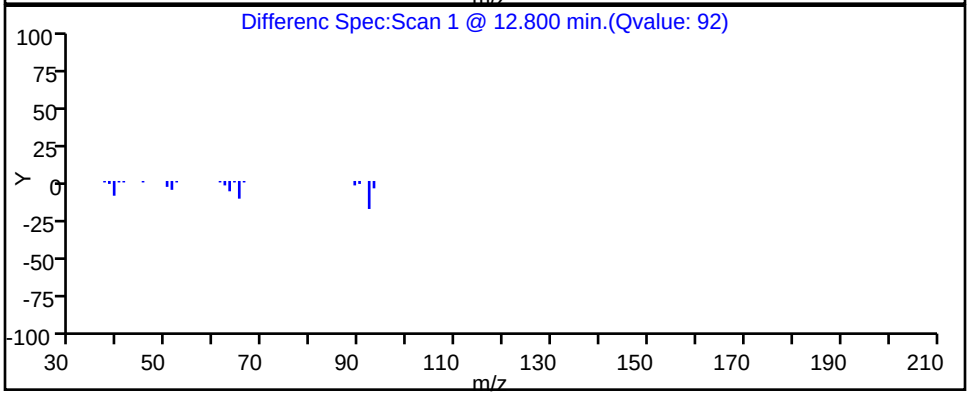






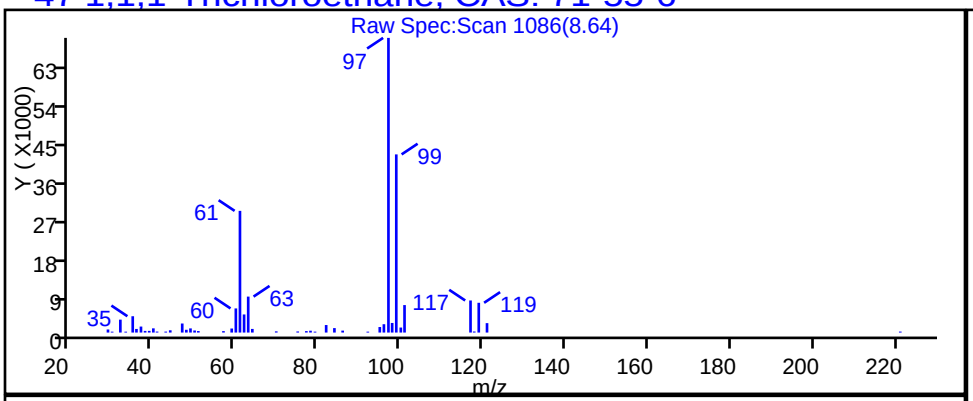


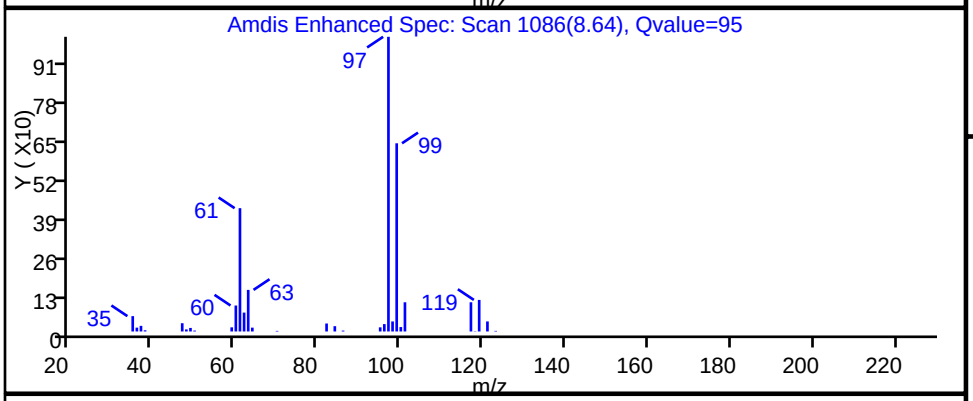


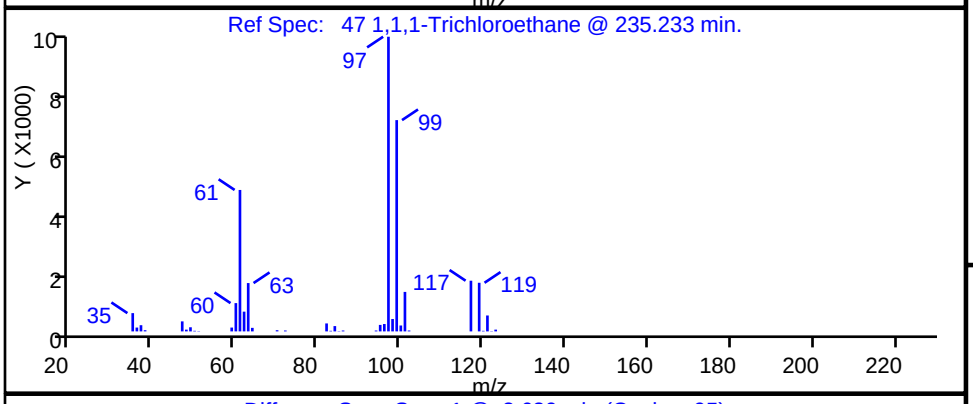


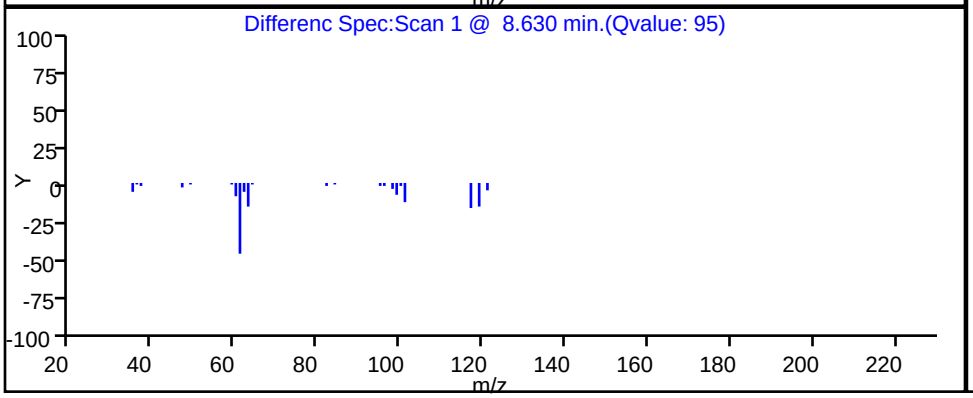
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D
Injection Date: 19-Jul-2016 22:05:30 Instrument ID: ME
Lims ID: 140-5356-A-6 Lab Sample ID: 140-5356-6
Client ID: C-EFFLUENT
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 16
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

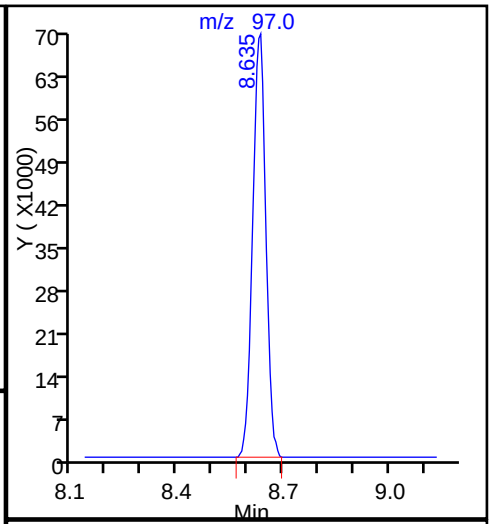
47 1,1,1-Trichloroethane, CAS: 71-55-6

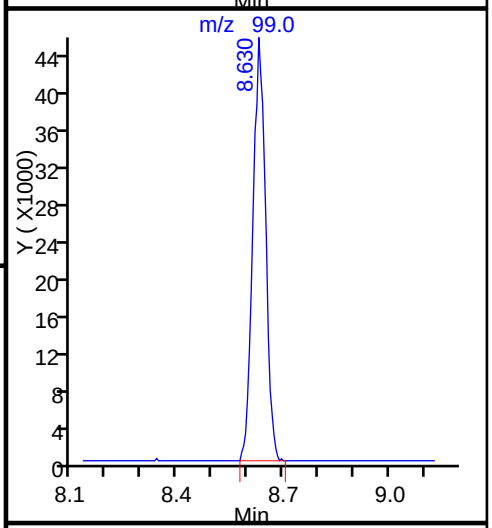


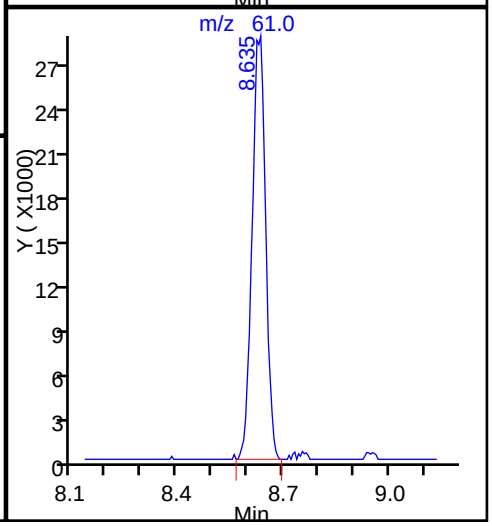








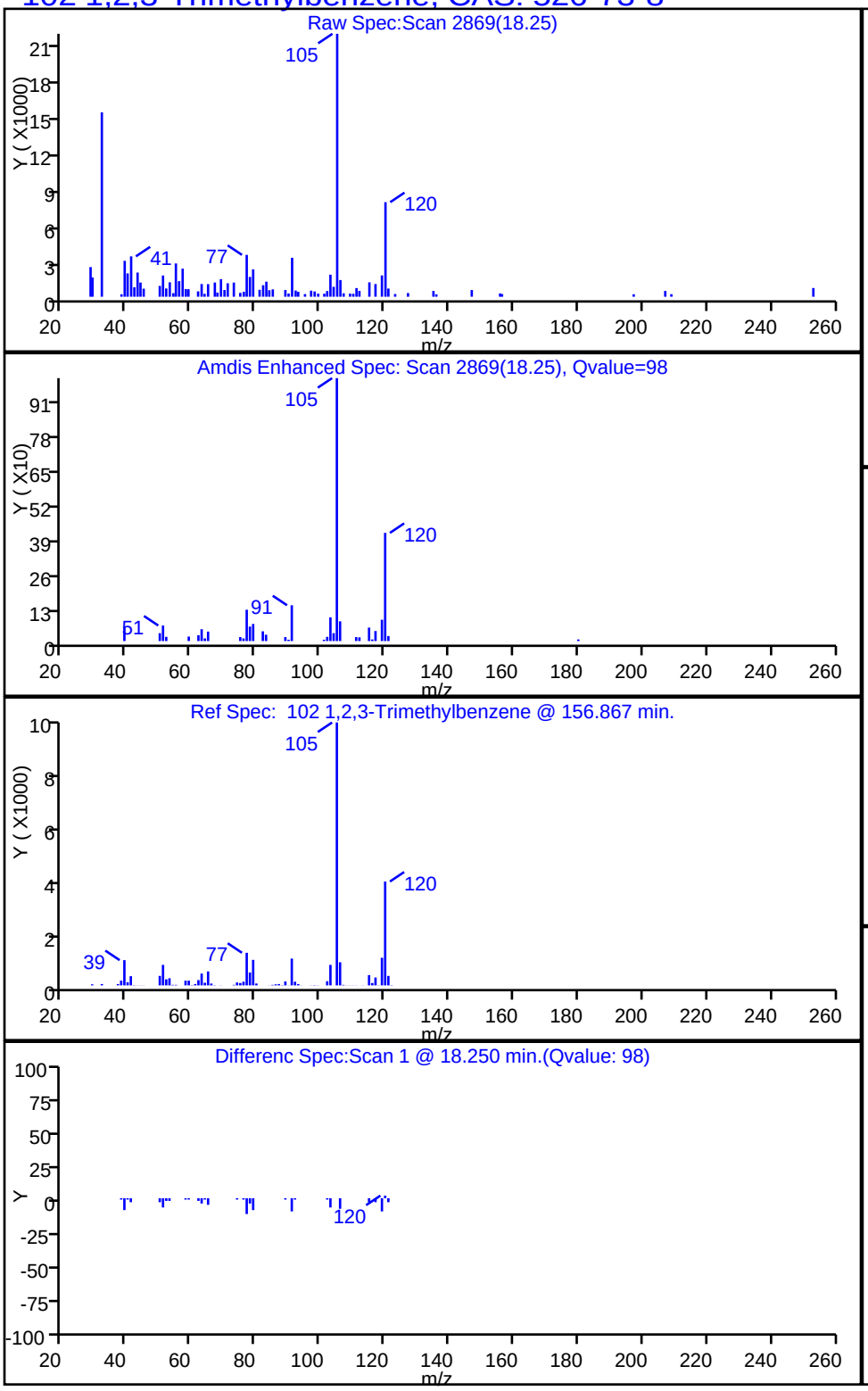


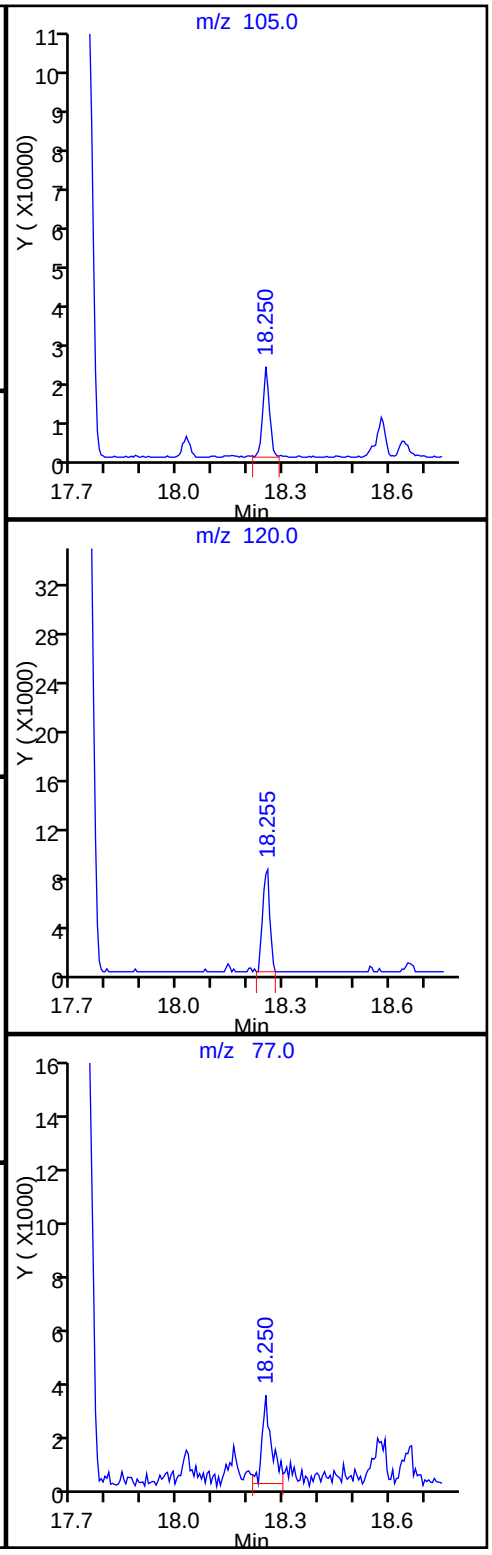


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 1,2,3-Trimethylbenzene, CAS: 526-73-8

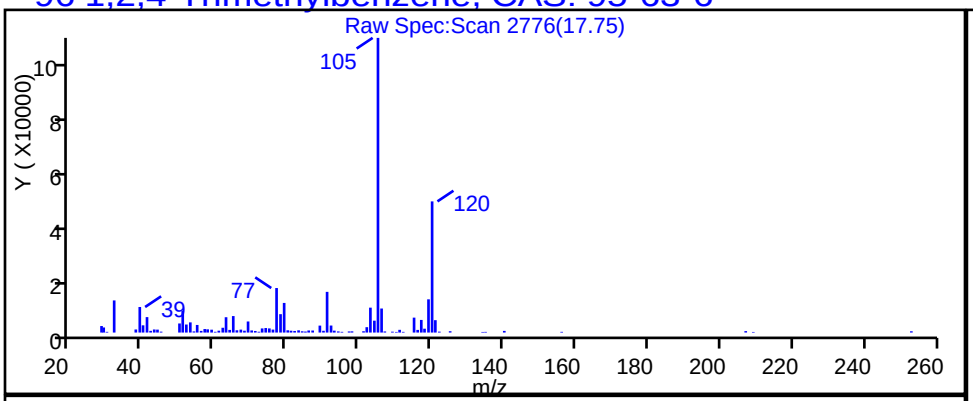


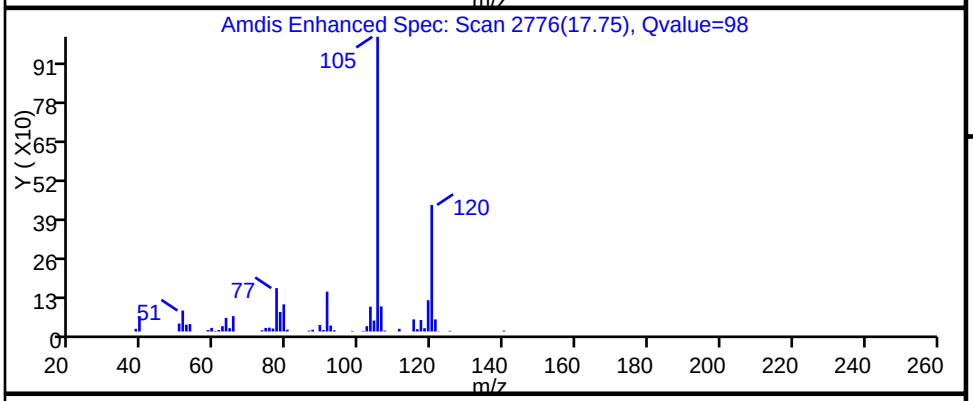


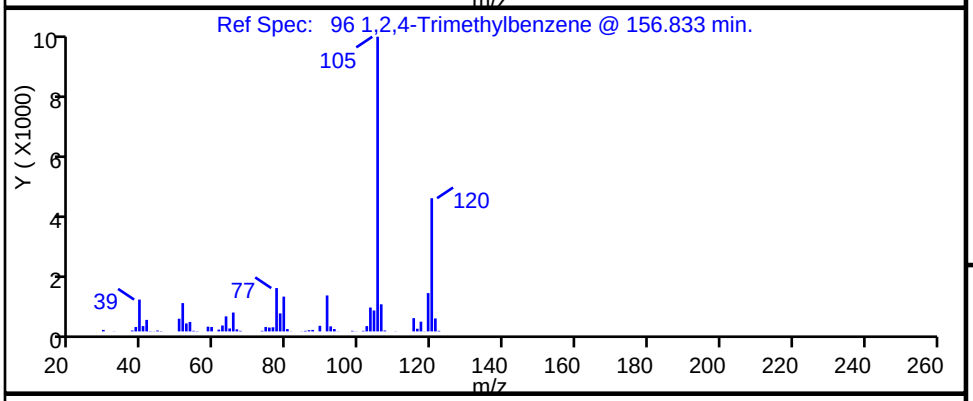
TestAmerica Knoxville

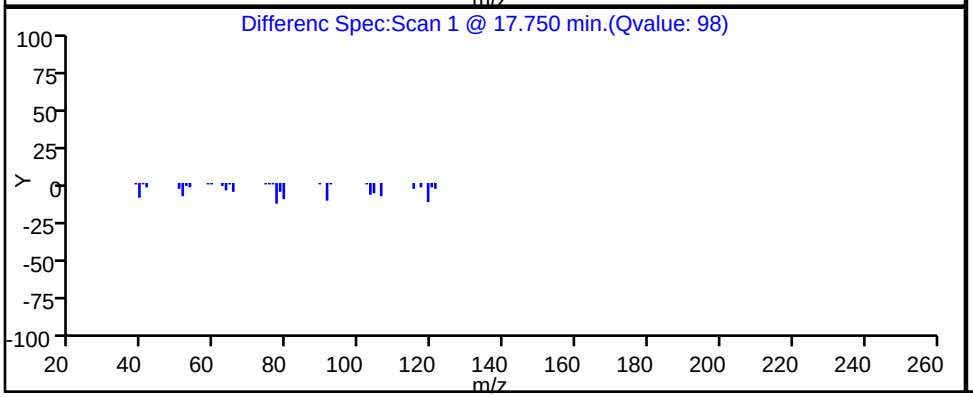
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

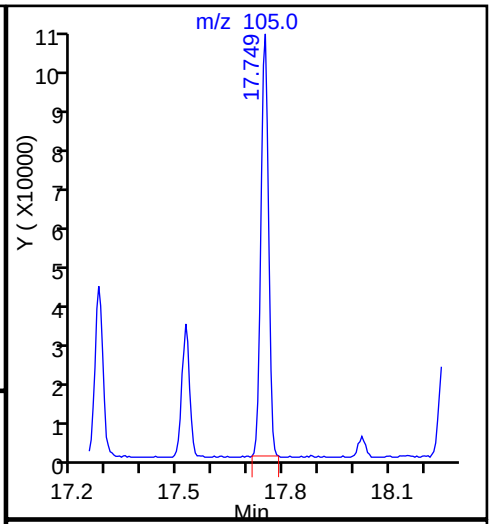
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

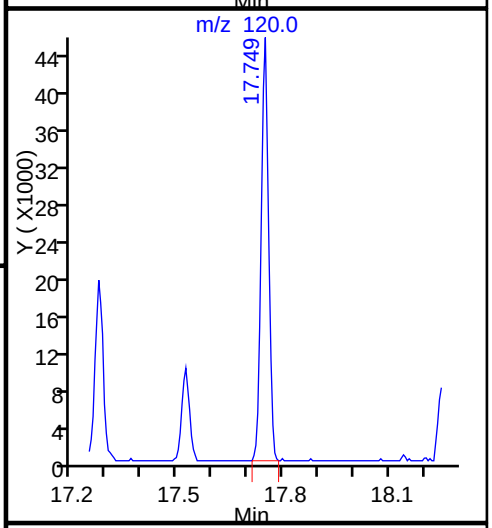


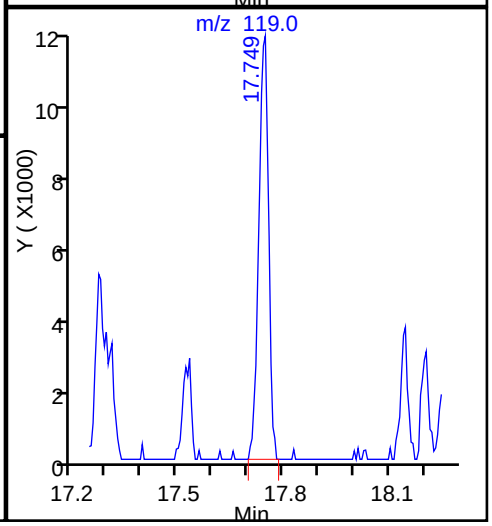








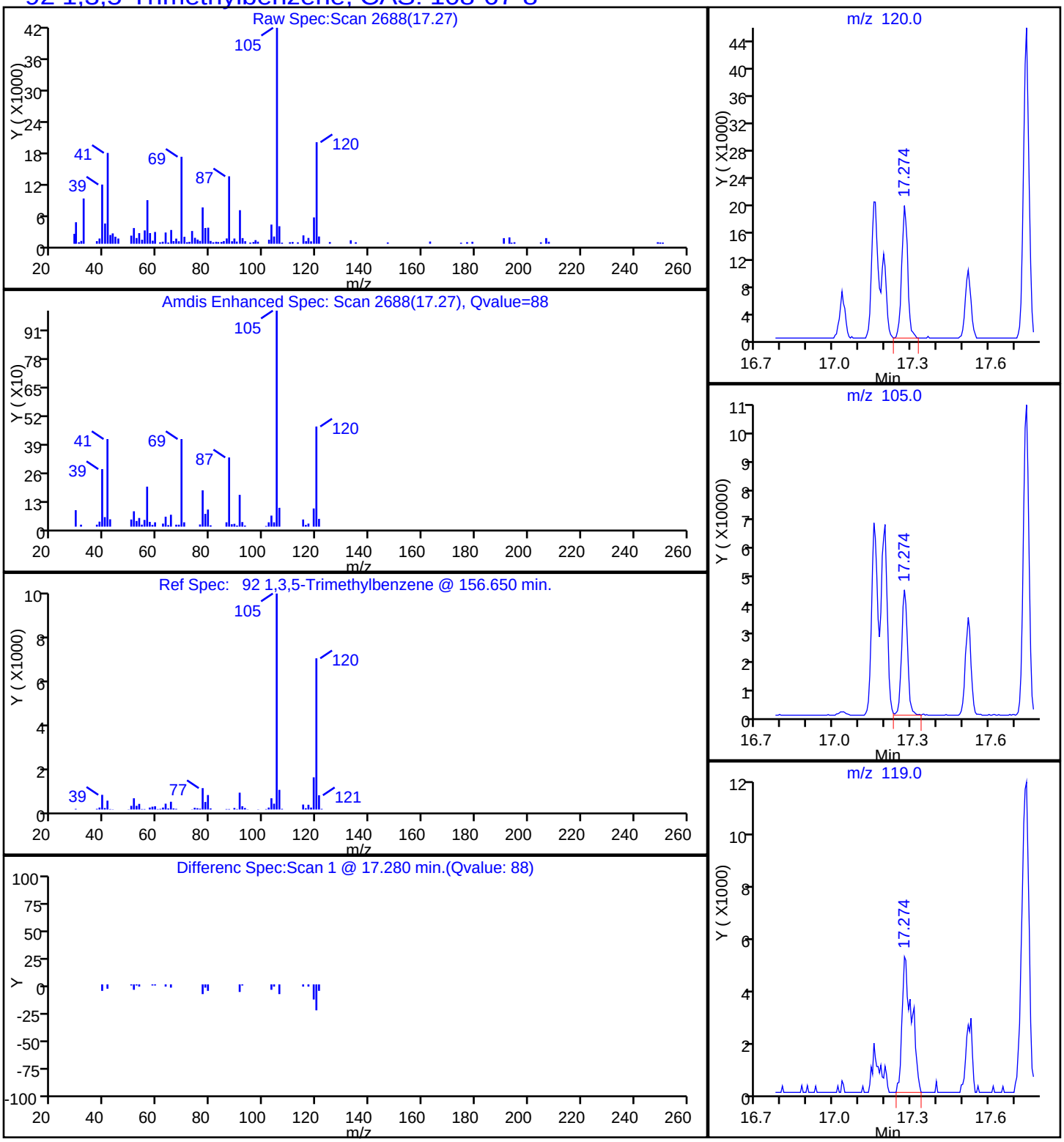




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

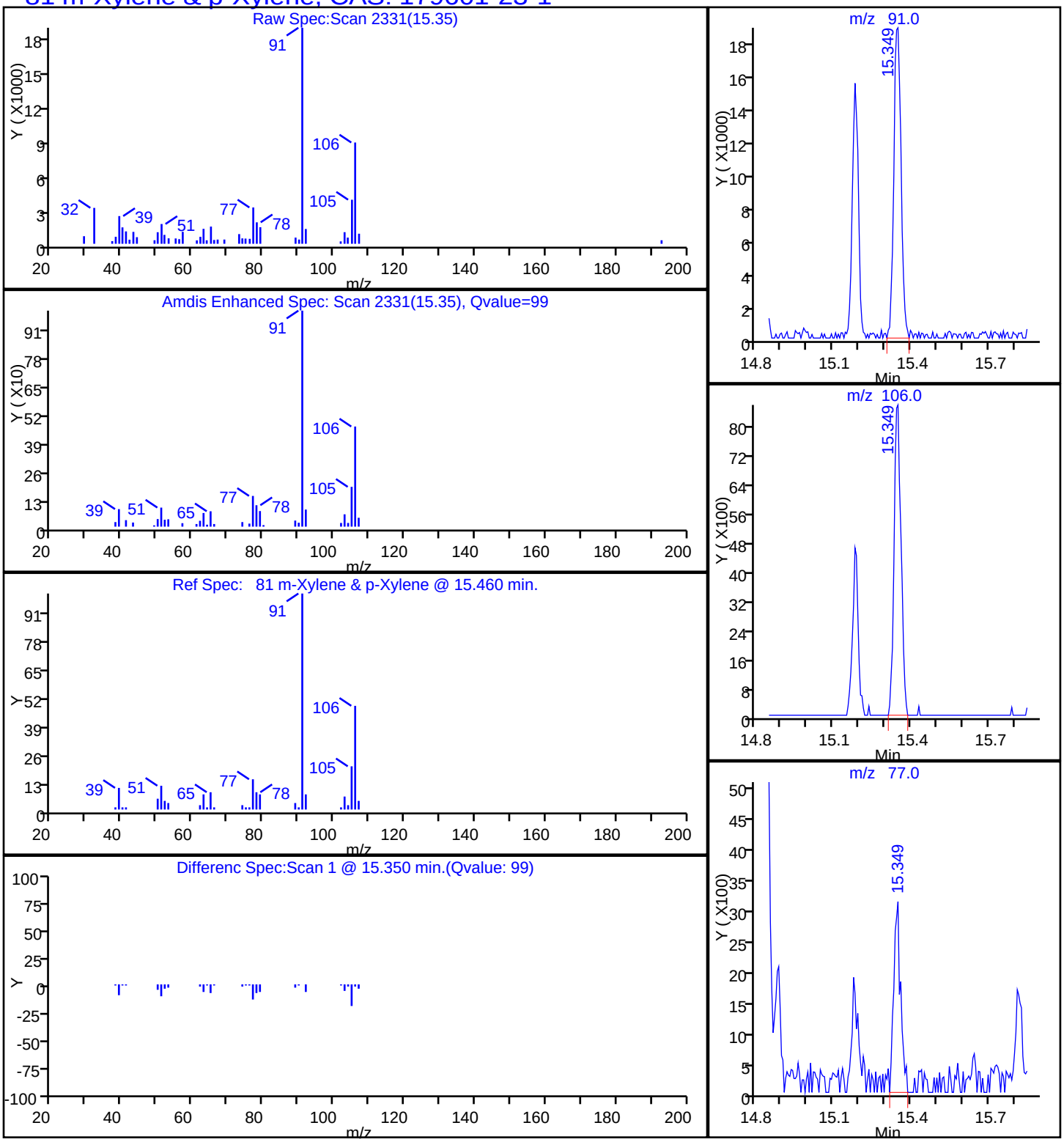
92 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

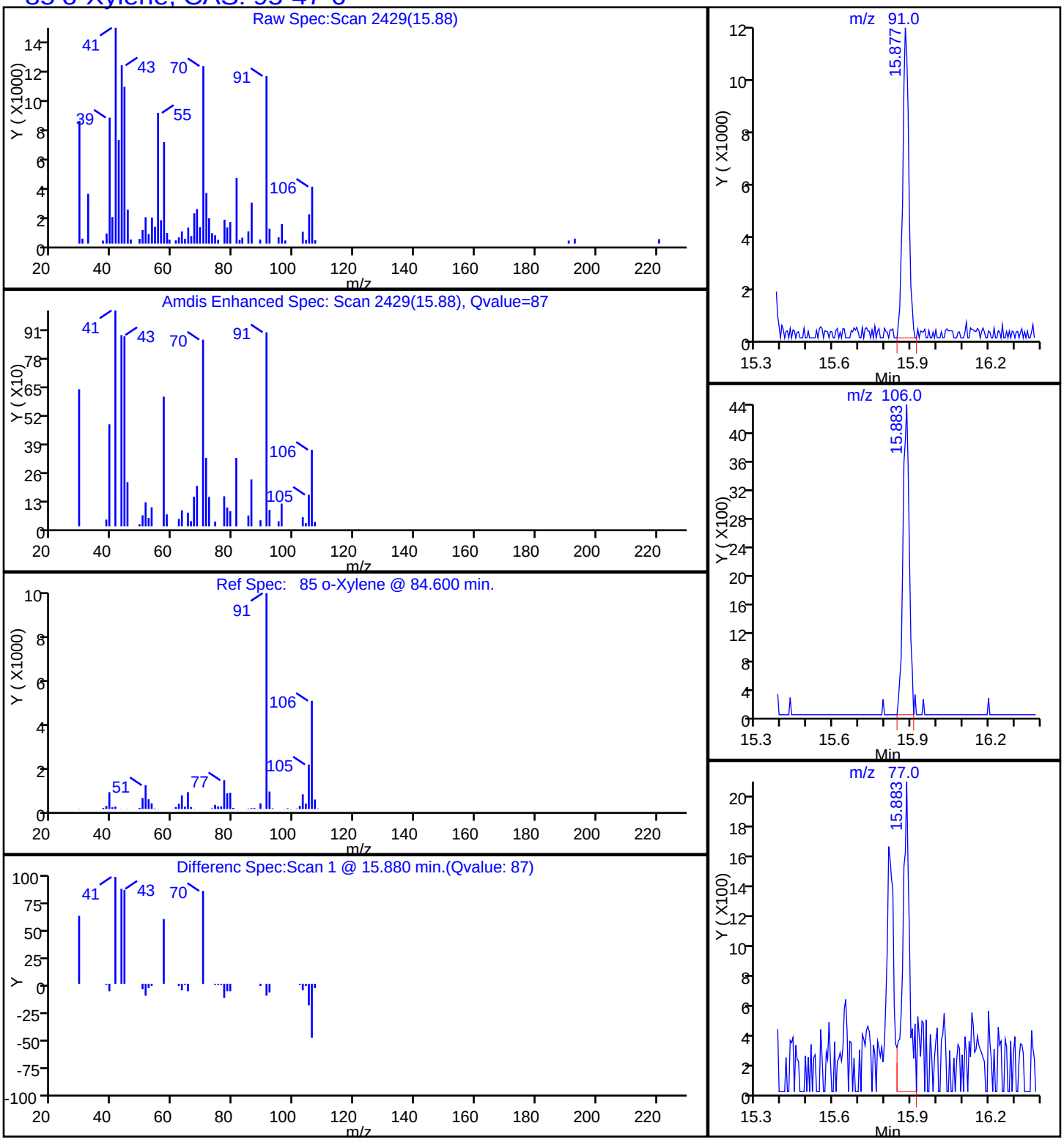
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EG19P112.D				
Injection Date:	19-Jul-2016 22:05:30	Instrument ID:	ME		
Lims ID:	140-5356-A-6	Lab Sample ID:	140-5356-6		
Client ID:	C-EFFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5589/2	EF28IC01.D
Level 2	IC 140-5589/3	EF28IC02.D
Level 3	IC 140-5589/4	EF28IC03.D
Level 4	IC 140-5589/5	EF28IC04.D
Level 5	IC 140-5589/6	EF28IC05.D
Level 6	ICIS 140-5589/7	EF28IC06.D
Level 7	IC 140-5589/8	EF28IC07.D
Level 8	IC 140-5589/9	EF28IC08.D
Level 9	IC 140-5589/10	EF28IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5881	0.5941 0.5037	0.5642 0.4961	0.5646 0.4724	0.6523	Ave		0.5544				10.8		30.0			
Propene	+++++ 1.0988	+++++ 0.9224	1.2729 0.8962	1.2106 +++++	1.2662	Ave		1.1112				15.2		30.0			
Dichlorodifluoromethane	+++++ 4.9553	5.0080 4.2252	4.9645 4.0217	4.9835 3.4275	5.5807	Ave		4.6458				14.9		30.0			
Chloromethane	+++++ 0.3542	0.4123 0.2985	0.3920 0.3001	0.3872 0.2819	0.3871	Ave		0.3517				14.5		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	3.0918 2.8157	3.0041 2.6470	2.9748 2.6642	2.8129 2.3117	3.1294	Ave		2.8280				9.2		30.0			
Acetaldehyde	+++++ 0.4475	+++++ 0.3417	+++++ 0.3299	0.6778 0.3161	0.5130	Ave		0.4377				32.2	*	30.0			
Vinyl chloride	1.5420 1.2336	1.3265 1.0849	1.2163 1.0901	1.2219 0.9917	1.3411	Ave		1.2276				13.4		30.0			
1,3-Butadiene	+++++ 0.9143	0.9436 0.8052	0.9270 0.8158	0.8956 0.7630	1.0126	Ave		0.8846				9.4		30.0			
Butane	+++++ 1.7828	1.9309 1.5424	1.8527 1.5369	1.8360 1.3963	1.9655	Ave		1.7304				12.1		30.0			
Bromomethane	+++++ 1.2267	1.3094 1.1246	1.2143 1.1570	1.1816 1.0917	1.3217	Ave		1.2034				6.8		30.0			
Chloroethane	+++++ 0.5701	0.5987 0.5282	0.5721 0.5394	0.5801 0.5038	0.6367	Ave		0.5661				7.4		30.0			
Ethanol	+++++ 0.4578	+++++ 0.4038	0.5288 0.3695	0.4513 0.3371	0.4720	Ave		0.4315				15.2		30.0			
Vinyl bromide	+++++ 1.2141	1.2909 1.1357	1.1708 1.1738	1.1326 1.1275	1.2777	Ave		1.1904				5.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.2201	1.2958 1.0889	1.1951 1.1078	1.2138 1.0195	1.3280	Ave		1.1836				8.9		30.0			
Trichlorofluoromethane	+++++ 5.0854	5.0157 4.5739	4.8978 4.5231	4.7578 3.9752	5.4564	Ave		4.7857				9.3		30.0			
Acrolein	+++++ 0.3049	+++++ 0.2775	0.4917 0.2682	0.3465 0.2566	0.3426	Ave		0.3268				24.7		30.0			
Acetonitrile	+++++ 0.3669	+++++ 0.3765	+++++ 0.3629	0.3658 0.3621	0.3734	Ave		0.3679				1.6		30.0			
Acetone	+++++ 0.4687	+++++ 0.3758	+++++ 0.3609	0.6462 0.3720	0.5006	Ave		0.4540				24.3		30.0			
Pentane	+++++ 0.2051	+++++ 0.1951	+++++ 0.2008	0.2036 0.1926	0.2111	Ave		0.2014				3.4		30.0			
Isopropyl alcohol	+++++ 1.6050	+++++ 1.4824	1.6759 1.3025	1.5214 1.1984	1.5769	Ave		1.4803				11.6		30.0			
Ethyl ether	+++++ 0.9993	0.9374 0.9368	0.9886 0.8936	0.9131 0.8847	0.9766	Ave		0.9413				4.6		30.0			
1,1-Dichloroethene	+++++ 1.1145	1.2808 1.0560	1.0430 1.1019	1.0378 1.0806	1.1814	Ave		1.1120				7.4		30.0			
tert-Butyl alcohol	+++++ 1.8765	+++++ 1.8075	1.8054 1.6089	1.6713 1.5848	1.8427	Ave		1.7424				6.8		30.0			
Acrylonitrile	+++++ 0.6097	+++++ 0.5786	+++++ 0.5640	0.6310 0.5733	0.5768	Ave		0.5889				4.4		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8317	2.8497 2.5842	2.7619 2.6123	2.6995 2.4251	2.9296	Ave		2.7118				6.1		30.0			
Methylene Chloride	+++++ 1.0782	+++++ 0.9360	1.4080 0.9272	1.1597 0.8469	1.2081	Ave		1.0806				18.1		30.0			
3-Chloropropene	+++++ 1.5774	1.7597 1.3671	1.6244 1.3573	1.6735 1.1477	1.6873	Ave		1.5243				13.8		30.0			
Carbon disulfide	+++++ 3.4982	3.6602 3.0424	3.5378 3.0329	3.4899 2.6991	3.8824	Ave		3.3554				11.7		30.0			
trans-1,2-Dichloroethene	+++++ 1.2796	1.3526 1.1384	1.2966 1.1584	1.2582 1.0977	1.3878	Ave		1.2462				8.4		30.0			
2-Methylpentane	+++++ 2.4658	2.6482 2.0795	2.5192 2.0317	2.5033 1.8616	2.7221	Ave		2.3539				13.5		30.0			
Methyl tert-butyl ether	+++++ 3.7841	+++++ 3.4046	3.8076 3.1559	3.5654 3.1589	3.7435	Ave		3.5171				8.0		30.0			
1,1-Dichloroethane	+++++ 2.4670	2.4438 2.1331	2.5068 2.1089	2.4054 1.9935	2.6878	Ave		2.3433				10.2		30.0			
Vinyl acetate	+++++ 3.1500	3.1009 2.8991	3.1042 2.7162	2.9344 2.5601	3.1732	Ave		2.9547				7.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5359	+++++ 0.4743	0.7879 0.4416	0.6191 0.4661	0.5404	Ave		0.5522				21.7		30.0			
Hexane	+++++ 0.9274	0.9480 0.8020	0.9947 0.7864	0.9402 0.7427	1.0210	Ave		0.8953				11.6		30.0			
Isopropyl ether	+++++ 3.6661	3.5109 3.2354	3.7733 2.9760	3.5361 2.9550	3.7386	Ave		3.4239				9.6		30.0			
cis-1,2-Dichloroethene	+++++ 1.3099	1.3897 1.1867	1.2850 1.1883	1.2794 1.1558	1.4108	Ave		1.2757				7.4		30.0			
Ethyl acetate	2.3088 2.4606	2.3282 2.2309	2.3705 2.0169	2.3069 2.0834	2.4070	Ave		2.2792				6.4		30.0			
Chloroform	+++++ 3.3603	3.4119 2.9619	3.3430 2.9320	3.2176 2.7815	3.5688	Ave		3.1971				8.6		30.0			
Tert-butyl ethyl ether	3.3934 3.5748	3.3255 3.2249	3.4431 2.9952	3.3780 3.0186	3.5644	Ave		3.3242				6.3		30.0			
Tetrahydrofuran	+++++ 1.1745	+++++ 1.0411	+++++ 0.9648	1.1333 0.9854	1.1652	Ave		1.0774				8.6		30.0			
1,1,1-Trichloroethane	+++++ 4.1879	4.0947 3.7218	3.9112 3.6867	4.0079 3.4996	4.4404	Ave		3.9438				7.7		30.0			
1,2-Dichloroethane	0.6203 0.6023	0.5660 0.5143	0.5658 0.5174	0.5991 0.5097	0.6611	Ave		0.5729				9.2		30.0			
Cyclohexane	+++++ 0.1354	0.1381 0.1124	0.1273 0.1169	0.1442 0.1166	0.1484	Ave		0.1299				10.5		30.0			
Benzene	+++++ 0.7959	0.7919 0.6790	0.7501 0.6811	0.8068 0.6716	0.8635	Ave		0.7550				9.5		30.0			
1-Butanol	+++++ 0.0853	+++++ 0.0760	+++++ 0.0719	0.0826 0.0739	0.0918	Ave		0.0803				9.5		30.0			
Carbon tetrachloride	0.9507 1.0686	0.8998 0.9272	0.8357 0.9346	1.0330 0.9129	1.0221	Ave		0.9538				7.8		30.0			
2,3-Dimethylpentane	0.1981 0.1902	0.1946 0.1607	0.1758 0.1669	0.1920 0.1645	0.2054	Ave		0.1831				8.9		30.0			
Thiophene	0.4769 0.4713	0.4379 0.4028	0.4318 0.4124	0.4586 0.4060	0.5198	Ave		0.4464				8.7		30.0			
Tert-amyl methyl ether	+++++ 0.8134	0.8305 0.7273	0.7720 0.6970	0.7930 0.7109	0.8690	Ave		0.7766				7.9		30.0			
2,2,4-Trimethylpentane	+++++ 1.2259	1.1936 1.0235	1.1509 1.0221	1.2527 0.9831	1.3513	Ave		1.1504				11.3		30.0			
Heptane	+++++ 0.2984	0.2805 0.2534	0.2833 0.2562	0.2895 0.2580	0.3162	Ave		0.2794				8.0		30.0			
1,2-Dichloropropane	+++++ 0.2915	0.2804 0.2520	0.2621 0.2497	0.2878 0.2529	0.3127	Ave		0.2736				8.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4845 0.4238	0.4285 0.3742	0.4091 0.3908	0.4181 0.4064	0.4604	Ave		0.4217				8.0		30.0			
Dibromomethane	+++++ 0.4205	0.3943 0.3662	0.3759 0.3768	0.4178 0.3779	0.4549	Ave		0.3980				7.7		30.0			
Bromodichloromethane	0.7314 0.8192	0.7004 0.7157	0.6821 0.7231	0.7642 0.7085	0.8733	Ave		0.7464				8.4		30.0			
1,4-Dioxane	+++++ 0.1162	0.1076 0.1037	0.1039 0.0980	0.1104 0.0993	0.1175	Ave		0.1071				6.8		30.0			
Methyl methacrylate	+++++ 0.3592	0.3279 0.3301	0.3127 0.3101	0.3623 0.3358	0.3459	Ave		0.3355				5.8		30.0			
Methylcyclohexane	+++++ 0.6197	0.6076 0.5329	0.5916 0.5406	0.6185 0.5336	0.6658	Ave		0.5888				8.3		30.0			
4-Methyl-2-pentanone (MIBK)	0.5743 0.5210	0.5565 0.4626	0.8228 0.4374	0.5590 0.4679	0.6407	Ave		0.5602				21.0		30.0			
cis-1,3-Dichloropropene	+++++ 0.5277	0.5103 0.4711	0.4679 0.4720	0.5061 0.4716	0.5698	Ave		0.4996				7.3		30.0			
trans-1,3-Dichloropropene	+++++ 0.5325	0.5500 0.4895	0.4930 0.4922	0.5227 0.4860	0.5859	Ave		0.5190				6.9		30.0			
Toluene Range	+++++ 2.5513	+++++ 2.2559	+++++ 2.2235	2.4982 2.2561	2.6890	Ave		2.4123				8.0		30.0			
Toluene	+++++ 0.9752	1.0466 0.8660	0.9686 0.8548	0.9906 0.8230	1.0806	Ave		0.9507				9.8		30.0			
1,1,2-Trichloroethane	0.2911 0.2950	0.2816 0.2580	0.2704 0.2589	0.2968 0.2571	0.3239	Ave		0.2814				8.0		30.0			
2-Methylthiophene	+++++ 0.8165	0.8077 0.7301	0.7673 0.7330	0.8121 0.7020	0.9024	Ave		0.7839				8.2		30.0			
3-Methylthiophene	0.8151 0.7924	0.7995 0.7190	0.7633 0.7154	0.7968 0.6924	0.8768	Ave		0.7745				7.5		30.0			
2-Hexanone	+++++ 0.2283	+++++ 0.2068	0.2083 0.2003	0.2268 0.2100	0.2473	Ave		0.2183				7.6		30.0			
C8 Range	+++++ 3.1214	+++++ 2.5885	+++++ 2.6450	3.1808 2.6022	3.3834	Ave		2.9202				12.0		30.0			
Octane	0.3523 0.3451	0.3243 0.2968	0.3174 0.3045	0.3390 0.2971	0.3808	Ave		0.3286				8.6		30.0			
Dibromochloromethane	0.6745 0.8019	0.6310 0.7376	0.6333 0.7661	0.7070 0.7360	0.8696	Ave		0.7286				10.7		30.0			
1,2-Dibromoethane (EDB)	0.5637 0.5893	0.5633 0.5490	0.5438 0.5557	0.5663 0.5508	0.6534	Ave		0.5706				5.9		30.0			
Tetrachloroethene	0.4804 0.4452	0.4418 0.3909	0.4331 0.4065	0.4502 0.4071	0.4958	Ave		0.4390				7.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	+++++ 0.8125	0.8264 0.7306	0.7973 0.7342	0.8280 0.7185	0.8894	Ave		0.7921				7.5		30.0			
2,3-Dimethylheptane	+++++ 0.8239	0.7925 0.6753	0.8043 0.6646	0.8567 0.6234	0.9374	Ave		0.7723				14.0		30.0			
Ethylbenzene	+++++ 1.3817	1.3473 1.2179	1.3353 1.1690	1.3421 1.0985	1.4810	Ave		1.2966				9.6		30.0			
2-Ethylthiophene	1.0524 1.0962	1.0076 0.9768	1.0235 0.9503	1.0610 0.9168	1.1905	Ave		1.0306				8.0		30.0			
m-Xylene & p-Xylene	1.0935 1.0966	1.0794 0.9443	1.0638 0.8923	1.0824 0.8235	1.1841	Ave		1.0289				11.3		30.0			
Bromoform	+++++ 1.1208	0.7031 1.1556	0.7885 1.2473	0.8358 1.2634	1.0854	Ave		1.0250				21.2		30.0			
Nonane	+++++ 0.5637	0.5425 0.4743	0.5315 0.4737	0.5691 0.4778	0.6194	Ave		0.5315				10.0		30.0			
Styrene	0.6518 0.7759	0.6104 0.7124	0.6436 0.7105	0.7003 0.7313	0.8178	Ave		0.7060				9.2		30.0			
o-Xylene	1.1710 1.1557	1.0892 0.9992	1.0998 0.9605	1.1440 0.9132	1.2428	Ave		1.0862				9.9		30.0			
1,1,2,2-Tetrachloroethane	0.6942 0.7228	0.6292 0.6322	0.6635 0.6093	0.6995 0.5989	0.7672	Ave		0.6685				8.5		30.0			
1,2,3-Trichloropropane	0.2819 0.2806	0.2443 0.2478	0.2576 0.2441	0.2593 0.2529	0.2920	Ave		0.2623				6.9		30.0			
Isopropylbenzene	+++++ 1.5541	1.5677 1.3568	1.4875 1.3053	1.5051 1.2264	1.6198	Ave		1.4528				9.6		30.0			
Propylbenzene	0.4053 0.4374	0.4154 0.3880	0.3725 0.3887	0.3994 0.4107	0.4407	Ave		0.4065				5.6		30.0			
2-Chlorotoluene	0.4080 0.4101	0.3947 0.3652	0.3684 0.3656	0.3790 0.3790	0.4266	Ave		0.3885				5.7		30.0			
4-Ethyltoluene	1.3482 1.5303	1.3440 1.3418	1.3792 1.2695	1.3647 1.2235	1.5274	Ave		1.3698				7.5		30.0			
1,3,5-Trimethylbenzene	0.7278 0.7235	0.6652 0.6440	0.6295 0.6359	0.6714 0.6618	0.7417	Ave		0.6779				6.2		30.0			
Alpha Methyl Styrene	+++++ 0.6320	+++++ 0.5892	0.4624 0.5820	0.5153 0.6077	0.6266	Ave		0.5736				10.9		30.0			
Decane	+++++ 0.6915	0.5851 0.5711	0.6142 0.5494	0.6605 0.5399	0.7294	Ave		0.6176				11.2		30.0			
tert-Butylbenzene	+++++ 1.4456	1.3435 1.2536	1.2600 1.2044	1.3127 1.2101	1.4754	Ave		1.3132				7.8		30.0			
1,2,4-Trimethylbenzene	1.2933 1.3336	1.1637 1.1567	1.1763 1.1053	1.2173 1.0836	1.3730	Ave		1.2114				8.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.6986 1.8574	1.6449 1.5771	1.6525 1.4926	1.6866 1.4311	1.8866	Ave		1.6586				9.0		30.0			
1,3-Dichlorobenzene	0.9629 1.0235	0.9227 0.9613	0.8604 0.9917	0.8820 1.0442	1.0271	Ave		0.9640				6.8		30.0			
Benzyl chloride	1.0317 1.1634	0.9573 1.0677	0.9491 1.0339	0.9632 1.0427	1.1532	Ave		1.0402				7.6		30.0			
1,4-Dichlorobenzene	+++++ 0.9975	0.8650 0.9420	0.8318 0.9576	0.8545 1.0009	1.0067	Ave		0.9320				7.7		30.0			
4-Isopropyltoluene	+++++ 1.6042	1.3794 1.3852	1.3755 1.3008	1.4384 1.2512	1.6245	Ave		1.4199				9.4		30.0			
1,2,3-Trimethylbenzene	+++++ 1.0376	0.9042 0.8792	0.8851 0.8344	0.9181 0.8203	1.0712	Ave		0.9188				9.8		30.0			
Butylcyclohexane	0.8723 0.8980	0.7963 0.7353	0.8387 0.7179	0.8454 0.7031	0.9561	Ave		0.8181				10.6		30.0			
1,2-Dichlorobenzene	0.9488 1.0162	0.8621 0.9228	0.8400 0.9371	0.8644 0.9848	1.0265	Ave		0.9336				7.3		30.0			
Indane	1.0848 1.2090	1.0279 1.0541	1.0577 1.0344	1.0688 1.0417	1.2532	Ave		1.0924				7.4		30.0			
Indene	+++++ 0.9141	+++++ 0.8291	0.7149 0.8057	0.7883 0.8289	0.9299	Ave		0.8301				8.9		30.0			
Butylbenzene	+++++ 1.4602	1.1483 1.2387	1.1967 1.1499	1.2597 1.1094	1.4966	Ave		1.2574				11.6		30.0			
Undecane	+++++ 0.7186	+++++ 0.6108	+++++ 0.5799	0.5071 0.5845	0.6329	Ave		0.6056				11.5		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.1653	0.8885 1.0138	0.9118 0.9508	0.9526 0.9485	1.1588	Ave		0.9988				10.7		30.0			
1,2-Dibromo-3-Chloropropane	0.3014 0.4970	0.2876 0.4798	0.3245 0.4842	0.3508 0.5452	0.4743	Ave		0.4161				23.7		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.3919	0.9505 1.2122	1.0646 1.1328	1.0588 1.1097	1.3514	Ave		1.1590				13.0		30.0			
1,2,3,5-Tetramethylbenzene	0.5668 0.8497	0.5753 0.7403	0.6367 0.7043	0.6574 0.7242	0.8237	Ave		0.6976				14.2		30.0			
1,2,3,4-Tetramethylbenzene	0.7670 1.1342	0.7049 0.9870	0.8214 0.9278	0.8084 0.9392	1.0603	Ave		0.9056				15.6		30.0			
Dodecane	+++++ 0.4893	+++++ 0.4090	0.4306 0.4175	0.3922 0.4742	0.5418	Ave		0.4507				11.8		30.0			
1,2,4-Trichlorobenzene	0.9109 1.0173	0.6603 0.9598	0.6733 1.0510	0.6137 1.1190	0.9272	Ave		0.8814				21.1		30.0			
Naphthalene	1.1530 1.3799	0.8571 1.2023	0.9787 1.2088	0.9694 1.1832	1.3658	Ave		1.1442				15.6		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.8269	+++++ 0.7047	0.6549 0.7630	0.6035 0.7868	0.8536	Ave		0.7419				12.3		30.0			
Hexachlorobutadiene	1.0667 1.5192	0.9743 1.3923	0.9936 1.4785	0.9427 1.4137	1.3903	Ave		1.2413				19.3		30.0			
1,2,3-Trichlorobenzene	+++++ 0.9338	+++++ 0.8164	+++++ 0.9396	0.5493 1.0022	0.8742	Ave		0.8526				18.9		30.0			
2-Methylnaphthalene	+++++ 0.1904	0.1722 0.1225	0.1892 0.1610	0.1200 0.1403	0.2091	Ave		0.1631				20.3		50.0			
1-Methylnaphthalene	+++++ 0.1542	0.1348 0.0947	0.1483 0.1249	0.0878 0.1072	0.1660	Ave		0.1272				22.5		50.0			
4-Bromofluorobenzene (Surr)	0.7384 0.7928	0.7499 0.7614	0.7617 0.7461	0.7904 0.7564	0.7847	Ave		0.7646				2.6		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5589/2	EF28IC01.D
Level 2	IC 140-5589/3	EF28IC02.D
Level 3	IC 140-5589/4	EF28IC03.D
Level 4	IC 140-5589/5	EF28IC04.D
Level 5	IC 140-5589/6	EF28IC05.D
Level 6	ICIS 140-5589/7	EF28IC06.D
Level 7	IC 140-5589/8	EF28IC07.D
Level 8	IC 140-5589/9	EF28IC08.D
Level 9	IC 140-5589/10	EF28IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 80893	3796 163765	6725 320680	15720 632557	42086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 151139	+++++ 299872	15172 579323	33706 +++++	81702	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 +++++	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 681591	31997 1373581	59174 2599680	138750 4589896	360085	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 48725	2634 97033	4672 193979	10780 377509	24976	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	10322 387292	19194 860525	35458 1722160	78315 3095724	201916	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 307774	+++++ 555389	+++++ 1066214	94360 2116835	165502	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	5148 169673	8475 352699	14498 704661	34021 1328019	86532	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 125764	6029 261752	11049 527323	24934 1021729	65339	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 245223	12337 501408	22083 993494	51118 1869779	126822	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 168725	8366 365608	14474 747916	32899 1461903	85280	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 78412	3825 171721	6819 348701	16152 674608	41081	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 314821	+++++ 656285	31515 1194331	62831 2256890	152267	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 166997	8248 369216	13955 758750	31534 1509923	82443	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 167826	8279 353984	14245 716098	33794 1365305	85686	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 699483	32046 1486952	58379 2923800	132467 5323355	352065	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 41932	+++++ 90215	5861 173340	9646 343619	22104	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 50468	+++++ 122407	+++++ 234556	10184 484896	24093	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 193431	+++++ 366509	+++++ 699961	53975 1494389	96904	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 28205	+++++ 63421	+++++ 129771	5668 257920	13620	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Isopropyl alcohol	CBM	Ave	+++++ 662355	+++++ 1445860	59930 2525972	127084 4814699	305257	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Ethyl ether	CBM	Ave	+++++ 137455	5989 304551	11784 577628	25421 1184730	63011	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 153302	8183 343284	12432 712301	28895 1447033	76229	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 258104	+++++ 587595	21519 1040034	46533 2122224	118899	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 83869	+++++ 188084	+++++ 364558	17569 767793	37214	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	+++++ 389497	18207 840099	32920 1688606	75160 3247539	189029	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 148300	+++++ 304301	16782 599380	32289 1134150	77948	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 216965	11243 444443	19362 877345	46592 1536897	108869	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 481173	23386 989070	42168 1960534	97165 3614441	250504	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 176005	8642 370099	15455 748777	35030 1470007	89543	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 339161	16920 676037	30027 1313327	69697 2492987	175639	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 520490	+++++ 1106795	45384 2040031	99267 4230169	241541	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 339331	15614 693449	29879 1363233	66972 2669561	173427	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 433269	19812 942461	37000 1755794	81699 3428309	204742	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 73711	+++++ 154190	9391 285474	17236 624173	34869	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 127555	6057 260739	11856 508322	26176 994621	65878	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	+++++ 504263	22432 1051800	44975 1923713	98452 3957110	241227	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 180169	8879 385776	15317 768159	35621 1547814	91032	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	7708 338447	14875 725233	28255 1303761	64227 2789907	155308	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 462195	21799 962876	39846 1895303	89583 3724871	230271	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	11329 491705	21247 1048399	41040 1936111	94049 4042274	229989	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 161545	+++++ 338462	+++++ 623673	31553 1319610	75180	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 576037	26162 1209931	46619 2383118	111586 4686421	286510	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	9385 367133	16386 768312	31691 1494126	71907 2960139	186788	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 82559	3997 167849	7128 337464	17303 677298	41935	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 485148	22927 1014406	42017 1966812	96828 3900212	243995	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 51986	+++++ 113606	+++++ 207693	9909 428985	25940	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	14384 651374	26048 1385147	46813 2698600	123974 5301466	288785	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	2997 115937	5633 240147	9845 481950	23038 955338	58045	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7215 287307	12676 601756	24186 1190915	55046 2357444	146859	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 495134	23478 1082941	41168 2000232	91889 4237340	232902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 747250	34556 1529070	64465 2951276	150352 5708740	381817	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 181906	8121 378580	15870 739884	34747 1498037	89339	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 177662	8117 376509	14682 720943	34539 1468376	88348	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	7331 258305	12404 558987	22915 1128486	50183 2359769	130090	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 256309	11415 547038	21056 1088051	50146 2194648	128522	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	11066 499343	20276 1069154	38206 2087896	91719 4114062	246763	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 70802	3115 154890	5819 282923	13250 576665	33187	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 218961	9493 493157	17514 895381	43477 1949784	97747	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 377713	17591 796135	33139 1561023	74230 3098604	188125	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	8689 317549	16112 691027	46087 1263084	67093 2716993	181042	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	+++++ 321643	14773 703734	26208 1362842	60744 2738332	161008	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 324125	15547 728884	26293 1412541	60571 2897048	157029	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 1555137	+++++ 3370182	+++++ 6420237	299831 13101279	759769	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 593649	29586 1289517	51656 2453112	114790 4906094	289597	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	4161 179601	7961 384115	14422 742949	34389 1532777	86807	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 497008	22831 1087108	40919 2103726	94109 4184790	241856	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	11650 482355	22601 1070601	40707 2053287	92335 4127422	234979	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 138946	+++++ 307985	11111 574857	26279 1251635	66282	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 1902664	+++++ 3866967	+++++ 7637287	381758 15111445	955972	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	5036 210097	9166 441931	16929 873938	39282 1771045	102066	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	9641 488169	17837 1098398	33773 2198719	81925 4387090	233058	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	8057 358746	15923 817525	28998 1594818	65623 3283374	175111	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	6867 271036	12490 582101	23098 1166568	52170 2426549	132889	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 494600	23360 1087888	42521 2107128	95948 4282825	238369	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 501568	22402 1005508	42895 1907510	99277 3716232	251233	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	+++++ 841101	38087 1813486	71210 3355042	155521 6547804	396914	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	15042 667286	28484 1454484	54581 2727287	122946 5464937	319071	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	31259 1335051	61025 2812148	113460 5121493	250849 9817283	634708	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 682246	19875 1720841	42048 3579711	96855 7531151	290880	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	+++++ 343134	15335 706301	28346 1359355	65947 2847857	165997	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	9316 472316	17255 1060850	34321 2039038	81146 4359068	219163	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	16738 703538	30789 1487957	58654 2756502	132558 5443715	333080	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9923 439982	17786 941378	35384 1748722	81058 3569804	205609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	4029 170804	6906 368996	13737 700447	30043 1507435	78269	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 946067	44316 2020312	79328 3746150	174404 7310344	434108	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	5793 266250	11742 577714	19867 1115614	46286 2448426	118101	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	5831 249650	11157 543849	19645 1049164	43916 2259372	114339	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	19270 931560	37991 1998075	73550 3643494	158137 7293226	409339	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	10402 440413	18804 958961	33571 1825117	77799 3944682	198783	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 384752	+++++ 877365	24661 1670244	59712 3622238	167944	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 420912	16540 850432	32757 1576873	76536 3218041	195490	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 879969	37979 1866760	67197 3456446	152114 7213417	395426	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	18485 811802	32895 1722380	62732 3172111	141057 6458966	367979	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	24278 1130666	46498 2348437	88126 4283678	195437 8530657	505609	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	13763 623049	26084 1431461	45885 2846055	102208 6224576	275273	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	14746 708209	27062 1589839	50617 2967385	111609 6215272	309067	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 607244	24452 1402639	44360 2748339	99018 5966183	269791	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 976541	38992 2062671	73356 3733305	166682 7458324	435381	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 631653	25561 1309266	47202 2394684	106389 4889649	287097	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	12468 546639	22510 1094915	44727 2060315	97961 4190904	256239	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	13562 618608	24369 1374052	44794 2689398	100167 5870259	275105	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	15505 735942	29056 1569680	56405 2968708	123854 6209689	335858	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 556469	+++++ 1234546	38123 2312292	91341 4940807	249218	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 888892	32459 1844466	63817 3300064	145976 6612869	401083	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 437463	+++++ 909590	+++++ 1664286	58757 3484263	169622	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 709344	25116 1509659	48627 2728651	110386 5653685	310567	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	4308 302539	8129 714470	17307 1389722	40649 3249951	127103	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 847298	26870 1805105	56772 3251199	122695 6614855	362175	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	8101 517253	16264 1102430	33953 2021228	76180 4316826	220744	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	10963 690438	19925 1469686	43803 2662809	93674 5598272	284163	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 297870	+++++ 608973	22965 1198284	45442 2826683	145200	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	13020 619271	18666 1429175	35909 3016404	71115 6670153	248485	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	16480 840007	24229 1790373	52195 3469184	112328 7052663	366042	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 503364	+++++ 1049286	34923 2189768	69931 4689856	228757	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	15246 924822	27541 2073212	52990 4243166	109232 8426914	372617	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 568469	+++++ 1215672	+++++ 2696644	63656 5974195	234288	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 362111	15212 569829	31532 1443984	43461 2612638	175140	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 293276	11903 440544	24709 1120542	31786 1997345	139014	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1076875 966471	1081606 1133820	1024031 1070571	915941 1127253	839876	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5589

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/28/2016 14:43 Calibration End Date: 06/28/2016 20:55 Calibration ID: 649

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 28-Jun-2016 14:43:30 ALS Bottle#: 7 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044591,,1,1,,ICAL01
Misc. Info.: E062816I,T15,,140-0003101-002
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:07:24 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 28-Jun-2016 16:26:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.616	7.622	-0.006	84	340665	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.859	9.859	0.000	95	1543911	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	89	1458486	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	1076875	4.00	3.86	
6 Chlorodifluoromethane	67	2.946	2.940	0.006	95	2747	0.0392	0.0582	
7 Propene	41	2.952	2.946	0.006	91	4995	0.0392	0.0528	
8 Dichlorodifluoromethane	85	2.995	2.991	0.004	100	17893	0.0392	0.0452	
9 Chloromethane	52	3.146	3.142	0.004	64	1615	0.0392	0.0539	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	89	10322	0.0392	0.0429	
11 Acetaldehyde	44	3.275	3.274	0.001	89	20736	0.1960	0.5563	
12 Vinyl chloride	62	3.286	3.285	0.001	99	5148	0.0392	0.0492	
13 Butane	43	3.362	3.359	0.003	82	6876	0.0392	0.0467	
14 Butadiene	54	3.362	3.359	0.003	75	3587	0.0392	0.0476	
15 Bromomethane	94	3.631	3.626	0.005	94	4690	0.0392	0.0458	
16 Chloroethane	64	3.744	3.744	0.000	86	2196	0.0392	0.0455	
17 Ethanol	31	3.825	3.831	-0.006	97	17577	0.1960	0.4783	
18 Vinyl bromide	106	3.992	3.995	-0.003	95	4737	0.0392	0.0467	
19 2-Methylbutane	43	4.036	4.034	0.002	90	5646	0.0392	0.0560	
20 Trichlorofluoromethane	101	4.219	4.220	-0.001	99	17897	0.0392	0.0439	
21 Acrolein	56	4.230	4.230	0.000	39	4703	0.0392	0.1690	
22 Acetonitrile	40	4.289	4.289	0.000	70	1802	0.0392	0.0575	
23 Acetone	58	4.338	4.330	0.008	99	10782	0.1176	0.2788	
24 Isopropyl alcohol	45	4.413	4.410	0.003	89	19567	0.1176	0.1552	
26 Ethyl ether	31	4.569	4.556	0.013	89	3712	0.0392	0.0463	
27 1,1-Dichloroethene	96	4.839	4.837	0.002	95	5046	0.0392	0.0533	
29 Acrylonitrile	53	4.936	4.940	-0.004	92	2884	0.0392	0.0575	
28 2-Methyl-2-propanol	59	4.952	4.945	0.007	82	7339	0.0392	0.0495	
30 1,1,2-Trichloro-1,2,2-trif	101	5.001	5.000	0.001	93	10398	0.0392	0.0450	
31 Methylene Chloride	84	5.163	5.163	0.000	93	7836	0.0392	0.0851	
32 3-Chloro-1-propene	39	5.179	5.175	0.004	74	6191	0.0392	0.0477	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.303	5.305	-0.002	99	13267	0.0392	0.0464	
34 trans-1,2-Dichloroethene	96	5.928	5.928	0.000	97	5201	0.0392	0.0490	
35 2-Methylpentane	43	5.939	5.942	-0.003	89	10099	0.0392	0.0504	
36 Methyl tert-butyl ether	73	6.079	6.060	0.019	94	12223	0.0392	0.0408	
37 1,1-Dichloroethane	63	6.327	6.336	-0.009	97	8737	0.0392	0.0438	
38 Vinyl acetate	43	6.446	6.447	-0.001	99	10948	0.0392	0.0435	
39 2-Butanone (MEK)	72	6.894	6.888	0.006	88	2499	0.0392	0.0531	
40 Hexane	56	6.899	6.897	0.002	71	4030	0.0392	0.0529	
41 Isopropyl ether	45	7.077	7.068	0.009	93	12632	0.0392	0.0433	
42 cis-1,2-Dichloroethene	96	7.293	7.296	-0.003	94	5042	0.0392	0.0464	
43 Ethyl acetate	43	7.508	7.502	0.006	97	7708	0.0392	0.0397	
44 Chloroform	83	7.638	7.639	-0.001	91	11940	0.0392	0.0439	
45 Tert-butyl ethyl ether	59	7.762	7.740	0.022	95	11329	0.0392	0.0400	
46 Tetrahydrofuran	42	8.058	8.045	0.013	84	4382	0.0392	0.0478	
47 1,1,1-Trichloroethane	97	8.641	8.646	-0.005	96	14374	0.0392	0.0428	
48 1,2-Dichloroethane	62	8.765	8.765	0.000	97	9385	0.0392	0.0424	
50 Cyclohexane	69	9.239	9.244	-0.005	65	2394	0.0392	0.0477	
51 Benzene	78	9.255	9.254	0.001	98	14191	0.0392	0.0487	
52 Carbon tetrachloride	117	9.266	9.275	-0.009	94	14384	0.0392	0.0391	
53 2,3-Dimethylpentane	71	9.390	9.389	0.001	88	2997	0.0392	0.0424	
54 Thiophene	84	9.536	9.538	-0.002	94	7215	0.0392	0.0419	
55 Tert-amyl methyl ether	73	9.854	9.794	0.060	39	25866	0.0392	0.0913	
56 Isooctane	57	10.086	10.088	-0.002	96	19505	0.0392	0.0439	
57 n-Heptane	71	10.523	10.519	0.004	88	4715	0.0392	0.0437	
58 1,2-Dichloropropane	63	10.587	10.590	-0.003	74	4779	0.0392	0.0453	
59 Trichloroethene	130	10.620	10.627	-0.007	95	7331	0.0392	0.0450	
60 Dibromomethane	93	10.717	10.716	0.001	85	7091	0.0392	0.0462	
61 Dichlorobromomethane	83	10.878	10.879	-0.001	98	11066	0.0392	0.0384	
62 1,4-Dioxane	88	10.932	10.916	0.016	60	1547	0.0392	0.0374	
63 Methyl methacrylate	41	11.019	11.019	0.000	85	5307	0.0392	0.0410	
64 Methylcyclohexane	83	11.445	11.447	-0.002	93	9885	0.0392	0.0435	
65 4-Methyl-2-pentanone (MIBK	43	11.930	11.923	0.007	94	8689	0.0392	0.0402	
66 cis-1,3-Dichloropropene	75	11.968	11.965	0.003	95	8330	0.0392	0.0432	
67 trans-1,3-Dichloropropene	75	12.707	12.705	0.001	96	8463	0.0392	0.0447	
68 Toluene	91	12.814	12.813	0.001	92	17178	0.0392	0.0496	
69 1,1,2-Trichloroethane	83	12.906	12.904	0.002	89	4161	0.0392	0.0405	
70 2-Methylthiophene	97	12.965	12.970	-0.005	97	12467	0.0392	0.0436	
71 3-Methylthiophene	97	13.181	13.179	0.002	97	11650	0.0392	0.0413	
72 2-Hexanone	58	13.332	13.327	0.005	91	2550	0.0392	0.0320	
73 n-Octane	85	13.559	13.559	-0.001	88	5036	0.0392	0.0420	
74 Chlorodibromomethane	129	13.612	13.617	-0.005	97	9641	0.0392	0.0363	
75 Ethylene Dibromide	107	13.914	13.915	-0.001	99	8057	0.0392	0.0387	
76 Tetrachloroethene	129	13.995	13.994	0.001	90	6867	0.0392	0.0429	
77 Chlorobenzene	112	14.890	14.890	0.000	95	12757	0.0392	0.0442	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	90	16127	0.0392	0.0573	
79 Ethylbenzene	91	15.192	15.193	-0.001	98	21259	0.0392	0.0450	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	97	15042	0.0392	0.0400	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	99	31259	0.0784	0.0833	
83 Bromoform	173	15.796	15.798	-0.002	95	11237	0.0392	0.0301	
82 n-Nonane	57	15.813	15.811	0.002	82	8795	0.0392	0.0454	
84 Styrene	104	15.834	15.830	0.004	98	9316	0.0392	0.0362	
85 o-Xylene	91	15.883	15.888	-0.005	98	16738	0.0392	0.0423	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	16.228	16.225	0.003	96	9923	0.0392	0.0407	
87 1,2,3-Trichloropropane	110	16.384	16.386	-0.002	94	4029	0.0392	0.0421	
88 Isopropylbenzene	105	16.487	16.487	0.000	95	25695	0.0392	0.0485	
89 N-Propylbenzene	120	17.037	17.041	-0.004	99	5793	0.0392	0.0391	
90 2-Chlorotoluene	126	17.074	17.076	-0.002	96	5831	0.0392	0.0412	
91 4-Ethyltoluene	105	17.204	17.204	0.000	97	19270	0.0392	0.0386	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	92	10402	0.0392	0.0421	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	90	7130	0.0392	0.0341	
94 n-Decane	57	17.619	17.619	0.000	93	12720	0.0392	0.0565	
95 tert-Butylbenzene	119	17.738	17.740	-0.002	91	20652	0.0392	0.0431	
96 1,2,4-Trimethylbenzene	105	17.754	17.756	-0.002	96	18485	0.0392	0.0418	
97 sec-Butylbenzene	105	18.034	18.032	0.002	96	24278	0.0392	0.0401	
98 1,3-Dichlorobenzene	146	18.034	18.037	-0.003	77	13763	0.0392	0.0392	
99 Benzyl chloride	91	18.126	18.124	0.002	95	14746	0.0392	0.0389	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	92	14025	0.0392	0.0413	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	95	30692	0.0392	0.0593	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	94	15481	0.0392	0.0462	
103 Butylcyclohexane	83	18.320	18.322	-0.002	90	12468	0.0392	0.0418	
104 1,2-Dichlorobenzene	146	18.509	18.514	-0.005	90	13562	0.0392	0.0398	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	92	15505	0.0392	0.0389	
106 Indene	116	18.649	18.650	-0.001	91	10325	0.0392	0.0341	
107 n-Butylbenzene	91	18.670	18.671	-0.001	98	14526	0.0392	0.0317	
108 Undecane	57	19.016	19.016	0.000	90	7258	0.0392	0.0329	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.064	19.061	0.003	97	12771	0.0392	0.0351	
110 1,2-Dibromo-3-Chloropropan	157	19.150	19.150	0.000	92	4308	0.0392	0.0284	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	98	13292	0.0392	0.0315	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	94	8101	0.0392	0.0318	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	10963	0.0392	0.0332	
114 Dodecane	57	20.094	20.092	0.002	86	6118	0.0392	0.0372	
115 1,2,4-Trichlorobenzene	180	20.250	20.247	0.003	92	13020	0.0392	0.0405	
116 Naphthalene	128	20.374	20.375	-0.001	98	16480	0.0392	0.0395	
117 Benzo(b)thiophene	134	20.477	20.474	0.003	97	11365	0.0392	0.0420	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	94	15246	0.0392	0.0337	
119 1,2,3-Trichlorobenzene	180	20.649	20.650	-0.001	95	11719	0.0392	0.0377	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	98	12861	0.1225	0.2163	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	97	9519	0.1225	0.2052	
A 124 Toluene Range	1	12.814	(12.784-12.844)		0	48507	0.0392	0.0521	
A 125 C8 Range	1	13.552	(13.529-13.589)		0	46352	0.0392	0.0411	
S 126 Xylenes, Total	100				0		0.1176	0.1256	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0954	

Reagents:

40L12DNP_00005	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

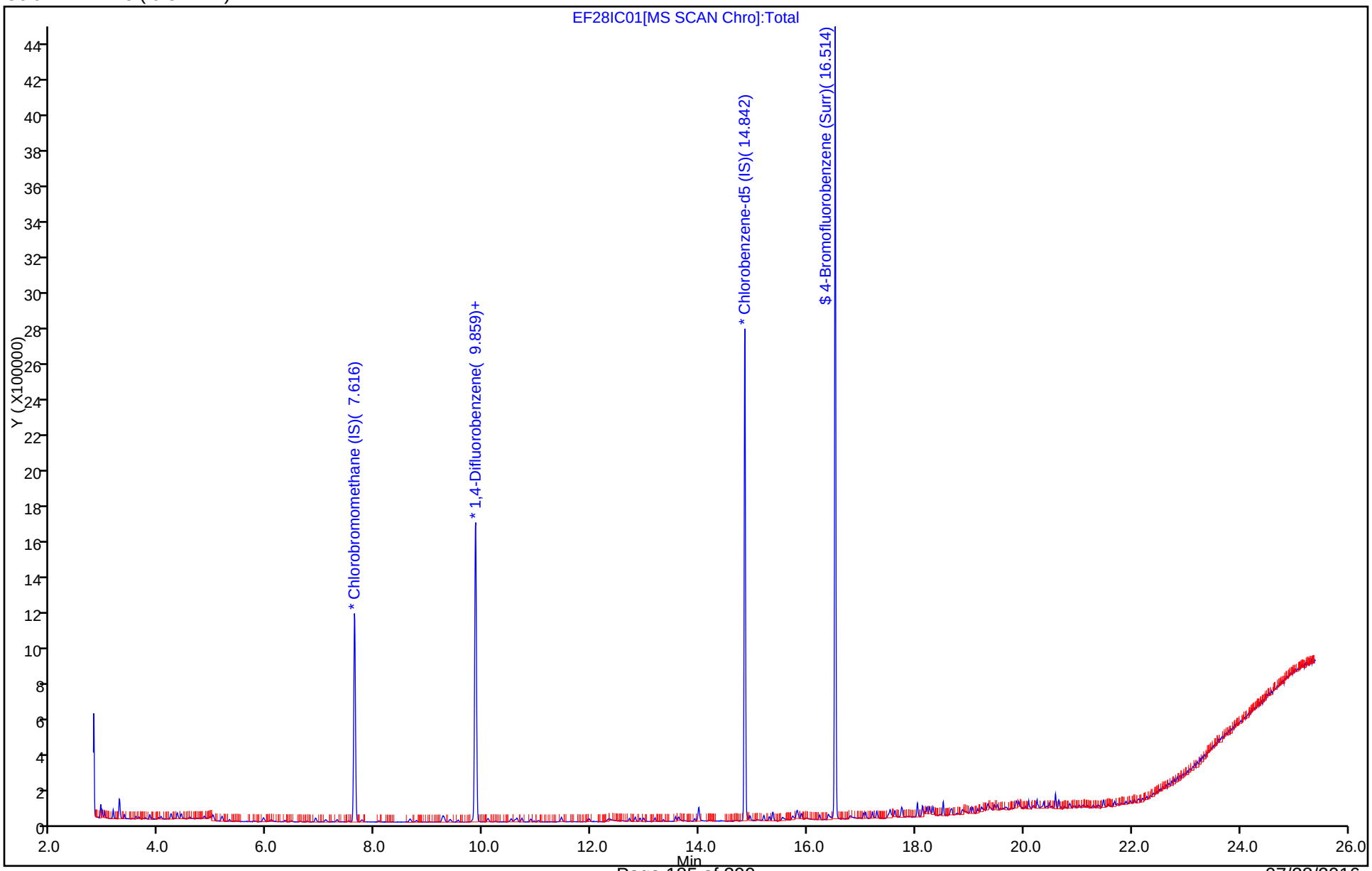
Report Date: 01-Jul-2016 17:07:29 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC01.D

Injection Date:	28-Jun-2016 14:43:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

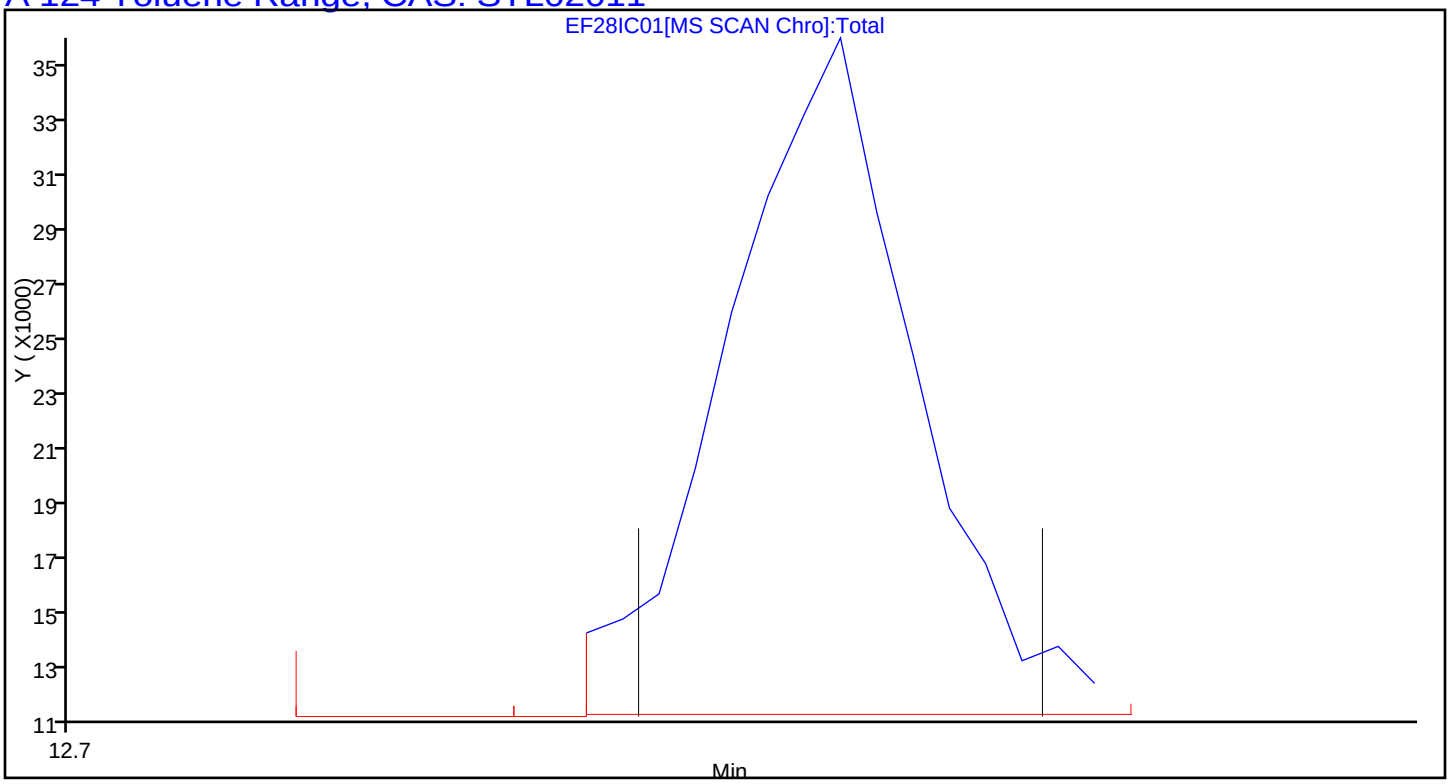


Report Date: 01-Jul-2016 17:07:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC01.D				
Injection Date:	28-Jun-2016 14:43:30	Instrument ID:	ME		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

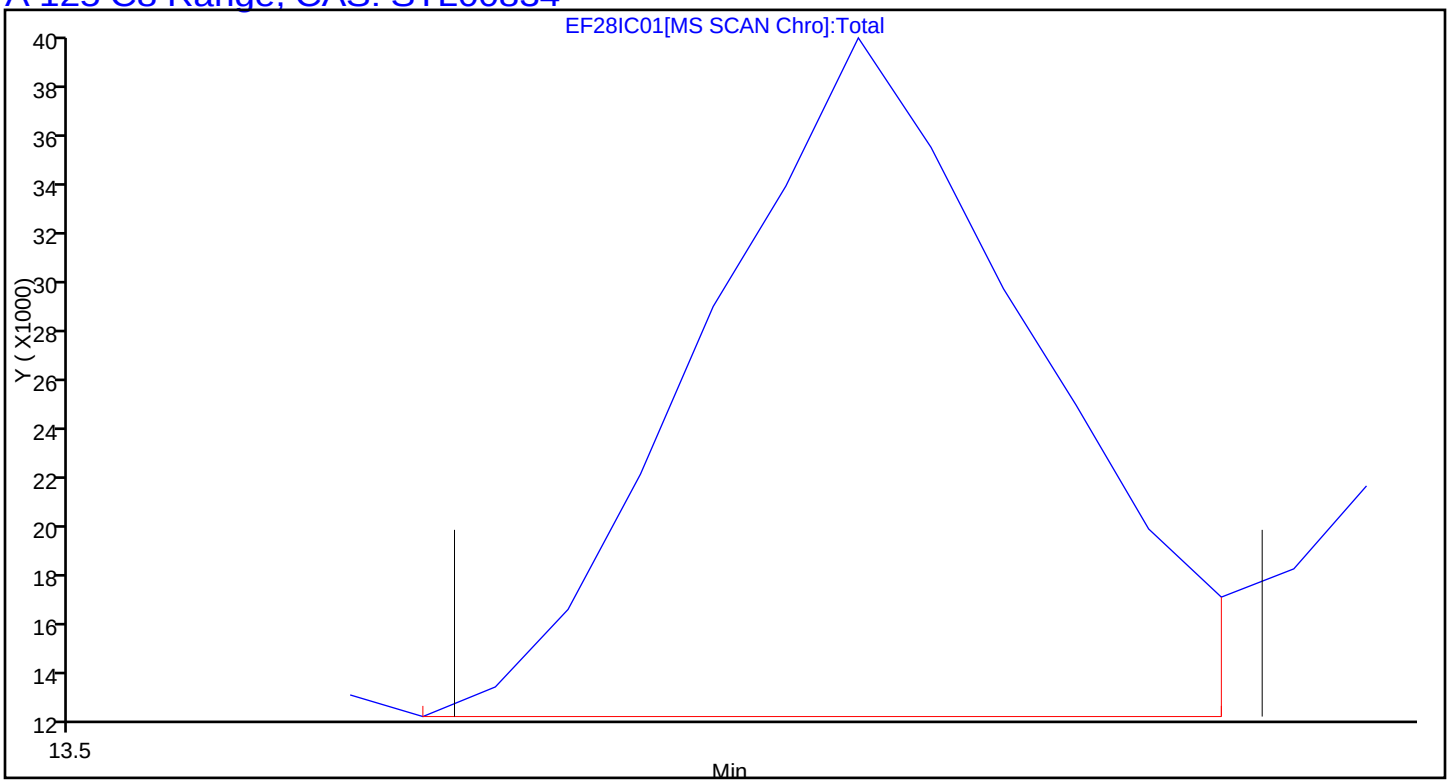


Report Date: 01-Jul-2016 17:07:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC01.D				
Injection Date:	28-Jun-2016 14:43:30	Instrument ID:	ME		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 28-Jun-2016 15:30:30 ALS Bottle#: 7 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044591,,1,2,,ICAL02
Misc. Info.: E062816I,T15,,140-0003101-003
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:07:36 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 28-Jun-2016 16:24:53

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.616	7.622	-0.006	84	325979	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.859	-0.005	95	1477050	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	89	1442251	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	1081606	4.00	3.92	
6 Chlorodifluoromethane	67	2.941	2.940	0.001	97	3796	0.0784	0.0840	
7 Propene	41	2.946	2.946	0.000	95	8358	0.0784	0.0923	
8 Dichlorodifluoromethane	85	2.995	2.991	0.004	100	31997	0.0784	0.0845	
9 Chloromethane	52	3.146	3.142	0.004	60	2634	0.0784	0.0919	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	90	19194	0.0784	0.0833	
11 Acetaldehyde	44	3.270	3.274	-0.004	90	33606	0.3920	0.9422	
12 Vinyl chloride	62	3.286	3.285	0.001	98	8475	0.0784	0.0847	
13 Butane	43	3.362	3.359	0.003	84	12337	0.0784	0.0875	
14 Butadiene	54	3.362	3.359	0.003	70	6029	0.0784	0.0836	
15 Bromomethane	94	3.626	3.626	0.000	97	8366	0.0784	0.0853	
16 Chloroethane	64	3.744	3.744	0.000	88	3825	0.0784	0.0829	
17 Ethanol	31	3.825	3.831	-0.006	99	31088	0.3920	0.8841	
18 Vinyl bromide	106	3.992	3.995	-0.003	96	8248	0.0784	0.0850	
19 2-Methylbutane	43	4.036	4.034	0.002	88	8279	0.0784	0.0858	
20 Trichlorofluoromethane	101	4.219	4.220	-0.001	100	32046	0.0784	0.0822	
21 Acrolein	56	4.230	4.230	0.000	42	7251	0.0784	0.2722	
22 Acetonitrile	40	4.284	4.289	-0.005	94	3069	0.0784	0.1024	
23 Acetone	58	4.332	4.330	0.002	98	19225	0.2352	0.5196	
25 Pentane	72	4.413	4.409	0.004	73	1378	0.0784	0.0840	
24 Isopropyl alcohol	45	4.408	4.410	-0.002	84	33748	0.2352	0.2797	
26 Ethyl ether	31	4.559	4.556	0.003	88	5989	0.0784	0.0781	
27 1,1-Dichloroethene	96	4.834	4.837	-0.003	95	8183	0.0784	0.0903	
29 Acrylonitrile	53	4.931	4.940	-0.009	90	3846	0.0784	0.0801	
28 2-Methyl-2-propanol	59	4.952	4.945	0.007	94	12785	0.0784	0.0900	
30 1,1,2-Trichloro-1,2,2-trif	101	5.001	5.000	0.001	89	18207	0.0784	0.0824	
31 Methylene Chloride	84	5.157	5.163	-0.006	94	10989	0.0784	0.1248	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.173	5.175	-0.002	88	11243	0.0784	0.0905	
33 Carbon disulfide	76	5.303	5.305	-0.002	98	23386	0.0784	0.0855	
34 trans-1,2-Dichloroethene	96	5.923	5.928	-0.005	95	8642	0.0784	0.0851	
35 2-Methylpentane	43	5.939	5.942	-0.003	92	16920	0.0784	0.0882	
36 Methyl tert-butyl ether	73	6.074	6.060	0.014	95	25725	0.0784	0.0898	
37 1,1-Dichloroethane	63	6.333	6.336	-0.003	98	15614	0.0784	0.0818	
38 Vinyl acetate	43	6.446	6.447	-0.001	99	19812	0.0784	0.0823	
39 2-Butanone (MEK)	72	6.894	6.888	0.006	89	4929	0.0784	0.1095	
40 Hexane	56	6.899	6.897	0.002	68	6057	0.0784	0.0830	
41 Isopropyl ether	45	7.071	7.068	0.003	93	22432	0.0784	0.0804	
42 cis-1,2-Dichloroethene	96	7.293	7.296	-0.003	96	8879	0.0784	0.0854	
43 Ethyl acetate	43	7.503	7.502	0.001	97	14875	0.0784	0.0801	
44 Chloroform	83	7.632	7.639	-0.007	93	21799	0.0784	0.0837	
45 Tert-butyl ethyl ether	59	7.740	7.740	0.000	95	21247	0.0784	0.0784	
46 Tetrahydrofuran	42	8.064	8.045	0.019	87	7847	0.0784	0.0894	
47 1,1,1-Trichloroethane	97	8.641	8.646	-0.005	95	26162	0.0784	0.0814	
48 1,2-Dichloroethane	62	8.759	8.765	-0.006	99	16386	0.0784	0.0775	
50 Cyclohexane	69	9.250	9.244	0.006	68	3997	0.0784	0.0833	
51 Benzene	78	9.255	9.254	0.001	96	22927	0.0784	0.0822	
49 n-Butanol	31	9.277	9.263	0.014	42	2720	0.0784	0.0918	
52 Carbon tetrachloride	117	9.277	9.275	0.002	96	26048	0.0784	0.0740	
53 2,3-Dimethylpentane	71	9.390	9.389	0.001	86	5633	0.0784	0.0833	
54 Thiophene	84	9.530	9.538	-0.008	96	12676	0.0784	0.0769	
55 Tert-amyl methyl ether	73	9.800	9.794	0.006	96	23478	0.0784	0.0838	
56 Isooctane	57	10.086	10.088	-0.002	95	34556	0.0784	0.0813	
57 n-Heptane	71	10.517	10.519	-0.002	86	8121	0.0784	0.0787	
58 1,2-Dichloropropane	63	10.593	10.590	0.003	76	8117	0.0784	0.0803	
59 Trichloroethene	130	10.625	10.627	-0.002	94	12404	0.0784	0.0796	
60 Dibromomethane	93	10.711	10.716	-0.005	84	11415	0.0784	0.0777	
61 Dichlorobromomethane	83	10.873	10.879	-0.006	98	20276	0.0784	0.0736	
62 1,4-Dioxane	88	10.916	10.916	0.000	68	3115	0.0784	0.0788	
63 Methyl methacrylate	41	11.019	11.019	0.000	88	9493	0.0784	0.0766	
64 Methylcyclohexane	83	11.445	11.447	-0.002	93	17591	0.0784	0.0809	
65 4-Methyl-2-pentanone (MIBK	43	11.930	11.923	0.007	95	16112	0.0784	0.0779	
66 cis-1,3-Dichloropropene	75	11.962	11.965	-0.003	97	14773	0.0784	0.0801	
67 trans-1,3-Dichloropropene	75	12.701	12.705	-0.004	96	15547	0.0784	0.0831	
68 Toluene	91	12.814	12.813	0.001	93	29586	0.0784	0.0863	
69 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	96	7961	0.0784	0.0785	
70 2-Methylthiophene	97	12.965	12.970	-0.005	98	22831	0.0784	0.0808	
71 3-Methylthiophene	97	13.176	13.179	-0.003	97	22601	0.0784	0.0809	
72 2-Hexanone	58	13.332	13.327	0.005	91	5134	0.0784	0.0652	
73 n-Octane	85	13.559	13.559	-0.001	87	9166	0.0784	0.0774	
74 Chlorodibromomethane	129	13.618	13.617	0.001	96	17837	0.0784	0.0679	
75 Ethylene Dibromide	107	13.914	13.915	-0.001	94	15923	0.0784	0.0774	
76 Tetrachloroethene	129	13.995	13.994	0.001	92	12490	0.0784	0.0789	
77 Chlorobenzene	112	14.890	14.890	0.000	92	23360	0.0784	0.0818	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	90	22402	0.0784	0.0805	
79 Ethylbenzene	91	15.192	15.193	-0.001	98	38087	0.0784	0.0815	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	98	28484	0.0784	0.0767	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	100	61025	0.1568	0.1645	
83 Bromoform	173	15.796	15.798	-0.002	97	19875	0.0784	0.0538	
82 n-Nonane	57	15.813	15.811	0.002	84	15335	0.0784	0.0800	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	97	17255	0.0784	0.0678	
85 o-Xylene	91	15.888	15.888	0.000	99	30789	0.0784	0.0786	
86 1,1,2,2-Tetrachloroethane	83	16.222	16.225	-0.003	92	17786	0.0784	0.0738	
87 1,2,3-Trichloropropane	110	16.384	16.386	-0.002	94	6906	0.0784	0.0730	
88 Isopropylbenzene	105	16.487	16.487	0.000	97	44316	0.0784	0.0846	
89 N-Propylbenzene	120	17.042	17.041	0.001	99	11742	0.0784	0.0801	
90 2-Chlorotoluene	126	17.074	17.076	-0.002	97	11157	0.0784	0.0796	
91 4-Ethyltoluene	105	17.204	17.204	0.000	96	37991	0.0784	0.0769	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	92	18804	0.0784	0.0769	
93 Alpha Methyl Styrene	118	17.538	17.534	0.004	88	12880	0.0784	0.0623	
94 n-Decane	57	17.619	17.619	0.000	95	16540	0.0784	0.0743	
95 tert-Butylbenzene	119	17.743	17.740	0.003	91	37979	0.0784	0.0802	
96 1,2,4-Trimethylbenzene	105	17.759	17.756	0.003	95	32895	0.0784	0.0753	
97 sec-Butylbenzene	105	18.029	18.032	-0.003	97	46498	0.0784	0.0778	
98 1,3-Dichlorobenzene	146	18.034	18.037	-0.003	97	26084	0.0784	0.0750	
99 Benzyl chloride	91	18.126	18.124	0.002	97	27062	0.0784	0.0722	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	96	24452	0.0784	0.0728	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	96	38992	0.0784	0.0762	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	98	25561	0.0784	0.0772	
103 Butylcyclohexane	83	18.320	18.322	-0.002	92	22510	0.0784	0.0763	
104 1,2-Dichlorobenzene	146	18.509	18.514	-0.005	92	24369	0.0784	0.0724	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	93	29056	0.0784	0.0738	
106 Indene	116	18.649	18.650	-0.001	90	19566	0.0784	0.0654	
107 n-Butylbenzene	91	18.670	18.671	-0.001	97	32459	0.0784	0.0716	
108 Undecane	57	19.016	19.016	0.000	91	12359	0.0784	0.0566	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.061	-0.002	97	25116	0.0784	0.0697	
110 1,2-Dibromo-3-Chloropropan	157	19.150	19.150	0.000	95	8129	0.0784	0.0542	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	97	26870	0.0784	0.0643	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	95	16264	0.0784	0.0647	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	19925	0.0784	0.0610	
114 Dodecane	57	20.094	20.092	0.002	89	9620	0.0784	0.0592	
115 1,2,4-Trichlorobenzene	180	20.245	20.247	-0.002	93	18666	0.0784	0.0587	
116 Naphthalene	128	20.374	20.375	-0.001	98	24229	0.0784	0.0587	
117 Benzo(b)thiophene	134	20.477	20.474	0.003	99	16681	0.0784	0.0624	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	95	27541	0.0784	0.0615	
119 1,2,3-Trichlorobenzene	180	20.649	20.650	-0.001	93	16509	0.0784	0.0537	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	99	15212	0.2450	0.2587	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	98	11903	0.2450	0.2595	
A 124 Toluene Range	1	12.814	(12.784-12.844)		0	74756	0.0784	0.0839	
A 125 C8 Range	1	13.549	(13.529-13.589)		0	80511	0.0784	0.0747	
S 126 Xylenes, Total	100				0		0.2352	0.2431	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1705	

Reagents:

40L12DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

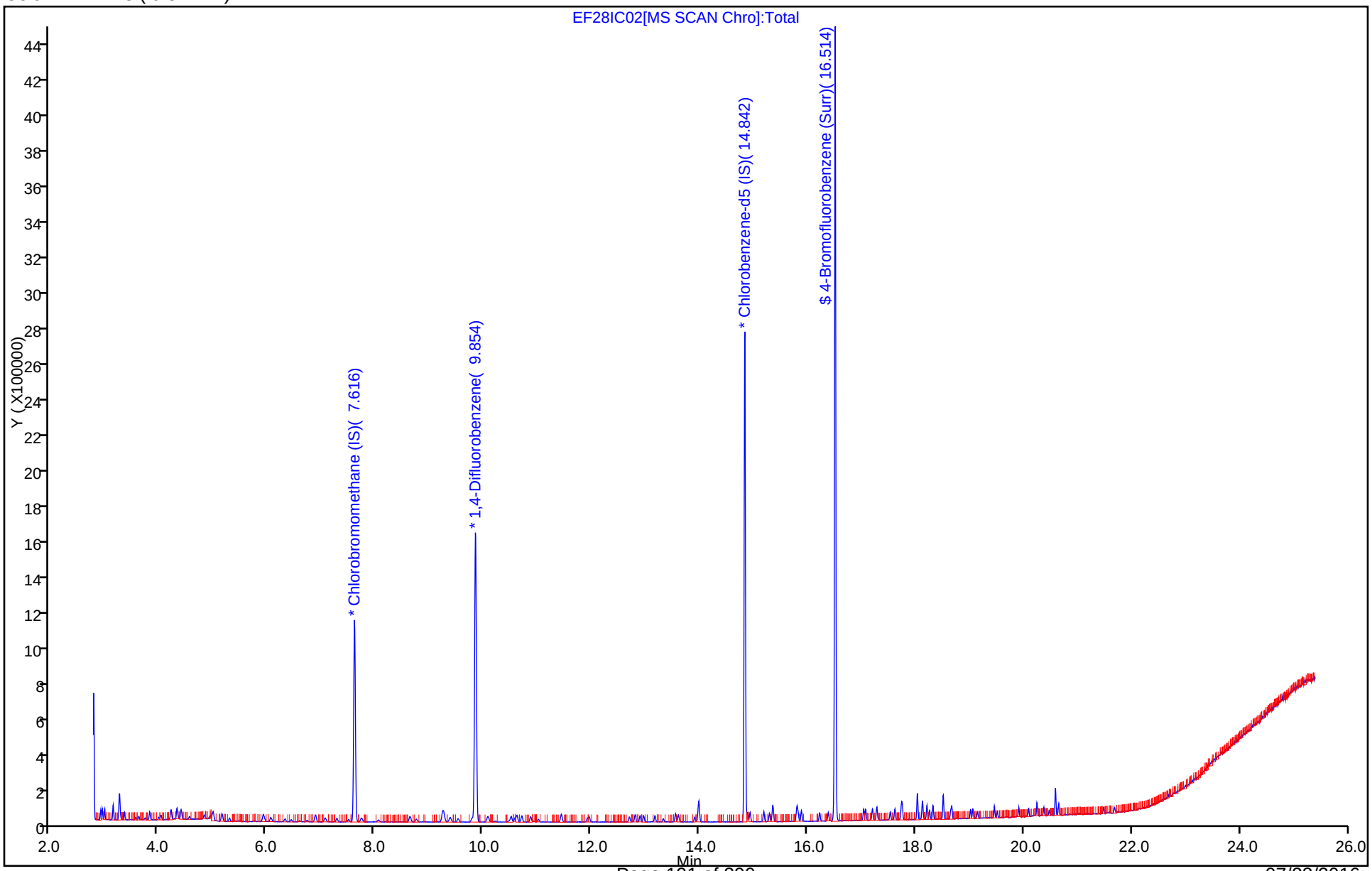
Report Date: 01-Jul-2016 17:07:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC02.D

Injection Date:	28-Jun-2016 15:30:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

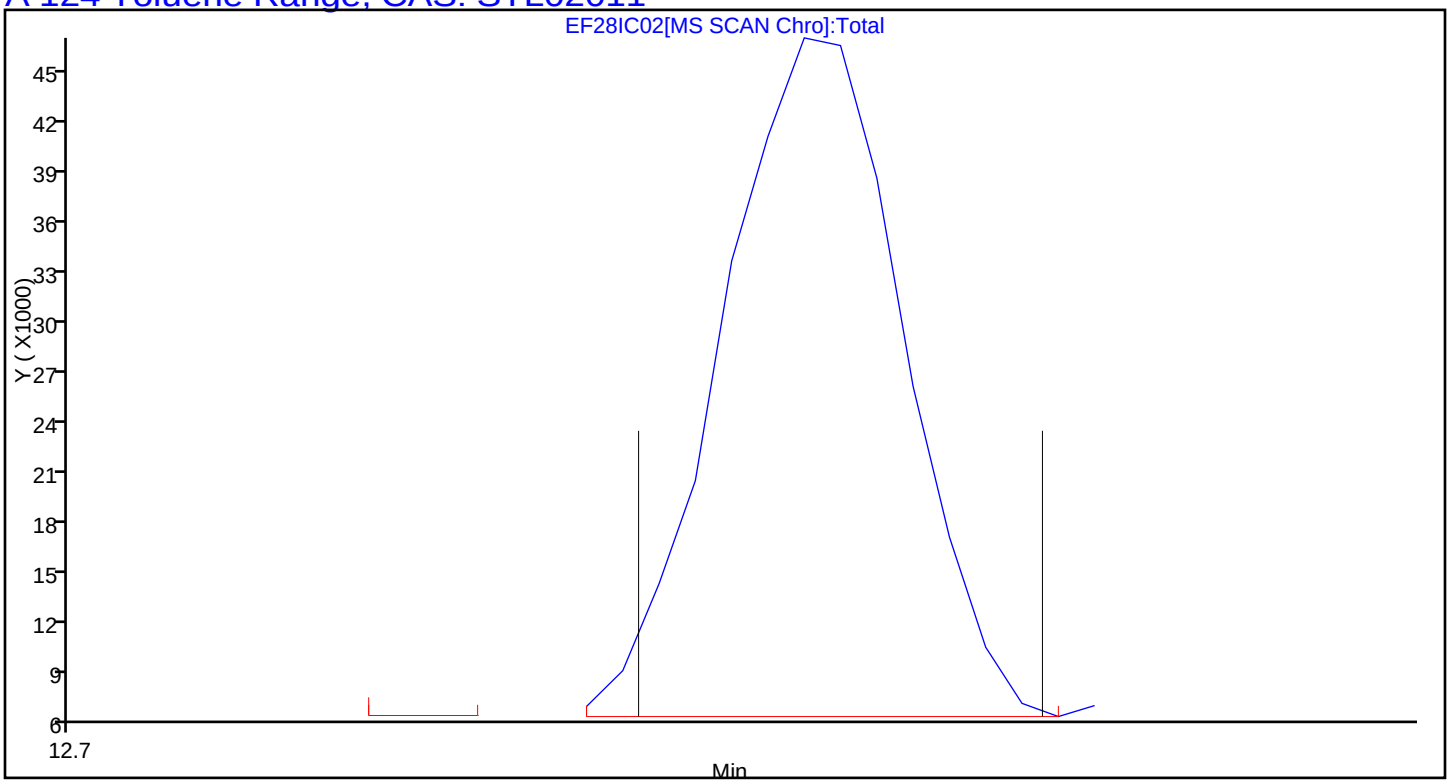


Report Date: 01-Jul-2016 17:07:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC02.D				
Injection Date:	28-Jun-2016 15:30:30	Instrument ID:	ME		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

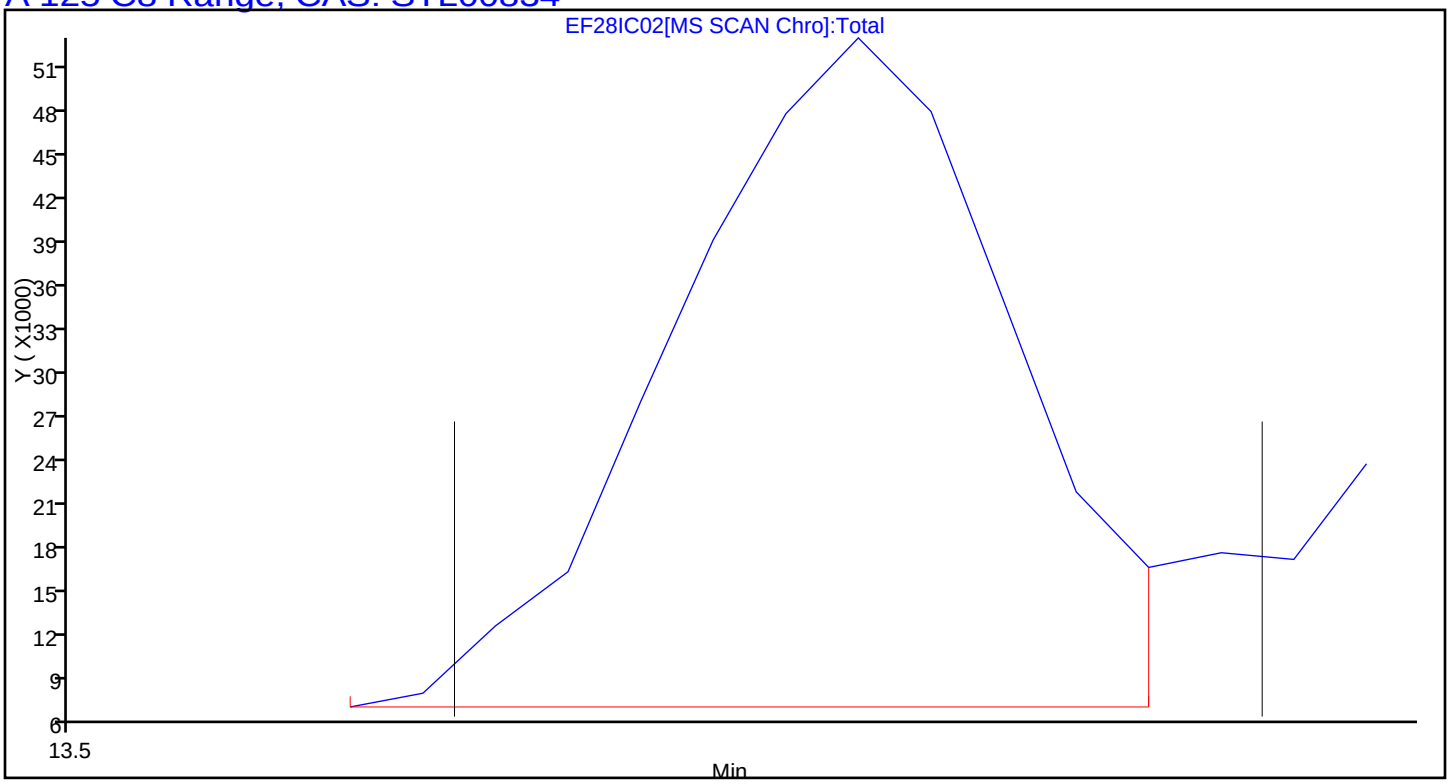


Report Date: 01-Jul-2016 17:07:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC02.D				
Injection Date:	28-Jun-2016 15:30:30	Instrument ID:	ME		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 28-Jun-2016 16:17:30 ALS Bottle#: 8 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044592,,1,3,,ICAL03
Misc. Info.: E062816I,T15,,140-0003101-004
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:07:48 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 28-Jun-2016 17:33:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.616	7.622	-0.006	87	300489	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.859	-0.005	96	1412138	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	89	1344435	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	1024031	4.00	3.98	
6 Chlorodifluoromethane	67	2.941	2.940	0.001	98	6725	0.1587	0.1615	
7 Propene	41	2.946	2.946	0.000	94	15172	0.1587	0.1818	
8 Dichlorodifluoromethane	85	2.989	2.991	-0.002	100	59174	0.1587	0.1696	
9 Chloromethane	52	3.140	3.142	-0.002	72	4672	0.1587	0.1769	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	89	35458	0.1587	0.1669	
11 Acetaldehyde	44	3.270	3.274	-0.004	85	62143	0.7933	1.89	
12 Vinyl chloride	62	3.286	3.285	0.001	99	14498	0.1587	0.1572	
13 Butane	43	3.356	3.359	-0.003	83	22083	0.1587	0.1699	
14 Butadiene	54	3.356	3.359	-0.003	72	11049	0.1587	0.1663	
15 Bromomethane	94	3.626	3.626	0.000	96	14474	0.1587	0.1601	
16 Chloroethane	64	3.744	3.744	0.000	86	6819	0.1587	0.1603	
17 Ethanol	31	3.820	3.831	-0.011	98	31515	0.7933	0.9723	
18 Vinyl bromide	106	3.992	3.995	-0.003	97	13955	0.1587	0.1561	
19 2-Methylbutane	43	4.036	4.034	0.002	90	14245	0.1587	0.1602	
20 Trichlorofluoromethane	101	4.219	4.220	-0.001	100	58379	0.1587	0.1624	
21 Acrolein	56	4.224	4.230	-0.006	31	5861	0.1587	0.2387	
22 Acetonitrile	40	4.284	4.289	-0.005	96	4149	0.1587	0.1501	
23 Acetone	58	4.327	4.330	-0.003	98	39855	0.4760	1.17	
25 Pentane	72	4.408	4.409	-0.001	70	2733	0.1587	0.1807	
24 Isopropyl alcohol	45	4.402	4.410	-0.008	86	59930	0.4760	0.5389	
26 Ethyl ether	31	4.553	4.556	-0.003	90	11784	0.1587	0.1667	
27 1,1-Dichloroethene	96	4.828	4.837	-0.009	94	12432	0.1587	0.1488	
29 Acrylonitrile	53	4.936	4.940	-0.004	64	8348	0.1587	0.1887	
28 2-Methyl-2-propanol	59	4.942	4.945	-0.003	96	21519	0.1587	0.1644	
30 1,1,2-Trichloro-1,2,2-trif	101	5.001	5.000	0.001	92	32920	0.1587	0.1616	
31 Methylene Chloride	84	5.157	5.163	-0.006	96	16782	0.1587	0.2067	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.168	5.175	-0.007	92	19362	0.1587	0.1691	
33 Carbon disulfide	76	5.297	5.305	-0.008	99	42168	0.1587	0.1673	
34 trans-1,2-Dichloroethene	96	5.923	5.928	-0.005	96	15455	0.1587	0.1651	
35 2-Methylpentane	43	5.939	5.942	-0.003	92	30027	0.1587	0.1698	
36 Methyl tert-butyl ether	73	6.063	6.060	0.003	95	45384	0.1587	0.1718	
37 1,1-Dichloroethane	63	6.333	6.336	-0.003	99	29879	0.1587	0.1697	
38 Vinyl acetate	43	6.441	6.447	-0.006	99	37000	0.1587	0.1667	
39 2-Butanone (MEK)	72	6.883	6.888	-0.005	90	9391	0.1587	0.2264	
40 Hexane	56	6.894	6.897	-0.003	67	11856	0.1587	0.1763	
41 Isopropyl ether	45	7.072	7.068	0.004	94	44975	0.1587	0.1749	
42 cis-1,2-Dichloroethene	96	7.293	7.296	-0.003	96	15317	0.1587	0.1598	
43 Ethyl acetate	43	7.498	7.502	-0.004	98	28255	0.1587	0.1650	
44 Chloroform	83	7.632	7.639	-0.007	96	39846	0.1587	0.1659	
45 Tert-butyl ethyl ether	59	7.740	7.740	0.000	95	41040	0.1587	0.1643	
46 Tetrahydrofuran	42	8.053	8.045	0.008	88	14536	0.1587	0.1796	
47 1,1,1-Trichloroethane	97	8.646	8.646	0.000	96	46619	0.1587	0.1574	
48 1,2-Dichloroethane	62	8.759	8.765	-0.006	98	31691	0.1587	0.1567	
50 Cyclohexane	69	9.245	9.244	0.001	67	7128	0.1587	0.1554	
51 Benzene	78	9.245	9.254	-0.009	96	42017	0.1587	0.1576	
49 n-Butanol	31	9.272	9.263	0.009	45	4127	0.1587	0.1457	
52 Carbon tetrachloride	117	9.272	9.275	-0.003	97	46813	0.1587	0.1390	
53 2,3-Dimethylpentane	71	9.385	9.389	-0.004	87	9845	0.1587	0.1523	
54 Thiophene	84	9.530	9.538	-0.008	96	24186	0.1587	0.1535	
55 Tert-amyl methyl ether	73	9.789	9.794	-0.005	96	41168	0.1587	0.1577	
56 Isooctane	57	10.086	10.088	-0.002	95	64465	0.1587	0.1587	
57 n-Heptane	71	10.512	10.519	-0.007	90	15870	0.1587	0.1609	
58 1,2-Dichloropropane	63	10.587	10.590	-0.003	75	14682	0.1587	0.1520	
59 Trichloroethene	130	10.625	10.627	-0.002	94	22915	0.1587	0.1539	
60 Dibromomethane	93	10.711	10.716	-0.005	86	21056	0.1587	0.1498	
61 Dichlorobromomethane	83	10.879	10.879	0.000	98	38206	0.1587	0.1450	
62 1,4-Dioxane	88	10.922	10.916	0.006	91	5819	0.1587	0.1540	
63 Methyl methacrylate	41	11.019	11.019	0.000	89	17514	0.1587	0.1479	
64 Methylcyclohexane	83	11.445	11.447	-0.002	94	33139	0.1587	0.1594	
65 4-Methyl-2-pentanone (MIBK	43	11.919	11.923	-0.004	96	46087	0.1587	0.2330	
66 cis-1,3-Dichloropropene	75	11.962	11.965	-0.003	96	26208	0.1587	0.1486	
67 trans-1,3-Dichloropropene	75	12.707	12.705	0.002	95	26293	0.1587	0.1507	
68 Toluene	91	12.814	12.813	0.001	94	51656	0.1587	0.1617	
69 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	94	14422	0.1587	0.1525	
70 2-Methylthiophene	97	12.971	12.970	0.001	96	40919	0.1587	0.1553	
71 3-Methylthiophene	97	13.176	13.179	-0.003	98	40707	0.1587	0.1564	
72 2-Hexanone	58	13.327	13.327	0.000	91	11111	0.1587	0.1515	
73 n-Octane	85	13.559	13.559	0.000	89	16929	0.1587	0.1533	
74 Chlorodibromomethane	129	13.612	13.617	-0.005	96	33773	0.1587	0.1379	
75 Ethylene Dibromide	107	13.914	13.915	-0.001	96	28998	0.1587	0.1512	
76 Tetrachloroethene	129	13.995	13.994	0.001	91	23098	0.1587	0.1565	
77 Chlorobenzene	112	14.885	14.890	-0.005	91	42521	0.1587	0.1597	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	90	42895	0.1587	0.1653	
79 Ethylbenzene	91	15.192	15.193	-0.001	99	71210	0.1587	0.1634	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	99	54581	0.1587	0.1576	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	100	113460	0.3173	0.3281	
83 Bromoform	173	15.796	15.798	-0.002	98	42048	0.1587	0.1221	
82 n-Nonane	57	15.813	15.811	0.002	87	28346	0.1587	0.1587	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	98	34321	0.1587	0.1446	
85 o-Xylene	91	15.888	15.888	0.000	98	58654	0.1587	0.1607	
86 1,1,2,2-Tetrachloroethane	83	16.222	16.225	-0.003	96	35384	0.1587	0.1575	
87 1,2,3-Trichloropropane	110	16.390	16.386	0.004	93	13737	0.1587	0.1558	
88 Isopropylbenzene	105	16.487	16.487	0.000	98	79328	0.1587	0.1625	
89 N-Propylbenzene	120	17.042	17.041	0.001	98	19867	0.1587	0.1454	
90 2-Chlorotoluene	126	17.074	17.076	-0.002	97	19645	0.1587	0.1504	
91 4-Ethyltoluene	105	17.204	17.204	0.000	98	73550	0.1587	0.1597	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	91	33571	0.1587	0.1473	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	84	24661	0.1587	0.1279	
94 n-Decane	57	17.619	17.619	0.000	93	32757	0.1587	0.1578	
95 tert-Butylbenzene	119	17.738	17.740	-0.002	90	67197	0.1587	0.1522	
96 1,2,4-Trimethylbenzene	105	17.754	17.756	-0.002	96	62732	0.1587	0.1541	
97 sec-Butylbenzene	105	18.034	18.032	0.002	97	88126	0.1587	0.1581	
98 1,3-Dichlorobenzene	146	18.040	18.037	0.003	96	45885	0.1587	0.1416	
99 Benzyl chloride	91	18.120	18.124	-0.004	96	50617	0.1587	0.1448	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	91	44360	0.1587	0.1416	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	96	73356	0.1587	0.1537	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	98	47202	0.1587	0.1529	
103 Butylcyclohexane	83	18.320	18.322	-0.002	91	44727	0.1587	0.1627	
104 1,2-Dichlorobenzene	146	18.514	18.514	0.000	93	44794	0.1587	0.1427	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	94	56405	0.1587	0.1536	
106 Indene	116	18.649	18.650	-0.001	92	38123	0.1587	0.1366	
107 n-Butylbenzene	91	18.671	18.671	-0.001	98	63817	0.1587	0.1510	
108 Undecane	57	19.016	19.016	0.000	87	25548	0.1587	0.1255	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.061	-0.002	97	48627	0.1587	0.1449	
110 1,2-Dibromo-3-Chloropropan	157	19.150	19.150	0.000	94	17307	0.1587	0.1238	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	96	56772	0.1587	0.1457	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	94	33953	0.1587	0.1448	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	96	43803	0.1587	0.1439	
114 Dodecane	57	20.094	20.092	0.002	91	22965	0.1587	0.1516	
115 1,2,4-Trichlorobenzene	180	20.245	20.247	-0.002	94	35909	0.1587	0.1212	
116 Naphthalene	128	20.375	20.375	-0.001	98	52195	0.1587	0.1357	
117 Benzo(b)thiophene	134	20.472	20.474	-0.002	99	34923	0.1587	0.1401	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	95	52990	0.1587	0.1270	
119 1,2,3-Trichlorobenzene	180	20.650	20.650	0.000	94	34340	0.1587	0.1198	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	99	31532	0.4958	0.5752	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	98	24709	0.4958	0.5778	
A 124 Toluene Range	1	12.814	(12.784-12.844)		0	134864	0.1587	0.1584	
A 125 C8 Range	1	13.552	(13.529-13.589)		0	168099	0.1587	0.1631	
S 126 Xylenes, Total	100				0		0.4760	0.4888	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3249	

Reagents:

40L3DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

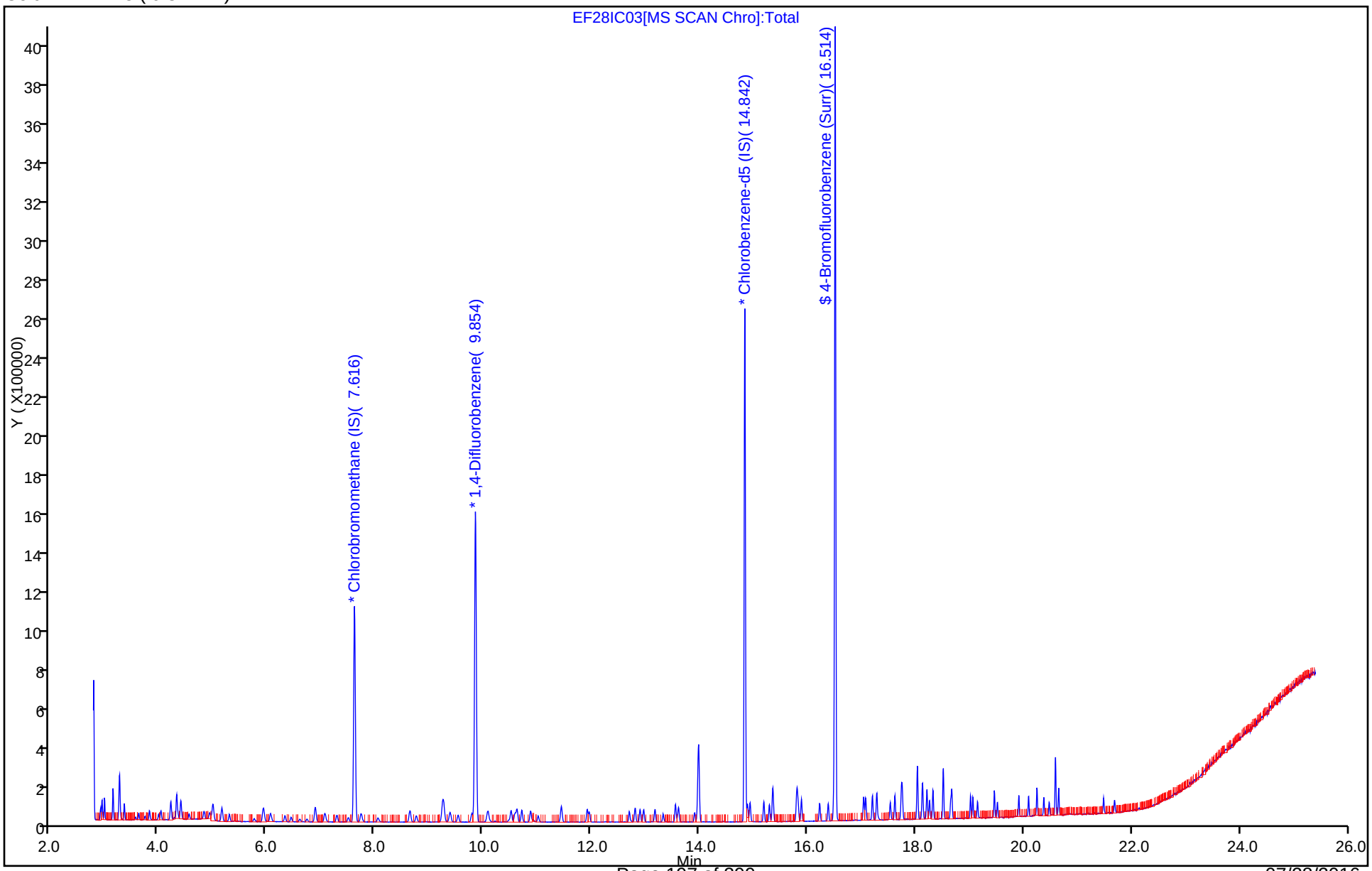
Report Date: 01-Jul-2016 17:07:52 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC03.D

Injection Date:	28-Jun-2016 16:17:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

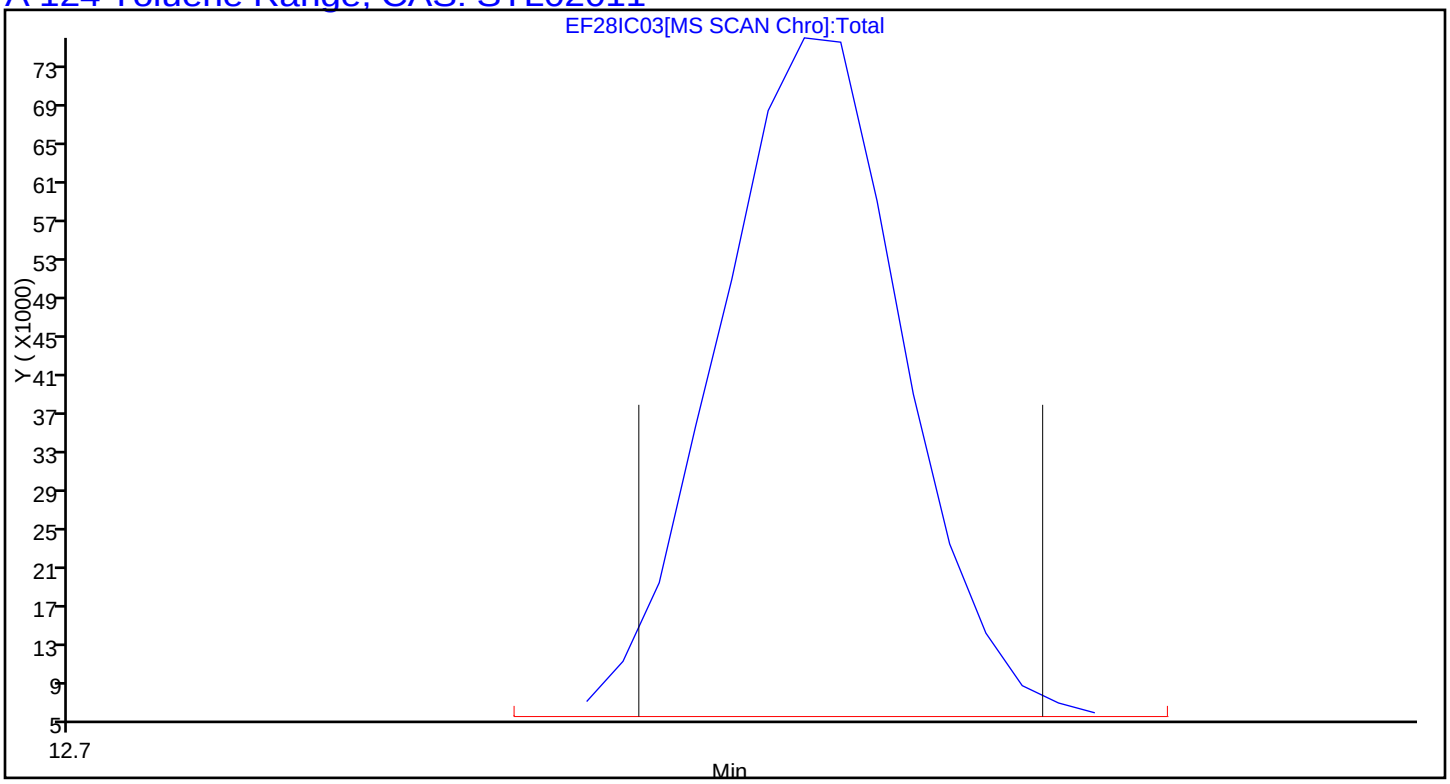


Report Date: 01-Jul-2016 17:07:52 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC03.D				
Injection Date:	28-Jun-2016 16:17:30	Instrument ID:	ME		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

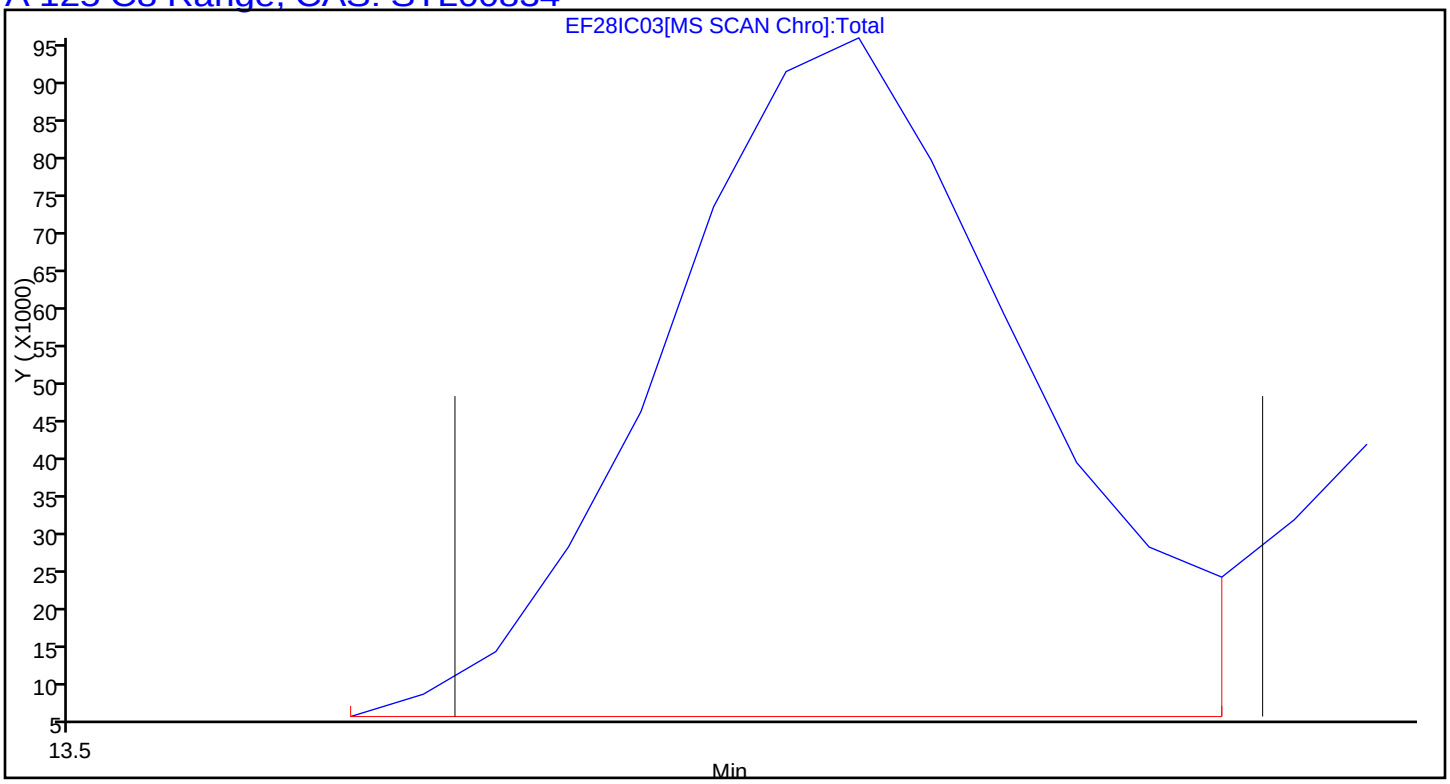


Report Date: 01-Jul-2016 17:07:52 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC03.D				
Injection Date:	28-Jun-2016 16:17:30	Instrument ID:	ME		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 28-Jun-2016 17:03:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044590,,1,4,,ICAL04
Misc. Info.: E062816I,T15,,140-0003101-005
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:07:59 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 28-Jun-2016 17:58:23

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.616	7.622	-0.006	87	278418	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.859	-0.005	96	1200178	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	90	1158773	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	915941	4.00	4.13	
6 Chlorodifluoromethane	67	2.941	2.940	0.001	97	15720	0.4000	0.4073	
7 Propene	41	2.946	2.946	0.000	95	33706	0.4000	0.4358	
8 Dichlorodifluoromethane	85	2.990	2.991	-0.001	100	138750	0.4000	0.4291	
9 Chloromethane	52	3.140	3.142	-0.002	98	10780	0.4000	0.4404	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	91	78315	0.4000	0.3979	
11 Acetaldehyde	44	3.270	3.274	-0.004	87	94360	2.00	3.10	
12 Vinyl chloride	62	3.281	3.285	-0.004	100	34021	0.4000	0.3982	
13 Butane	43	3.356	3.359	-0.003	83	51118	0.4000	0.4244	
14 Butadiene	54	3.356	3.359	-0.003	70	24934	0.4000	0.4049	
15 Bromomethane	94	3.620	3.626	-0.006	97	32899	0.4000	0.3928	
16 Chloroethane	64	3.739	3.744	-0.005	84	16152	0.4000	0.4099	
17 Ethanol	31	3.820	3.831	-0.011	97	62831	2.00	2.09	
18 Vinyl bromide	106	3.992	3.995	-0.003	97	31534	0.4000	0.3806	
19 2-Methylbutane	43	4.030	4.034	-0.004	89	33794	0.4000	0.4102	
20 Trichlorofluoromethane	101	4.219	4.220	-0.001	100	132467	0.4000	0.3977	
21 Acrolein	56	4.224	4.230	-0.006	28	9646	0.4000	0.4240	
22 Acetonitrile	40	4.278	4.289	-0.011	98	10184	0.4000	0.3977	
23 Acetone	58	4.321	4.330	-0.009	99	53975	1.20	1.71	
25 Pentane	72	4.408	4.409	-0.001	96	5668	0.4000	0.4044	
24 Isopropyl alcohol	45	4.397	4.410	-0.013	95	127084	1.20	1.23	
26 Ethyl ether	31	4.553	4.556	-0.003	91	25421	0.4000	0.3880	
27 1,1-Dichloroethene	96	4.834	4.837	-0.003	95	28895	0.4000	0.3733	
29 Acrylonitrile	53	4.931	4.940	-0.009	62	17569	0.4000	0.4286	
28 2-Methyl-2-propanol	59	4.931	4.945	-0.014	96	46533	0.4000	0.3837	
30 1,1,2-Trichloro-1,2,2-trif	101	4.995	5.000	-0.005	93	75160	0.4000	0.3982	
31 Methylene Chloride	84	5.157	5.163	-0.006	97	32289	0.4000	0.4293	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.168	5.175	-0.007	92	46592	0.4000	0.4391	
33 Carbon disulfide	76	5.303	5.305	-0.002	98	97165	0.4000	0.4160	
34 trans-1,2-Dichloroethene	96	5.923	5.928	-0.005	95	35030	0.4000	0.4039	
35 2-Methylpentane	43	5.939	5.942	-0.003	92	69697	0.4000	0.4254	
36 Methyl tert-butyl ether	73	6.052	6.060	-0.008	95	99267	0.4000	0.4055	
37 1,1-Dichloroethane	63	6.327	6.336	-0.009	99	66972	0.4000	0.4106	
38 Vinyl acetate	43	6.441	6.447	-0.006	99	81699	0.4000	0.3972	
39 2-Butanone (MEK)	72	6.888	6.888	0.000	97	17236	0.4000	0.4485	
40 Hexane	56	6.894	6.897	-0.003	77	26176	0.4000	0.4200	
41 Isopropyl ether	45	7.061	7.068	-0.007	93	98452	0.4000	0.4131	
42 cis-1,2-Dichloroethene	96	7.287	7.296	-0.009	98	35621	0.4000	0.4012	
43 Ethyl acetate	43	7.498	7.502	-0.004	97	64227	0.4000	0.4048	
44 Chloroform	83	7.632	7.639	-0.007	98	89583	0.4000	0.4026	
45 Tert-butyl ethyl ether	59	7.740	7.740	0.000	95	94049	0.4000	0.4065	
46 Tetrahydrofuran	42	8.042	8.045	-0.003	89	31553	0.4000	0.4208	
47 1,1,1-Trichloroethane	97	8.641	8.646	-0.005	95	111586	0.4000	0.4065	
48 1,2-Dichloroethane	62	8.759	8.765	-0.006	99	71907	0.4000	0.4183	
50 Cyclohexane	69	9.239	9.244	-0.005	73	17303	0.4000	0.4439	
51 Benzene	78	9.250	9.254	-0.004	96	96828	0.4000	0.4274	
49 n-Butanol	31	9.255	9.263	-0.008	47	9909	0.4000	0.4115	
52 Carbon tetrachloride	117	9.277	9.275	0.002	96	123974	0.4000	0.4332	
53 2,3-Dimethylpentane	71	9.385	9.389	-0.004	87	23038	0.4000	0.4193	
54 Thiophene	84	9.530	9.538	-0.008	96	55046	0.4000	0.4110	
55 Tert-amyl methyl ether	73	9.784	9.794	-0.010	96	91889	0.4000	0.4084	
56 Isooctane	57	10.086	10.088	-0.002	95	150352	0.4000	0.4356	
57 n-Heptane	71	10.517	10.519	-0.002	90	34747	0.4000	0.4144	
58 1,2-Dichloropropane	63	10.587	10.590	-0.003	77	34539	0.4000	0.4207	
59 Trichloroethene	130	10.625	10.627	-0.002	95	50183	0.4000	0.3966	
60 Dibromomethane	93	10.711	10.716	-0.005	90	50146	0.4000	0.4199	
61 Dichlorobromomethane	83	10.873	10.879	-0.006	99	91719	0.4000	0.4095	
62 1,4-Dioxane	88	10.916	10.916	0.000	88	13250	0.4000	0.4125	
63 Methyl methacrylate	41	11.013	11.019	-0.006	82	43477	0.4000	0.4319	
64 Methylcyclohexane	83	11.445	11.447	-0.002	93	74230	0.4000	0.4202	
65 4-Methyl-2-pentanone (MIBK	43	11.925	11.923	0.002	98	67093	0.4000	0.3991	
66 cis-1,3-Dichloropropene	75	11.962	11.965	-0.003	98	60744	0.4000	0.4053	
67 trans-1,3-Dichloropropene	75	12.701	12.705	-0.004	95	60571	0.4000	0.4029	
68 Toluene	91	12.809	12.813	-0.004	93	114790	0.4000	0.4168	
69 1,1,2-Trichloroethane	83	12.906	12.904	0.002	94	34389	0.4000	0.4218	
70 2-Methylthiophene	97	12.965	12.970	-0.005	97	94109	0.4000	0.4144	
71 3-Methylthiophene	97	13.176	13.179	-0.003	99	92335	0.4000	0.4115	
72 2-Hexanone	58	13.327	13.327	0.000	92	26279	0.4000	0.4156	
73 n-Octane	85	13.559	13.559	0.000	90	39282	0.4000	0.4127	
74 Chlorodibromomethane	129	13.618	13.617	0.001	97	81925	0.4000	0.3882	
75 Ethylene Dibromide	107	13.914	13.915	-0.001	97	65623	0.4000	0.3970	
76 Tetrachloroethene	129	13.990	13.994	-0.004	92	52170	0.4000	0.4102	
77 Chlorobenzene	112	14.890	14.890	0.000	90	95948	0.4000	0.4181	
78 2,3-Dimethylheptane	43	14.934	14.938	-0.004	92	99277	0.4000	0.4437	
79 Ethylbenzene	91	15.192	15.193	-0.001	99	155521	0.4000	0.4140	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	99	122946	0.4000	0.4118	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	100	250849	0.8000	0.8416	
83 Bromoform	173	15.796	15.798	-0.002	97	96855	0.4000	0.3262	
82 n-Nonane	57	15.807	15.811	-0.004	88	65947	0.4000	0.4283	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	98	81146	0.4000	0.3968	
85 o-Xylene	91	15.888	15.888	0.000	97	132558	0.4000	0.4213	
86 1,1,2,2-Tetrachloroethane	83	16.222	16.225	-0.003	96	81058	0.4000	0.4185	
87 1,2,3-Trichloropropane	110	16.384	16.386	-0.002	95	30043	0.4000	0.3954	
88 Isopropylbenzene	105	16.487	16.487	0.000	98	174404	0.4000	0.4144	
89 N-Propylbenzene	120	17.042	17.041	0.001	99	46286	0.4000	0.3931	
90 2-Chlorotoluene	126	17.074	17.076	-0.002	97	43916	0.4000	0.3902	
91 4-Ethyltoluene	105	17.204	17.204	0.000	97	158137	0.4000	0.3985	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	91	77799	0.4000	0.3962	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	87	59712	0.4000	0.3593	
94 n-Decane	57	17.614	17.619	-0.005	94	76536	0.4000	0.4278	
95 tert-Butylbenzene	119	17.738	17.740	-0.002	90	152114	0.4000	0.3999	
96 1,2,4-Trimethylbenzene	105	17.754	17.756	-0.002	96	141057	0.4000	0.4019	
97 sec-Butylbenzene	105	18.029	18.032	-0.003	97	195437	0.4000	0.4068	
98 1,3-Dichlorobenzene	146	18.034	18.037	-0.003	96	102208	0.4000	0.3660	
99 Benzyl chloride	91	18.121	18.124	-0.003	97	111609	0.4000	0.3704	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	92	99018	0.4000	0.3667	
101 4-Isopropyltoluene	119	18.207	18.212	-0.005	96	166682	0.4000	0.4052	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	99	106389	0.4000	0.3997	
103 Butylcyclohexane	83	18.320	18.322	-0.002	89	97961	0.4000	0.4133	
104 1,2-Dichlorobenzene	146	18.514	18.514	0.000	93	100167	0.4000	0.3704	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	93	123854	0.4000	0.3914	
106 Indene	116	18.649	18.650	-0.001	93	91341	0.4000	0.3798	
107 n-Butylbenzene	91	18.671	18.671	0.000	98	145976	0.4000	0.4007	
108 Undecane	57	19.016	19.016	0.000	90	58757	0.4000	0.3349	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.061	-0.002	97	110386	0.4000	0.3815	
110 1,2-Dibromo-3-Chloropropan	157	19.150	19.150	0.000	95	40649	0.4000	0.3372	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	96	122695	0.4000	0.3654	
112 1,2,3,5-Tetramethylbenzene	119	19.512	19.516	-0.004	94	76180	0.4000	0.3770	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	93674	0.4000	0.3571	
114 Dodecane	57	20.094	20.092	0.002	90	45442	0.4000	0.3481	
115 1,2,4-Trichlorobenzene	180	20.245	20.247	-0.002	93	71115	0.4000	0.2785	
116 Naphthalene	128	20.375	20.375	0.000	98	112328	0.4000	0.3389	
117 Benzo(b)thiophene	134	20.472	20.474	-0.002	99	69931	0.4000	0.3254	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	96	109232	0.4000	0.3038	
119 1,2,3-Trichlorobenzene	180	20.650	20.650	0.000	94	63656	0.4000	0.2577	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	98	43461	1.25	0.9199	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	98	31786	1.25	0.8624	
A 124 Toluene Range	1	12.809	(12.779-12.839)		0	299831	0.4000	0.4142	
A 125 C8 Range	1	13.552	(13.529-13.589)		0	381758	0.4000	0.4357	
S 126 Xylenes, Total	100				0		1.20	1.26	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.8050	

Reagents:

40L4DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

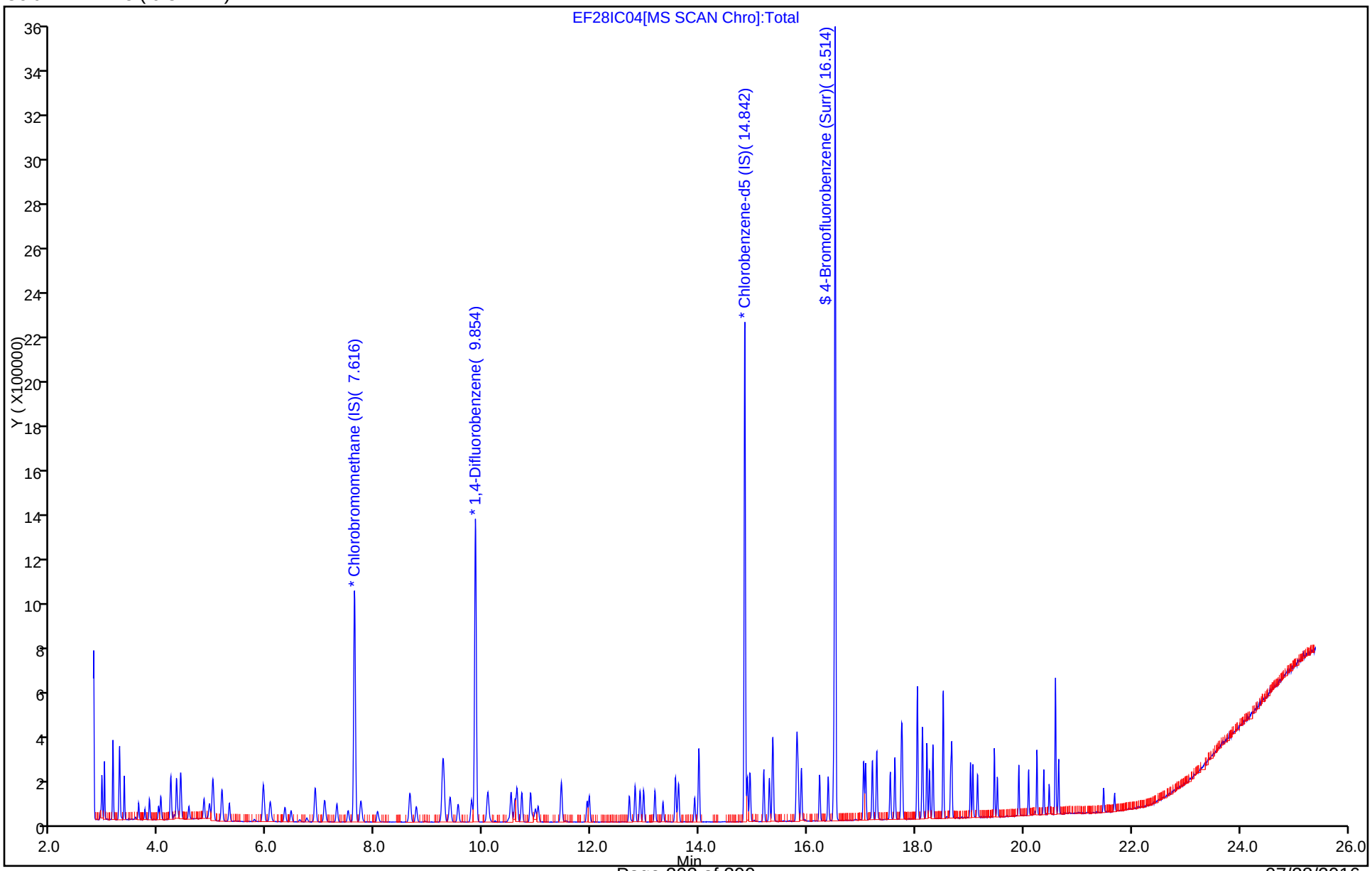
Report Date: 01-Jul-2016 17:08:03 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC04.D

Injection Date:	28-Jun-2016 17:03:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

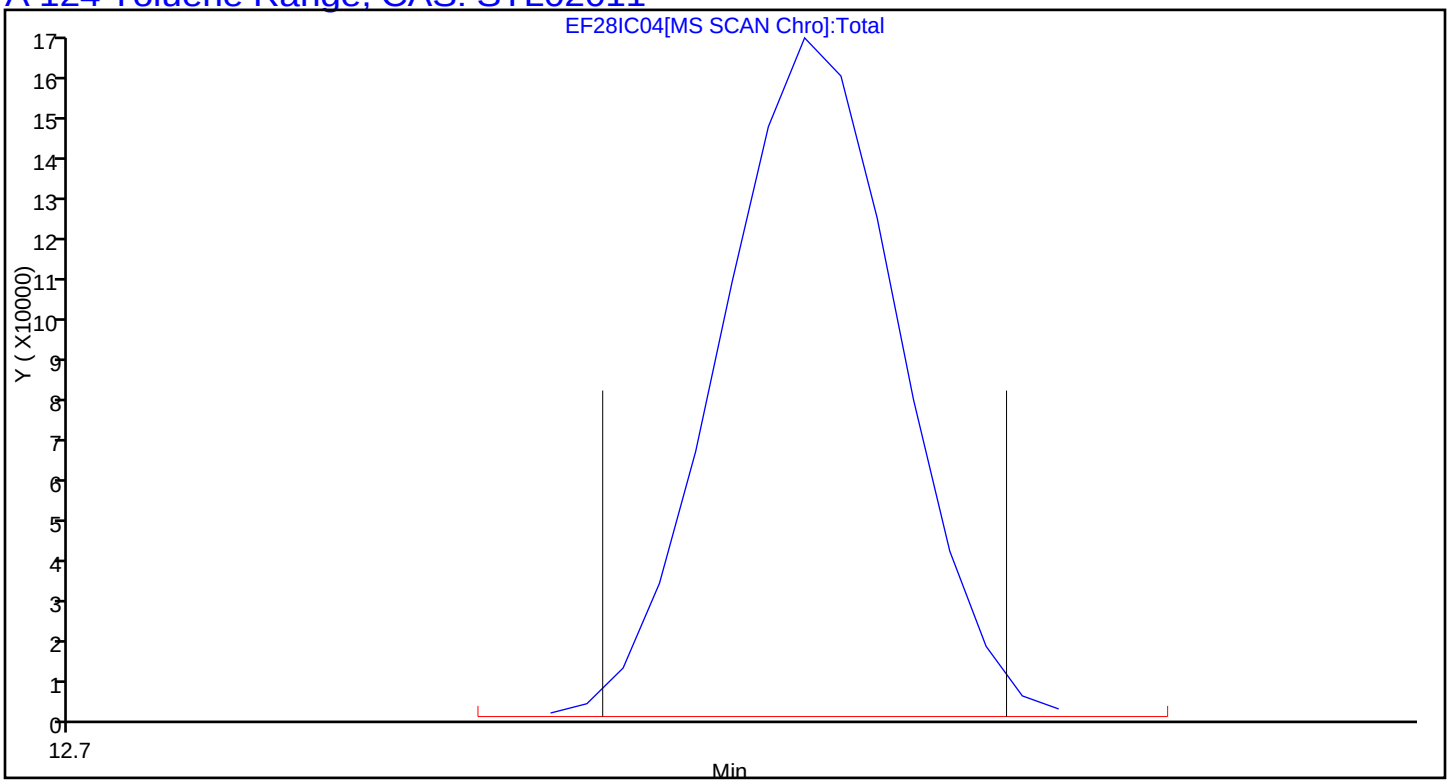


Report Date: 01-Jul-2016 17:08:03 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC04.D				
Injection Date:	28-Jun-2016 17:03:30	Instrument ID:	ME		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

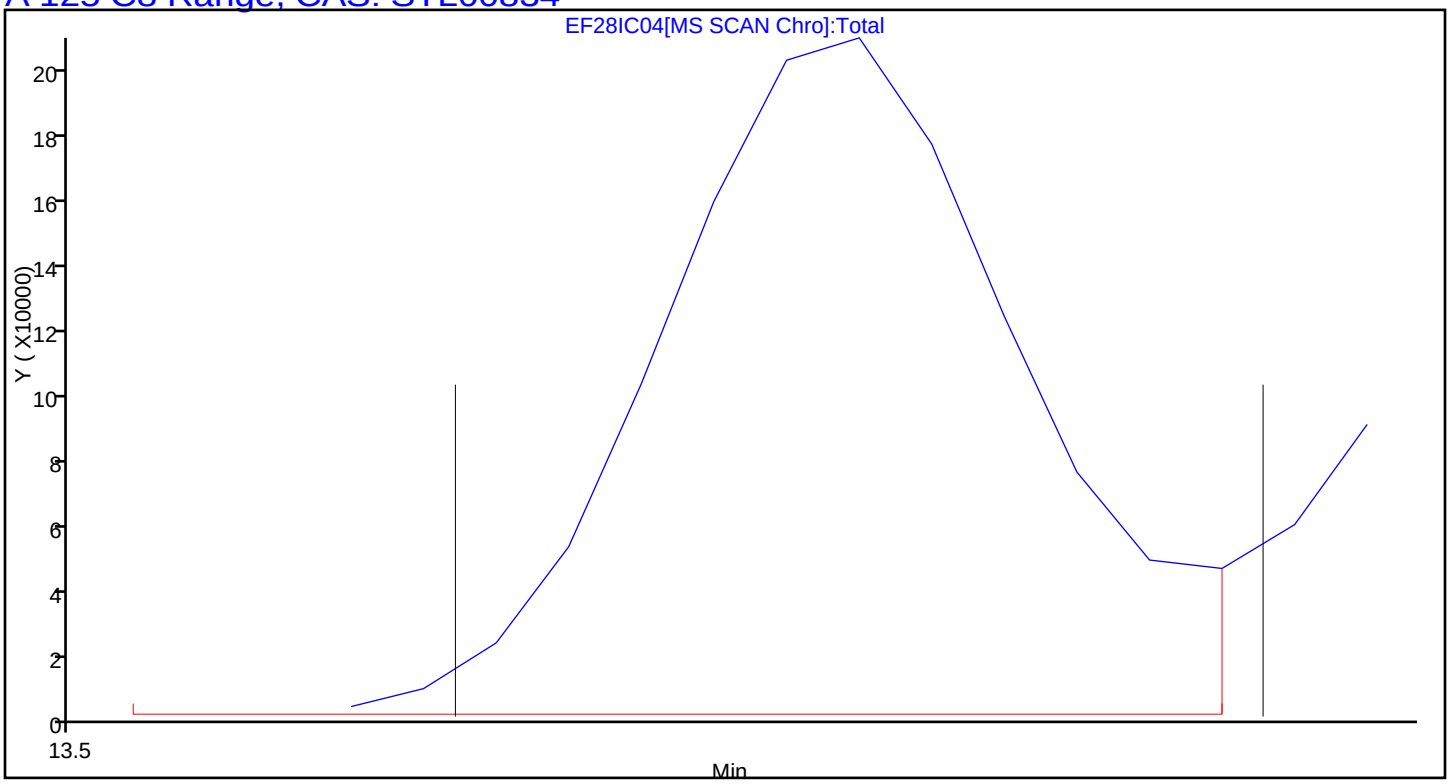


Report Date: 01-Jul-2016 17:08:03 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC04.D				
Injection Date:	28-Jun-2016 17:03:30	Instrument ID:	ME		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 28-Jun-2016 17:50:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044585,,1,5,,ICAL05
Misc. Info.: E062816I,T15,,140-0003101-006
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:08:10 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 28-Jun-2016 19:01:17

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.622	7.622	0.000	89	257680	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.859	-0.005	96	1128390	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	90	1070303	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	839876	4.00	4.10	
6 Chlorodifluoromethane	67	2.936	2.940	-0.004	98	42086	1.00	1.18	
7 Propene	41	2.946	2.946	0.000	95	81702	1.00	1.14	
8 Dichlorodifluoromethane	85	2.990	2.991	-0.001	100	360085	1.00	1.20	
9 Chloromethane	52	3.141	3.142	-0.001	98	24976	1.00	1.10	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.146	3.151	-0.005	93	201916	1.00	1.11	
11 Acetaldehyde	44	3.270	3.274	-0.004	88	165502	5.01	5.87	
12 Vinyl chloride	62	3.281	3.285	-0.004	99	86532	1.00	1.09	
13 Butane	43	3.356	3.359	-0.003	83	126822	1.00	1.14	
14 Butadiene	54	3.356	3.359	-0.003	74	65339	1.00	1.15	
15 Bromomethane	94	3.620	3.626	-0.006	97	85280	1.00	1.10	
16 Chloroethane	64	3.739	3.744	-0.005	86	41081	1.00	1.13	
17 Ethanol	31	3.825	3.831	-0.006	98	152267	5.01	5.48	
18 Vinyl bromide	106	3.993	3.995	-0.002	96	82443	1.00	1.08	
19 2-Methylbutane	43	4.030	4.034	-0.004	89	85686	1.00	1.12	
20 Trichlorofluoromethane	101	4.214	4.220	-0.006	99	352065	1.00	1.14	
21 Acrolein	56	4.224	4.230	-0.006	94	22104	1.00	1.05	
22 Acetonitrile	40	4.284	4.289	-0.005	99	24093	1.00	1.02	
23 Acetone	58	4.327	4.330	-0.003	99	96904	3.01	3.31	
25 Pentane	72	4.408	4.409	-0.001	93	13620	1.00	1.05	
24 Isopropyl alcohol	45	4.397	4.410	-0.013	92	305257	3.01	3.20	
26 Ethyl ether	31	4.553	4.556	-0.003	91	63011	1.00	1.04	
27 1,1-Dichloroethene	96	4.834	4.837	-0.003	96	76229	1.00	1.06	
29 Acrylonitrile	53	4.936	4.940	-0.004	54	37214	1.00	0.9809	
28 2-Methyl-2-propanol	59	4.931	4.945	-0.014	96	118899	1.00	1.06	
30 1,1,2-Trichloro-1,2,2-trif	101	4.996	5.000	-0.004	93	189029	1.00	1.08	
31 Methylene Chloride	84	5.157	5.163	-0.006	97	77948	1.00	1.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.168	5.175	-0.007	91	108869	1.00	1.11	
33 Carbon disulfide	76	5.303	5.305	-0.002	98	250504	1.00	1.16	
34 trans-1,2-Dichloroethene	96	5.923	5.928	-0.005	96	89543	1.00	1.12	
35 2-Methylpentane	43	5.939	5.942	-0.003	92	175639	1.00	1.16	
36 Methyl tert-butyl ether	73	6.052	6.060	-0.008	95	241541	1.00	1.07	
37 1,1-Dichloroethane	63	6.333	6.336	-0.003	99	173427	1.00	1.15	
38 Vinyl acetate	43	6.441	6.447	-0.006	99	204742	1.00	1.08	
39 2-Butanone (MEK)	72	6.883	6.888	-0.005	97	34869	1.00	0.9802	
40 Hexane	56	6.894	6.897	-0.003	79	65878	1.00	1.14	
41 Isopropyl ether	45	7.061	7.068	-0.007	93	241227	1.00	1.09	
42 cis-1,2-Dichloroethene	96	7.293	7.296	-0.003	98	91032	1.00	1.11	
43 Ethyl acetate	43	7.498	7.502	-0.004	97	155308	1.00	1.06	
44 Chloroform	83	7.632	7.639	-0.007	98	230271	1.00	1.12	
45 Tert-butyl ethyl ether	59	7.729	7.740	-0.011	95	229989	1.00	1.07	
46 Tetrahydrofuran	42	8.037	8.045	-0.008	87	75180	1.00	1.08	
47 1,1,1-Trichloroethane	97	8.646	8.646	0.000	95	286510	1.00	1.13	
48 1,2-Dichloroethane	62	8.759	8.765	-0.006	99	186788	1.00	1.16	
50 Cyclohexane	69	9.239	9.244	-0.005	77	41935	1.00	1.14	
51 Benzene	78	9.250	9.254	-0.004	96	243995	1.00	1.15	
49 n-Butanol	31	9.250	9.263	-0.013	48	25940	1.00	1.15	
52 Carbon tetrachloride	117	9.272	9.275	-0.003	98	288785	1.00	1.07	
53 2,3-Dimethylpentane	71	9.385	9.389	-0.004	87	58045	1.00	1.12	
54 Thiophene	84	9.536	9.538	-0.002	96	146859	1.00	1.17	
55 Tert-amyl methyl ether	73	9.784	9.794	-0.010	97	232902	1.00	1.12	
56 Isooctane	57	10.086	10.088	-0.002	95	381817	1.00	1.18	
57 n-Heptane	71	10.517	10.519	-0.002	91	89339	1.00	1.13	
58 1,2-Dichloropropane	63	10.587	10.590	-0.003	82	88348	1.00	1.14	
59 Trichloroethene	130	10.625	10.627	-0.002	94	130090	1.00	1.09	
60 Dibromomethane	93	10.711	10.716	-0.005	89	128522	1.00	1.14	
61 Dichlorobromomethane	83	10.879	10.879	0.000	99	246763	1.00	1.17	
62 1,4-Dioxane	88	10.911	10.916	-0.005	93	33187	1.00	1.10	
63 Methyl methacrylate	41	11.019	11.019	0.000	88	97747	1.00	1.03	
64 Methylcyclohexane	83	11.445	11.447	-0.002	92	188125	1.00	1.13	
65 4-Methyl-2-pentanone (MIBK	43	11.919	11.923	-0.004	98	181042	1.00	1.15	
66 cis-1,3-Dichloropropene	75	11.962	11.965	-0.003	98	161008	1.00	1.14	
67 trans-1,3-Dichloropropene	75	12.701	12.705	-0.004	95	157029	1.00	1.13	
68 Toluene	91	12.809	12.813	-0.004	93	289597	1.00	1.14	
69 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	95	86807	1.00	1.15	
70 2-Methylthiophene	97	12.971	12.970	0.001	98	241856	1.00	1.15	
71 3-Methylthiophene	97	13.176	13.179	-0.003	98	234979	1.00	1.13	
72 2-Hexanone	58	13.321	13.327	-0.006	91	66282	1.00	1.13	
73 n-Octane	85	13.559	13.559	0.000	89	102066	1.00	1.16	
74 Chlorodibromomethane	129	13.618	13.617	0.001	97	233058	1.00	1.20	
75 Ethylene Dibromide	107	13.915	13.915	-0.001	98	175111	1.00	1.15	
76 Tetrachloroethene	129	13.990	13.994	-0.004	91	132889	1.00	1.13	
77 Chlorobenzene	112	14.891	14.890	0.001	91	238369	1.00	1.12	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	91	251233	1.00	1.22	
79 Ethylbenzene	91	15.192	15.193	-0.001	99	396914	1.00	1.14	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	99	319071	1.00	1.16	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	100	634708	2.00	2.31	
83 Bromoform	173	15.796	15.798	-0.002	98	290880	1.00	1.06	
82 n-Nonane	57	15.807	15.811	-0.004	90	165997	1.00	1.17	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	97	219163	1.00	1.16	
85 o-Xylene	91	15.888	15.888	0.000	97	333080	1.00	1.15	
86 1,1,2,2-Tetrachloroethane	83	16.222	16.225	-0.003	96	205609	1.00	1.15	
87 1,2,3-Trichloropropane	110	16.384	16.386	-0.002	95	78269	1.00	1.12	
88 Isopropylbenzene	105	16.487	16.487	0.000	98	434108	1.00	1.12	
89 N-Propylbenzene	120	17.042	17.041	0.001	99	118101	1.00	1.09	
90 2-Chlorotoluene	126	17.074	17.076	-0.002	96	114339	1.00	1.10	
91 4-Ethyltoluene	105	17.204	17.204	0.000	97	409339	1.00	1.12	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	91	198783	1.00	1.10	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	87	167944	1.00	1.09	
94 n-Decane	57	17.619	17.619	0.000	94	195490	1.00	1.18	
95 tert-Butylbenzene	119	17.738	17.740	-0.002	90	395426	1.00	1.13	
96 1,2,4-Trimethylbenzene	105	17.754	17.756	-0.002	96	367979	1.00	1.14	
97 sec-Butylbenzene	105	18.029	18.032	-0.003	96	505609	1.00	1.14	
98 1,3-Dichlorobenzene	146	18.034	18.037	-0.003	97	275273	1.00	1.07	
99 Benzyl chloride	91	18.121	18.124	-0.003	97	309067	1.00	1.11	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	93	269791	1.00	1.08	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	95	435381	1.00	1.15	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	99	287097	1.00	1.17	
103 Butylcyclohexane	83	18.320	18.322	-0.002	90	256239	1.00	1.17	
104 1,2-Dichlorobenzene	146	18.514	18.514	0.000	91	275105	1.00	1.10	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	93	335858	1.00	1.15	
106 Indene	116	18.649	18.650	-0.001	93	249218	1.00	1.12	
107 n-Butylbenzene	91	18.671	18.671	0.000	98	401083	1.00	1.19	
108 Undecane	57	19.016	19.016	0.000	90	169622	1.00	1.05	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.061	-0.002	97	310567	1.00	1.16	
110 1,2-Dibromo-3-Chloropropan	157	19.150	19.150	0.000	98	127103	1.00	1.14	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	96	362175	1.00	1.17	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	95	220744	1.00	1.18	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	284163	1.00	1.17	
114 Dodecane	57	20.089	20.092	-0.003	91	145200	1.00	1.20	
115 1,2,4-Trichlorobenzene	180	20.245	20.247	-0.002	94	248485	1.00	1.05	
116 Naphthalene	128	20.375	20.375	0.000	98	366042	1.00	1.20	
117 Benzo(b)thiophene	134	20.472	20.474	-0.002	99	228757	1.00	1.15	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	94	372617	1.00	1.12	
119 1,2,3-Trichlorobenzene	180	20.650	20.650	0.000	94	234288	1.00	1.03	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	99	175140	3.13	4.01	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	99	139014	3.13	4.08	
A 124 Toluene Range	1	12.809	(12.779-12.839)		0	759769	1.00	1.12	
A 125 C8 Range	1	13.552	(13.529-13.589)		0	955972	1.00	1.16	
S 126 Xylenes, Total	100				0		3.00	3.45	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.22	

Reagents:

40L5DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

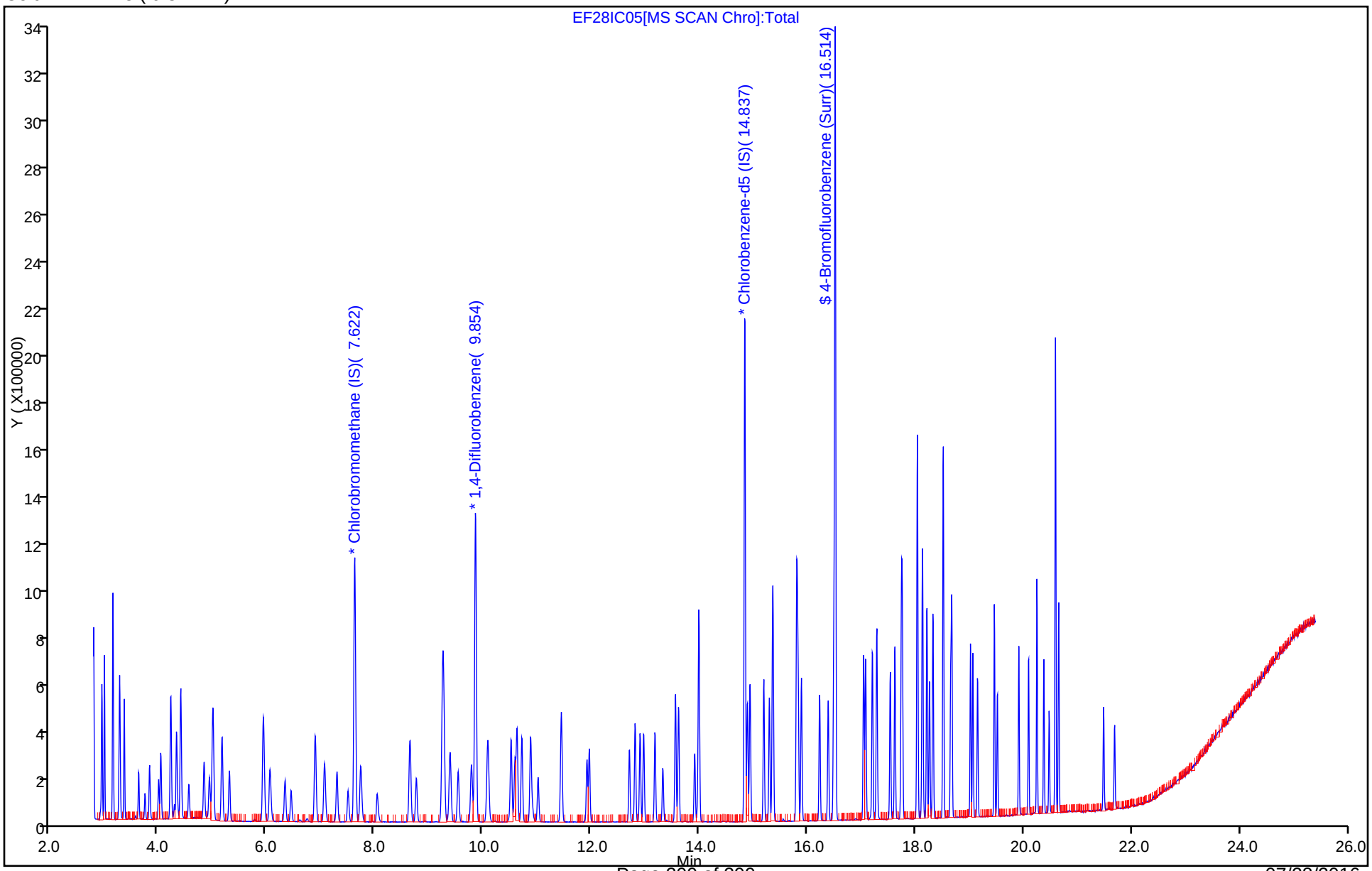
Report Date: 01-Jul-2016 17:08:14 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC05.D

Injection Date:	28-Jun-2016 17:50:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

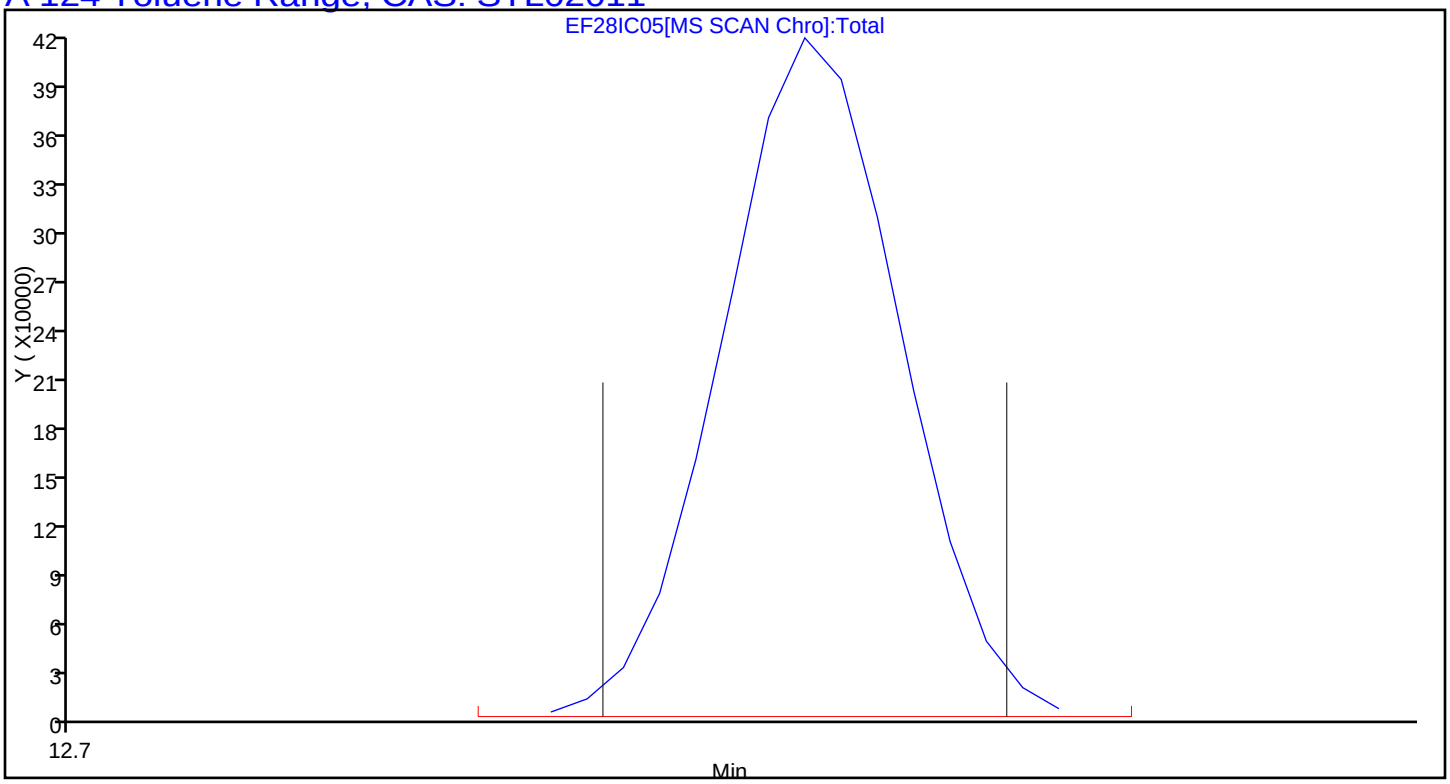


Report Date: 01-Jul-2016 17:08:14 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC05.D				
Injection Date:	28-Jun-2016 17:50:30	Instrument ID:	ME		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

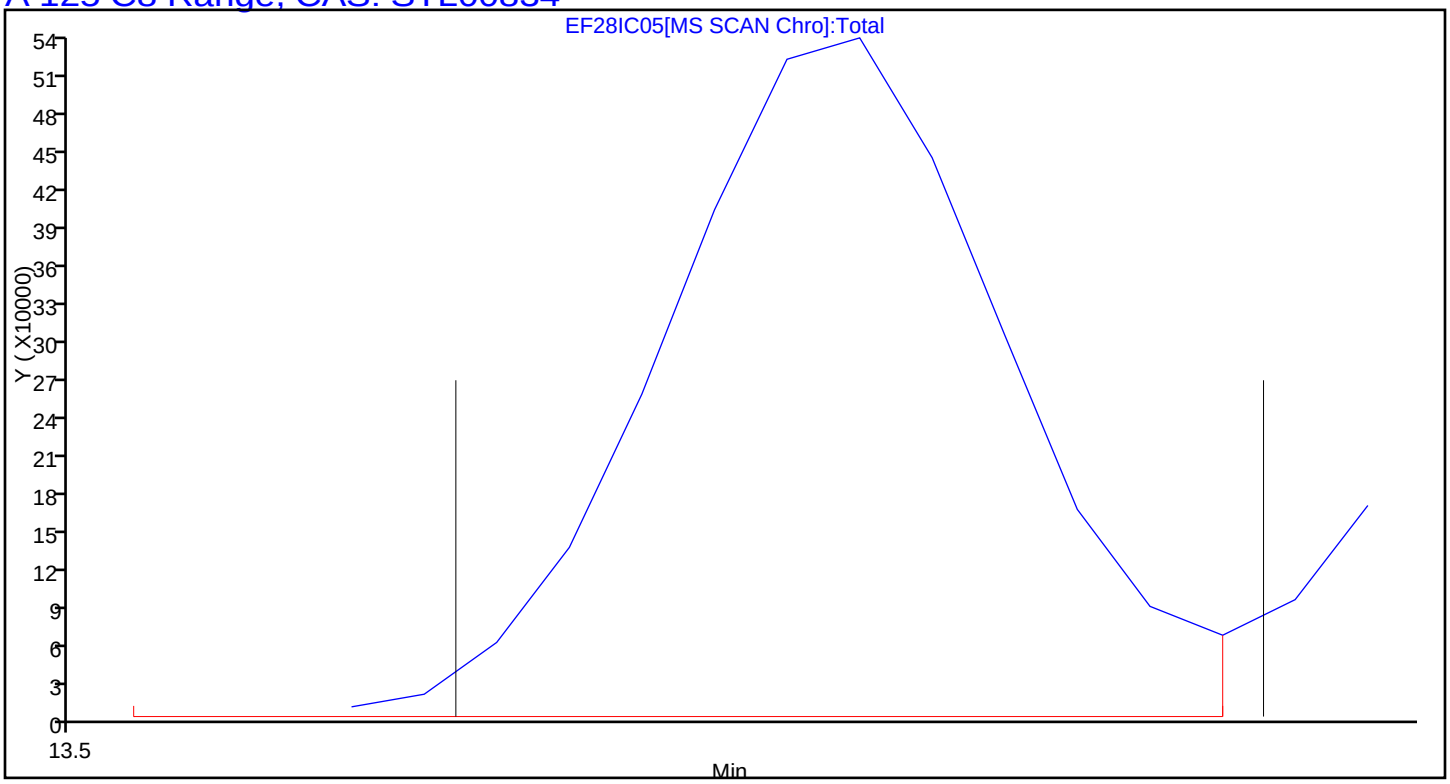


Report Date: 01-Jul-2016 17:08:14 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC05.D				
Injection Date:	28-Jun-2016 17:50:30	Instrument ID:	ME		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 28-Jun-2016 18:37:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044586,,1,6,,ICAL06
Misc. Info.: E062816I,T15,,140-0003101-007
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:08:23 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 01-Jul-2016 17:04:55

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.622	7.622	0.000	87	275461	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.859	9.859	0.000	96	1220727	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	90	1219101	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	966471	4.00	4.15	
6 Chlorodifluoromethane	67	2.941	2.940	0.001	97	80893	2.00	2.12	
7 Propene	41	2.946	2.946	0.000	94	151139	2.00	1.98	
8 Dichlorodifluoromethane	85	2.990	2.991	-0.001	100	681591	2.00	2.13	
9 Chloromethane	52	3.141	3.142	-0.001	97	48725	2.00	2.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	91	387292	2.00	1.99	
11 Acetaldehyde	44	3.275	3.274	0.001	88	307774	9.99	10.2	
12 Vinyl chloride	62	3.286	3.285	0.001	100	169673	2.00	2.01	
13 Butane	43	3.356	3.359	-0.003	82	245223	2.00	2.06	
14 Butadiene	54	3.356	3.359	-0.003	74	125764	2.00	2.06	
15 Bromomethane	94	3.626	3.626	0.000	97	168725	2.00	2.04	
16 Chloroethane	64	3.745	3.744	0.000	83	78412	2.00	2.01	
17 Ethanol	31	3.831	3.831	0.000	97	314821	9.99	10.6	
18 Vinyl bromide	106	3.993	3.995	-0.002	97	166997	2.00	2.04	
19 2-Methylbutane	43	4.036	4.034	0.002	88	167826	2.00	2.06	
20 Trichlorofluoromethane	101	4.219	4.220	-0.001	99	699483	2.00	2.12	
21 Acrolein	56	4.230	4.230	0.000	97	41932	2.00	1.86	
22 Acetonitrile	40	4.289	4.289	0.000	97	50468	2.00	1.99	
23 Acetone	58	4.327	4.330	-0.003	99	193431	5.99	6.19	
25 Pentane	72	4.408	4.409	-0.001	70	28205	2.00	2.03	
24 Isopropyl alcohol	45	4.408	4.410	-0.002	82	662355	5.99	6.50	
26 Ethyl ether	31	4.553	4.556	-0.003	92	137455	2.00	2.12	
27 1,1-Dichloroethene	96	4.839	4.837	0.002	96	153302	2.00	2.00	
29 Acrylonitrile	53	4.942	4.940	0.002	92	83869	2.00	2.07	
28 2-Methyl-2-propanol	59	4.936	4.945	-0.009	96	258104	2.00	2.15	
30 1,1,2-Trichloro-1,2,2-trif	101	4.996	5.000	-0.004	93	389497	2.00	2.09	
31 Methylene Chloride	84	5.163	5.163	0.000	97	148300	2.00	1.99	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.173	5.175	-0.002	91	216965	2.00	2.07	
33 Carbon disulfide	76	5.303	5.305	-0.002	98	481173	2.00	2.08	
34 trans-1,2-Dichloroethene	96	5.928	5.928	0.000	95	176005	2.00	2.05	
35 2-Methylpentane	43	5.945	5.942	0.003	91	339161	2.00	2.09	
36 Methyl tert-butyl ether	73	6.052	6.060	-0.008	95	520490	2.00	2.15	
37 1,1-Dichloroethane	63	6.338	6.336	0.002	99	339331	2.00	2.10	
38 Vinyl acetate	43	6.446	6.447	-0.001	99	433269	2.00	2.13	
39 2-Butanone (MEK)	72	6.883	6.888	-0.005	97	73711	2.00	1.94	
40 Hexane	56	6.894	6.897	-0.003	79	127555	2.00	2.07	
41 Isopropyl ether	45	7.061	7.068	-0.007	93	504263	2.00	2.14	
42 cis-1,2-Dichloroethene	96	7.298	7.296	0.002	98	180169	2.00	2.05	
43 Ethyl acetate	43	7.498	7.502	-0.004	97	338447	2.00	2.16	
44 Chloroform	83	7.638	7.639	-0.001	98	462195	2.00	2.10	
45 Tert-butyl ethyl ether	59	7.729	7.740	-0.011	95	491705	2.00	2.15	
46 Tetrahydrofuran	42	8.037	8.045	-0.008	87	161545	2.00	2.18	
47 1,1,1-Trichloroethane	97	8.646	8.646	0.000	95	576037	2.00	2.12	
48 1,2-Dichloroethane	62	8.765	8.765	0.000	99	367133	2.00	2.10	
50 Cyclohexane	69	9.245	9.244	0.001	86	82559	2.00	2.08	
51 Benzene	78	9.250	9.254	-0.004	98	485148	2.00	2.11	
49 n-Butanol	31	9.250	9.263	-0.013	61	51986	2.00	2.12	
52 Carbon tetrachloride	117	9.272	9.275	-0.003	98	651374	2.00	2.24	
53 2,3-Dimethylpentane	71	9.385	9.389	-0.004	88	115937	2.00	2.07	
54 Thiophene	84	9.541	9.538	0.003	96	287307	2.00	2.11	
55 Tert-amyl methyl ether	73	9.779	9.794	-0.015	96	495134	2.00	2.09	
56 Isooctane	57	10.086	10.088	-0.002	95	747250	2.00	2.13	
57 n-Heptane	71	10.517	10.519	-0.002	92	181906	2.00	2.13	
58 1,2-Dichloropropane	63	10.587	10.590	-0.003	79	177662	2.00	2.13	
59 Trichloroethene	130	10.625	10.627	-0.002	94	258305	2.00	2.01	
60 Dibromomethane	93	10.717	10.716	0.001	87	256309	2.00	2.11	
61 Dichlorobromomethane	83	10.879	10.879	0.000	99	499343	2.00	2.19	
62 1,4-Dioxane	88	10.911	10.916	-0.005	94	70802	2.00	2.17	
63 Methyl methacrylate	41	11.019	11.019	0.000	88	218961	2.00	2.14	
64 Methylcyclohexane	83	11.445	11.447	-0.002	92	377713	2.00	2.10	
65 4-Methyl-2-pentanone (MIBK	43	11.919	11.923	-0.004	98	317549	2.00	1.86	
66 cis-1,3-Dichloropropene	75	11.962	11.965	-0.003	98	321643	2.00	2.11	
67 trans-1,3-Dichloropropene	75	12.707	12.705	0.002	96	324125	2.00	2.05	
68 Toluene	91	12.809	12.813	-0.004	93	593649	2.00	2.05	
69 1,1,2-Trichloroethane	83	12.901	12.904	-0.003	94	179601	2.00	2.09	
70 2-Methylthiophene	97	12.971	12.970	0.001	97	497008	2.00	2.08	
71 3-Methylthiophene	97	13.181	13.179	0.002	98	482355	2.00	2.04	
72 2-Hexanone	58	13.321	13.327	-0.006	91	138946	2.00	2.09	
73 n-Octane	85	13.559	13.559	0.000	87	210097	2.00	2.10	
74 Chlorodibromomethane	129	13.618	13.617	0.001	97	488169	2.00	2.20	
75 Ethylene Dibromide	107	13.915	13.915	0.000	97	358746	2.00	2.06	
76 Tetrachloroethene	129	13.990	13.994	-0.004	91	271036	2.00	2.03	
77 Chlorobenzene	112	14.891	14.890	0.001	91	494600	2.00	2.05	
78 2,3-Dimethylheptane	43	14.934	14.938	-0.004	90	501568	2.00	2.13	
79 Ethylbenzene	91	15.193	15.193	0.000	99	841101	2.00	2.13	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	98	667286	2.00	2.12	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	99	1335051	3.99	4.26	
83 Bromoform	173	15.796	15.798	-0.002	98	682246	2.00	2.18	
82 n-Nonane	57	15.813	15.811	0.002	86	343134	2.00	2.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	97	472316	2.00	2.20	
85 o-Xylene	91	15.888	15.888	0.000	98	703538	2.00	2.13	
86 1,1,2,2-Tetrachloroethane	83	16.222	16.225	-0.003	95	439982	2.00	2.16	
87 1,2,3-Trichloropropane	110	16.384	16.386	-0.002	95	170804	2.00	2.14	
88 Isopropylbenzene	105	16.487	16.487	0.000	98	946067	2.00	2.14	
89 N-Propylbenzene	120	17.042	17.041	0.001	99	266250	2.00	2.15	
90 2-Chlorotoluene	126	17.074	17.076	-0.002	96	249650	2.00	2.11	
91 4-Ethyltoluene	105	17.204	17.204	0.000	97	931560	2.00	2.23	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	91	440413	2.00	2.13	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	87	384752	2.00	2.20	
94 n-Decane	57	17.619	17.619	0.000	94	420912	2.00	2.24	
95 tert-Butylbenzene	119	17.738	17.740	-0.002	90	879969	2.00	2.20	
96 1,2,4-Trimethylbenzene	105	17.754	17.756	-0.002	96	811802	2.00	2.20	
97 sec-Butylbenzene	105	18.029	18.032	-0.003	96	1130666	2.00	2.24	
98 1,3-Dichlorobenzene	146	18.034	18.037	-0.003	96	623049	2.00	2.12	
99 Benzyl chloride	91	18.121	18.124	-0.003	97	708209	2.00	2.23	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	95	607244	2.00	2.14	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	95	976541	2.00	2.26	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	98	631653	2.00	2.26	
103 Butylcyclohexane	83	18.320	18.322	-0.002	93	546639	2.00	2.19	
104 1,2-Dichlorobenzene	146	18.514	18.514	0.000	94	618608	2.00	2.17	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	93	735942	2.00	2.21	
106 Indene	116	18.649	18.650	-0.001	95	556469	2.00	2.20	
107 n-Butylbenzene	91	18.671	18.671	0.000	98	888892	2.00	2.32	
108 Undecane	57	19.016	19.016	0.000	90	437463	2.00	2.37	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.061	-0.002	97	709344	2.00	2.33	
110 1,2-Dibromo-3-Chloropropan	157	19.151	19.150	0.001	97	302539	2.00	2.39	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	97	847298	2.00	2.40	
112 1,2,3,5-Tetramethylbenzene	119	19.512	19.516	-0.004	95	517253	2.00	2.43	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	690438	2.00	2.50	
114 Dodecane	57	20.089	20.092	-0.003	89	297870	2.00	2.17	
115 1,2,4-Trichlorobenzene	180	20.245	20.247	-0.002	93	619271	2.00	2.31	
116 Naphthalene	128	20.375	20.375	0.000	98	840007	2.00	2.41	
117 Benzo(b)thiophene	134	20.472	20.474	-0.002	99	503364	2.00	2.23	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	93	924822	2.00	2.44	
119 1,2,3-Trichlorobenzene	180	20.650	20.650	0.000	94	568469	2.00	2.19	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	100	362111	6.24	7.29	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	99	293276	6.24	7.56	
A 124 Toluene Range	1	12.809	(12.779-12.839)		0	1555137	2.00	2.11	
A 125 C8 Range	1	13.552	(13.529-13.589)		0	1902664	2.00	2.13	
S 126 Xylenes, Total	100				0		5.99	6.38	
S 127 1,2-Dichloroethene, Total	1				0		3.99	4.10	

Reagents:

40L6DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

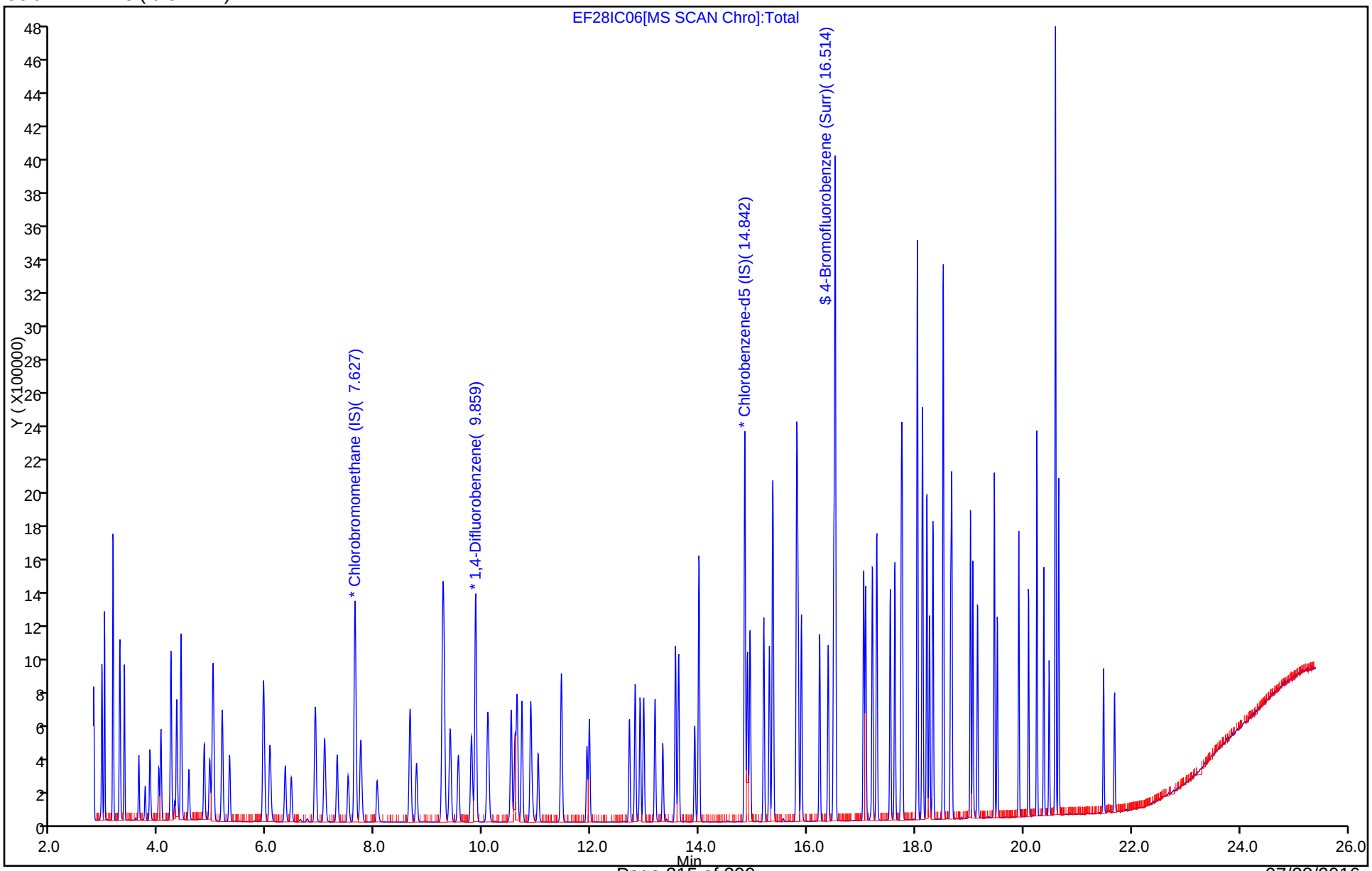
Report Date: 01-Jul-2016 17:08:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC06.D

Injection Date:	28-Jun-2016 18:37:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

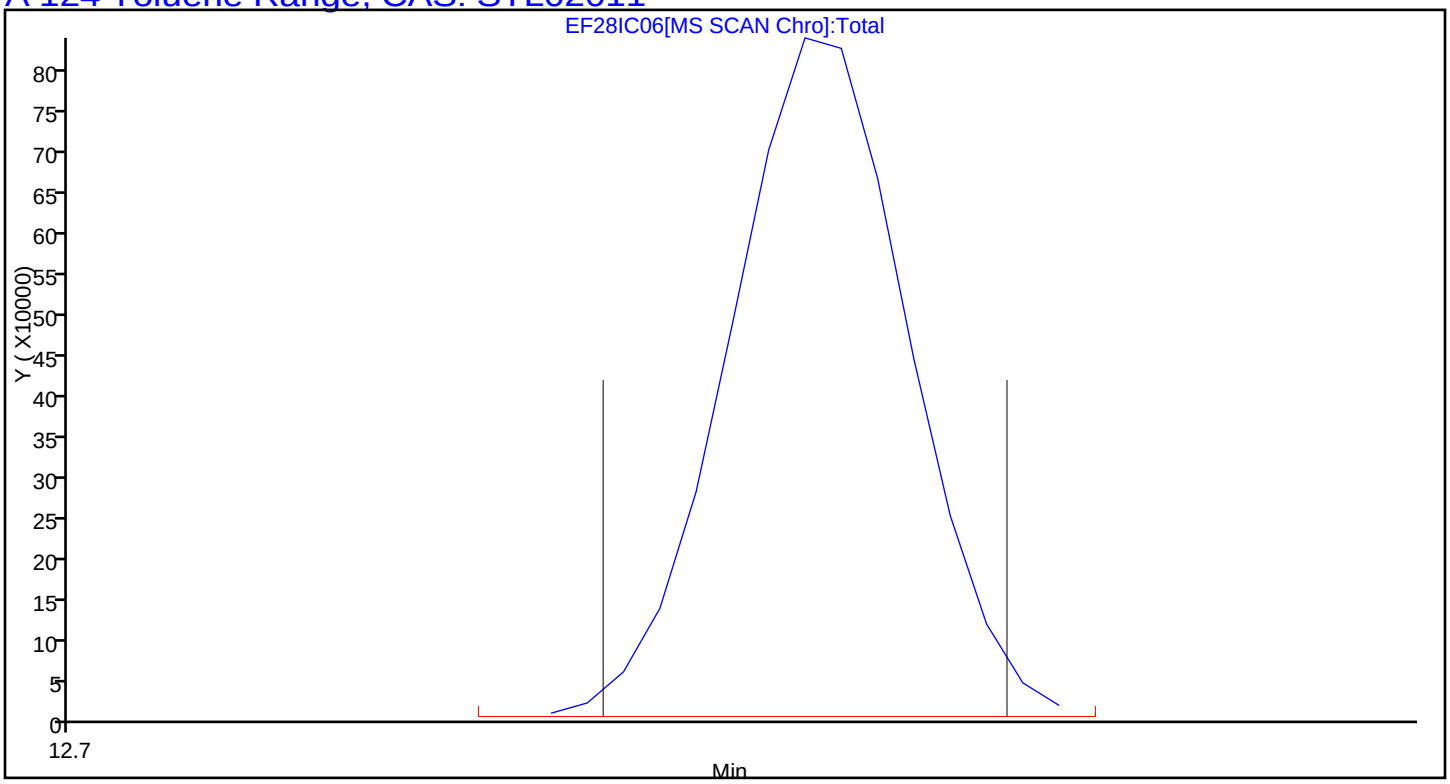


Report Date: 01-Jul-2016 17:08:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC06.D				
Injection Date:	28-Jun-2016 18:37:30	Instrument ID:	ME		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

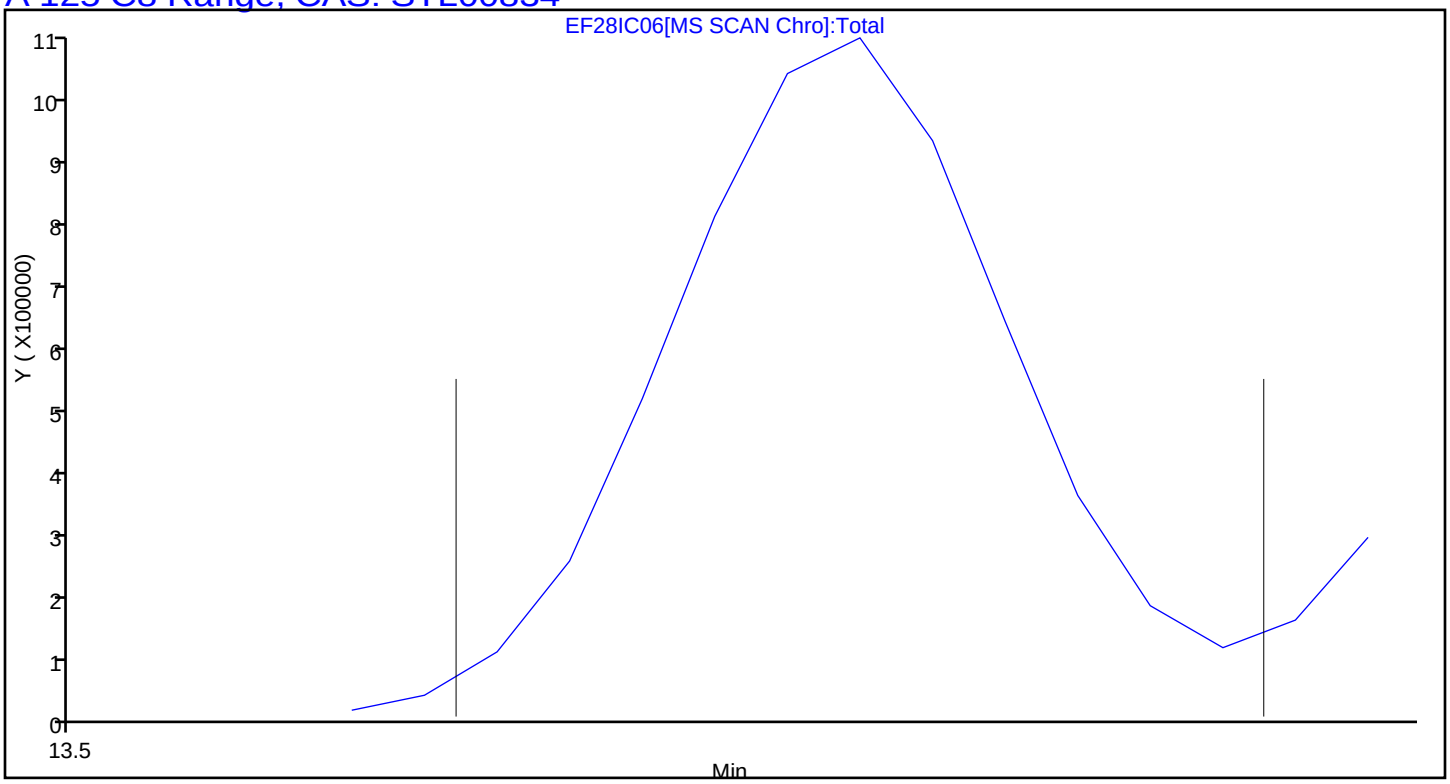


Report Date: 01-Jul-2016 17:08:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC06.D				
Injection Date:	28-Jun-2016 18:37:30	Instrument ID:	ME		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 28-Jun-2016 19:23:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044587,,1,7,,ICAL07
Misc. Info.: E062816I,T15,,140-0003101-008
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:08:35 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: tajh Date: 29-Jun-2016 11:47:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.627	7.622	0.005	86	325092	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.859	0.006	96	1493917	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	89	1489079	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	91	1133820	4.00	3.98	
6 Chlorodifluoromethane	67	2.941	2.940	0.001	96	163765	4.00	3.63	
7 Propene	41	2.946	2.946	0.000	94	299872	4.00	3.32	
8 Dichlorodifluoromethane	85	2.990	2.991	-0.001	99	1373581	4.00	3.64	
9 Chloromethane	52	3.146	3.142	0.004	99	97033	4.00	3.40	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	92	860525	4.00	3.74	
11 Acetaldehyde	44	3.275	3.274	0.001	88	555389	20.0	15.6	
12 Vinyl chloride	62	3.286	3.285	0.001	100	352699	4.00	3.54	
13 Butane	43	3.362	3.359	0.003	82	501408	4.00	3.57	
14 Butadiene	54	3.362	3.359	0.003	75	261752	4.00	3.64	
15 Bromomethane	94	3.626	3.626	0.000	97	365608	4.00	3.74	
16 Chloroethane	64	3.745	3.744	0.001	85	171721	4.00	3.73	
17 Ethanol	31	3.836	3.831	0.005	98	656285	20.0	18.7	
18 Vinyl bromide	106	3.998	3.995	0.003	97	369216	4.00	3.82	
19 2-Methylbutane	43	4.036	4.034	0.002	88	353984	4.00	3.68	
20 Trichlorofluoromethane	101	4.224	4.220	0.004	100	1486952	4.00	3.82	
21 Acrolein	56	4.230	4.230	0.000	96	90215	4.00	3.40	
22 Acetonitrile	40	4.295	4.289	0.006	99	122407	4.00	4.09	
23 Acetone	58	4.327	4.330	-0.003	100	366509	12.0	9.93	
25 Pentane	72	4.408	4.409	-0.001	93	63421	4.00	3.88	
24 Isopropyl alcohol	45	4.413	4.410	0.003	93	1445860	12.0	12.0	
26 Ethyl ether	31	4.553	4.556	-0.003	92	304551	4.00	3.98	
27 1,1-Dichloroethene	96	4.839	4.837	0.002	97	343284	4.00	3.80	
29 Acrylonitrile	53	4.942	4.940	0.002	56	188084	4.00	3.93	
28 2-Methyl-2-propanol	59	4.942	4.945	-0.003	96	587595	4.00	4.15	
30 1,1,2-Trichloro-1,2,2-trif	101	5.001	5.000	0.001	90	840099	4.00	3.81	
31 Methylene Chloride	84	5.168	5.163	0.005	96	304301	4.00	3.46	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.179	5.175	0.004	90	444443	4.00	3.59	
33 Carbon disulfide	76	5.308	5.305	0.003	98	989070	4.00	3.63	
34 trans-1,2-Dichloroethene	96	5.928	5.928	0.000	96	370099	4.00	3.65	
35 2-Methylpentane	43	5.945	5.942	0.003	93	676037	4.00	3.53	
36 Methyl tert-butyl ether	73	6.052	6.060	-0.008	95	1106795	4.00	3.87	
37 1,1-Dichloroethane	63	6.338	6.336	0.002	99	693449	4.00	3.64	
38 Vinyl acetate	43	6.452	6.447	0.005	99	942461	4.00	3.92	
39 2-Butanone (MEK)	72	6.883	6.888	-0.005	97	154190	4.00	3.44	
40 Hexane	56	6.899	6.897	0.002	80	260739	4.00	3.58	
41 Isopropyl ether	45	7.066	7.068	-0.002	92	1051800	4.00	3.78	
42 cis-1,2-Dichloroethene	96	7.298	7.296	0.002	97	385776	4.00	3.72	
43 Ethyl acetate	43	7.503	7.502	0.001	97	725233	4.00	3.92	
44 Chloroform	83	7.643	7.639	0.004	97	962876	4.00	3.71	
45 Tert-butyl ethyl ether	59	7.735	7.740	-0.005	95	1048399	4.00	3.88	
46 Tetrahydrofuran	42	8.031	8.045	-0.014	87	338462	4.00	3.87	
47 1,1,1-Trichloroethane	97	8.646	8.646	0.000	95	1209931	4.00	3.77	
48 1,2-Dichloroethane	62	8.770	8.765	0.005	99	768312	4.00	3.59	
50 Cyclohexane	69	9.245	9.244	0.001	84	167849	4.00	3.46	
51 Benzene	78	9.256	9.254	0.002	98	1014406	4.00	3.60	
49 n-Butanol	31	9.250	9.263	-0.013	64	113606	4.00	3.79	
52 Carbon tetrachloride	117	9.277	9.275	0.002	98	1385147	4.00	3.89	
53 2,3-Dimethylpentane	71	9.390	9.389	0.001	87	240147	4.00	3.51	
54 Thiophene	84	9.541	9.538	0.003	96	601756	4.00	3.61	
55 Tert-amyl methyl ether	73	9.784	9.794	-0.010	96	1082941	4.00	3.75	
56 Isooctane	57	10.086	10.088	-0.002	95	1529070	4.00	3.56	
57 n-Heptane	71	10.517	10.519	-0.002	89	378580	4.00	3.63	
58 1,2-Dichloropropane	63	10.593	10.590	0.003	81	376509	4.00	3.68	
59 Trichloroethene	130	10.631	10.627	0.004	94	558987	4.00	3.55	
60 Dibromomethane	93	10.717	10.716	0.001	85	547038	4.00	3.68	
61 Dichlorobromomethane	83	10.879	10.879	0.000	99	1069154	4.00	3.84	
62 1,4-Dioxane	88	10.911	10.916	-0.005	95	154890	4.00	3.87	
63 Methyl methacrylate	41	11.019	11.019	0.000	89	493157	4.00	3.94	
64 Methylcyclohexane	83	11.450	11.447	0.003	94	796135	4.00	3.62	
65 4-Methyl-2-pentanone (MIBK	43	11.919	11.923	-0.004	97	691027	4.00	3.30	
66 cis-1,3-Dichloropropene	75	11.968	11.965	0.003	98	703734	4.00	3.77	
67 trans-1,3-Dichloropropene	75	12.707	12.705	0.002	96	728884	4.00	3.77	
68 Toluene	91	12.815	12.813	0.002	93	1289517	4.00	3.64	
69 1,1,2-Trichloroethane	83	12.906	12.904	0.002	96	384115	4.00	3.67	
70 2-Methylthiophene	97	12.971	12.970	0.001	97	1087108	4.00	3.73	
71 3-Methylthiophene	97	13.181	13.179	0.002	98	1070601	4.00	3.71	
72 2-Hexanone	58	13.321	13.327	-0.006	92	307985	4.00	3.79	
73 n-Octane	85	13.559	13.559	0.000	86	441931	4.00	3.61	
74 Chlorodibromomethane	129	13.618	13.617	0.001	97	1098398	4.00	4.05	
75 Ethylene Dibromide	107	13.915	13.915	0.000	97	817525	4.00	3.85	
76 Tetrachloroethene	129	13.995	13.994	0.001	91	582101	4.00	3.56	
77 Chlorobenzene	112	14.891	14.890	0.001	91	1087888	4.00	3.69	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	88	1005508	4.00	3.50	
79 Ethylbenzene	91	15.193	15.193	0.000	99	1813486	4.00	3.76	
80 2-Ethylthiophene	97	15.295	15.296	-0.001	98	1454484	4.00	3.79	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	99	2812148	8.00	7.34	
83 Bromoform	173	15.797	15.798	-0.002	97	1720841	4.00	4.51	
82 n-Nonane	57	15.813	15.811	0.002	85	706301	4.00	3.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	98	1060850	4.00	4.04	
85 o-Xylene	91	15.888	15.888	0.000	99	1487957	4.00	3.68	
86 1,1,2,2-Tetrachloroethane	83	16.228	16.225	0.003	95	941378	4.00	3.78	
87 1,2,3-Trichloropropane	110	16.384	16.386	-0.002	94	368996	4.00	3.78	
88 Isopropylbenzene	105	16.487	16.487	0.000	98	2020312	4.00	3.74	
89 N-Propylbenzene	120	17.042	17.041	0.001	98	577714	4.00	3.82	
90 2-Chlorotoluene	126	17.080	17.076	0.004	95	543849	4.00	3.76	
91 4-Ethyltoluene	105	17.204	17.204	0.000	97	1998075	4.00	3.92	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	92	958961	4.00	3.80	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	86	877365	4.00	4.11	
94 n-Decane	57	17.619	17.619	0.000	94	850432	4.00	3.70	
95 tert-Butylbenzene	119	17.743	17.740	0.003	93	1866760	4.00	3.82	
96 1,2,4-Trimethylbenzene	105	17.759	17.756	0.003	96	1722380	4.00	3.82	
97 sec-Butylbenzene	105	18.034	18.032	0.002	96	2348437	4.00	3.80	
98 1,3-Dichlorobenzene	146	18.040	18.037	0.003	96	1431461	4.00	3.99	
99 Benzyl chloride	91	18.126	18.124	0.002	97	1589839	4.00	4.11	
100 1,4-Dichlorobenzene	146	18.131	18.133	-0.002	94	1402639	4.00	4.04	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	95	2062671	4.00	3.90	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	98	1309266	4.00	3.83	
103 Butylcyclohexane	83	18.326	18.322	0.004	90	1094915	4.00	3.60	
104 1,2-Dichlorobenzene	146	18.514	18.514	0.000	95	1374052	4.00	3.95	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	94	1569680	4.00	3.86	
106 Indene	116	18.649	18.650	-0.001	93	1234546	4.00	3.99	
107 n-Butylbenzene	91	18.671	18.671	0.000	97	1844466	4.00	3.94	
108 Undecane	57	19.016	19.016	0.000	90	909590	4.00	4.03	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.061	-0.002	97	1509659	4.00	4.06	
110 1,2-Dibromo-3-Chloropropan	157	19.151	19.150	0.001	97	714470	4.00	4.61	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	97	1805105	4.00	4.18	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	95	1102430	4.00	4.25	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	1469686	4.00	4.36	
114 Dodecane	57	20.089	20.092	-0.003	89	608973	4.00	3.63	
115 1,2,4-Trichlorobenzene	180	20.245	20.247	-0.002	93	1429175	4.00	4.36	
116 Naphthalene	128	20.375	20.375	0.000	98	1790373	4.00	4.20	
117 Benzo(b)thiophene	134	20.472	20.474	-0.002	99	1049286	4.00	3.80	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	92	2073212	4.00	4.49	
119 1,2,3-Trichlorobenzene	180	20.650	20.650	0.000	94	1215672	4.00	3.83	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	100	569829	12.5	9.39	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	100	440544	12.5	9.30	
A 124 Toluene Range	1	12.815	(12.785-12.845)		0	3370182	4.00	3.74	
A 125 C8 Range	1	13.552	(13.529-13.589)		0	3866967	4.00	3.55	
S 126 Xylenes, Total	100				0		12.0	11.0	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.38	

Reagents:

40L7DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

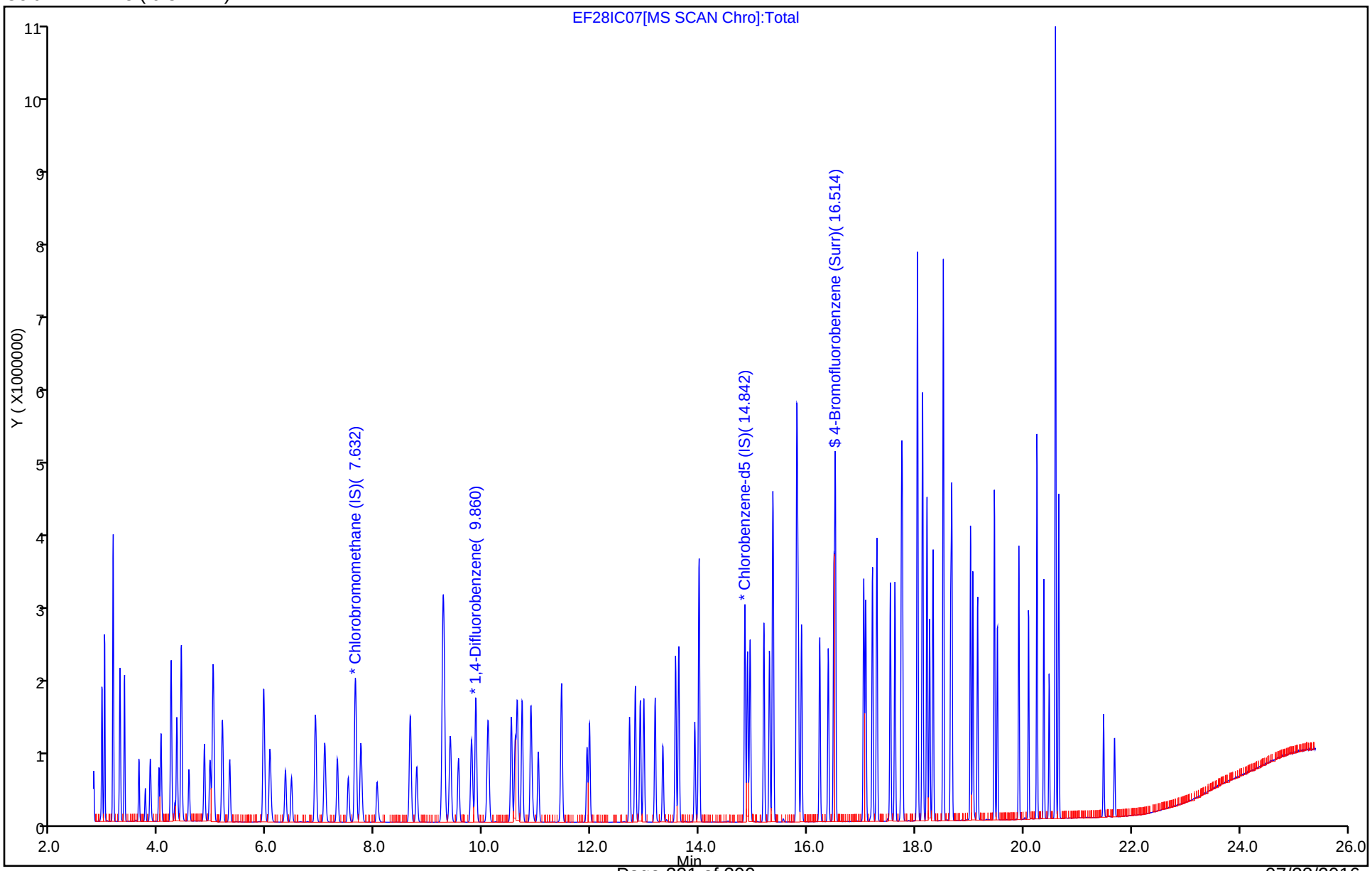
Report Date: 01-Jul-2016 17:08:38 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC07.D

Injection Date:	28-Jun-2016 19:23:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

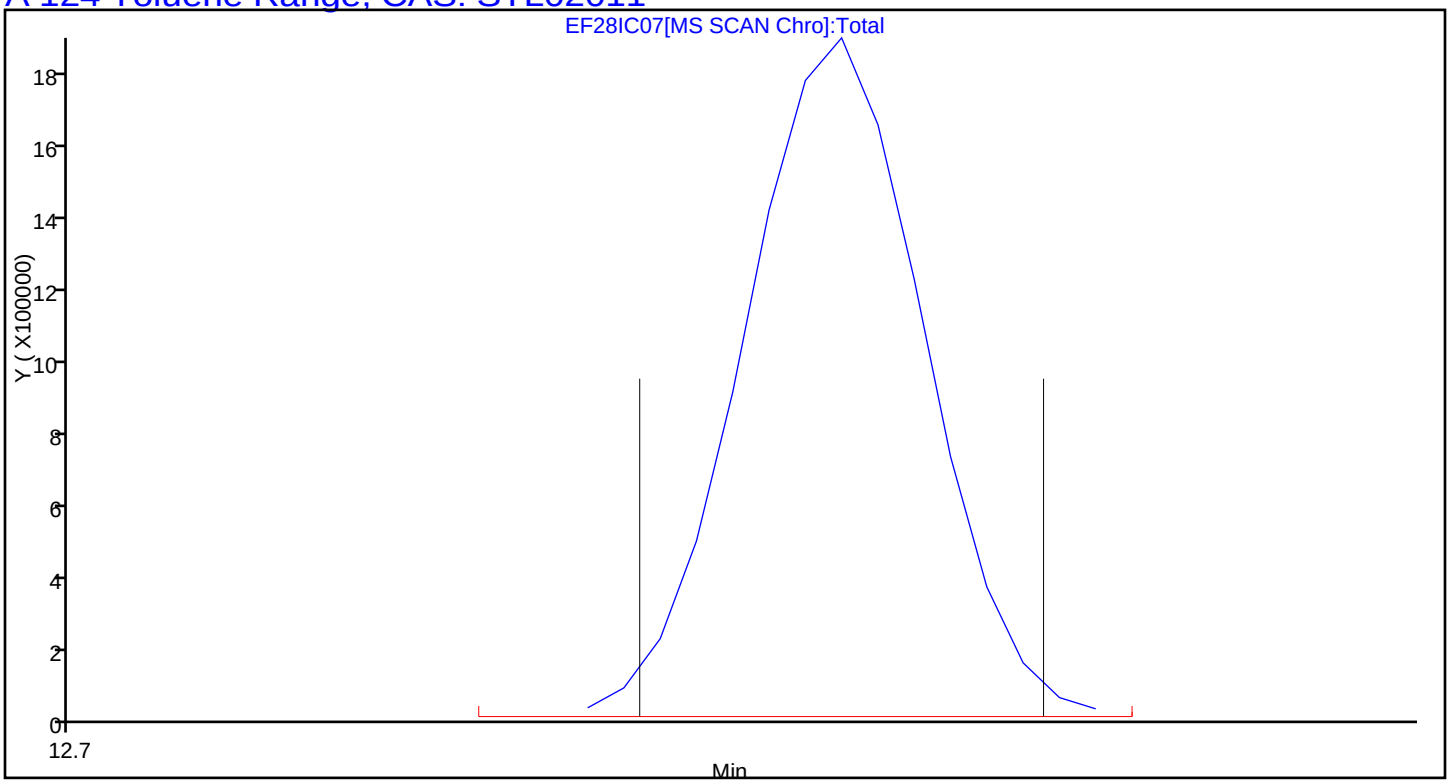


Report Date: 01-Jul-2016 17:08:38 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC07.D				
Injection Date:	28-Jun-2016 19:23:30	Instrument ID:	ME		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

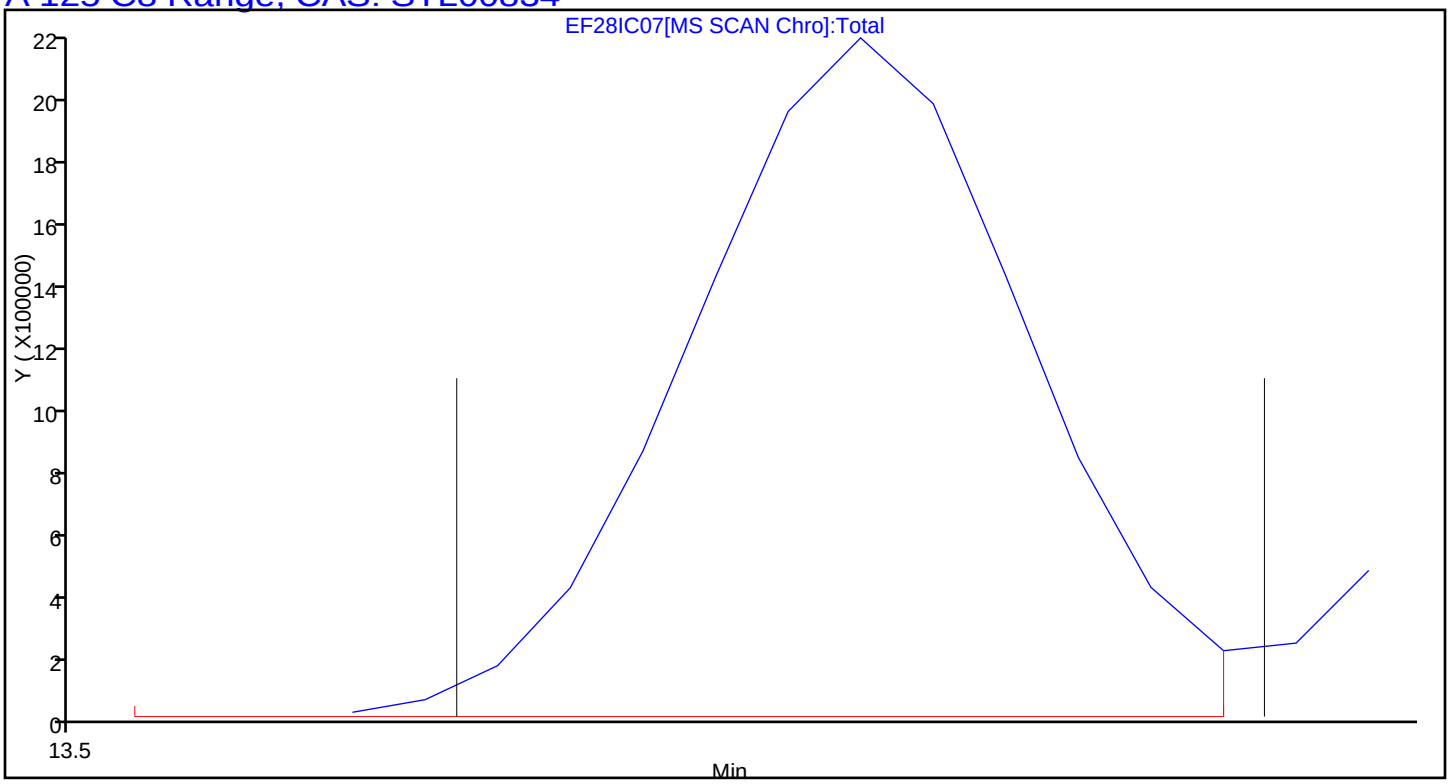


Report Date: 01-Jul-2016 17:08:38 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC07.D				
Injection Date:	28-Jun-2016 19:23:30	Instrument ID:	ME		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 28-Jun-2016 20:09:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044588,,1,8,,ICAL08
Misc. Info.: E062816I,T15,,140-0003101-009
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:08:47 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: tajh Date: 29-Jun-2016 11:47:28

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.627	7.622	0.005	89	323206	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.865	9.859	0.006	95	1443745	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.842	14.843	-0.001	88	1434977	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.514	16.514	0.000	92	1070571	4.00	3.90	
6 Chlorodifluoromethane	67	2.936	2.940	-0.004	97	320680	8.00	7.16	
7 Propene	41	2.947	2.946	0.001	94	579323	8.00	6.45	
8 Dichlorodifluoromethane	85	2.990	2.991	-0.001	98	2599680	8.00	6.93	
9 Chloromethane	52	3.141	3.142	-0.001	99	193979	8.00	6.83	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	88	1722160	8.00	7.54	
11 Acetaldehyde	44	3.275	3.274	0.001	89	1066214	40.0	30.1	
12 Vinyl chloride	62	3.286	3.285	0.001	100	704661	8.00	7.10	
13 Butane	43	3.362	3.359	0.003	81	993494	8.00	7.11	
14 Butadiene	54	3.362	3.359	0.003	76	527323	8.00	7.38	
15 Bromomethane	94	3.626	3.626	0.000	97	747916	8.00	7.69	
16 Chloroethane	64	3.745	3.744	0.001	85	348701	8.00	7.62	
17 Ethanol	31	3.842	3.831	0.011	98	1194331	40.0	34.3	
18 Vinyl bromide	106	3.998	3.995	0.003	97	758750	8.00	7.89	
19 2-Methylbutane	43	4.036	4.034	0.002	88	716098	8.00	7.49	
20 Trichlorofluoromethane	101	4.225	4.220	0.004	99	2923800	8.00	7.56	
21 Acrolein	56	4.235	4.230	0.005	96	173340	8.00	6.56	
22 Acetonitrile	40	4.295	4.289	0.006	98	234556	8.00	7.89	
23 Acetone	58	4.332	4.330	0.002	100	699961	24.0	19.1	
25 Pentane	72	4.408	4.409	-0.001	94	129771	8.00	7.98	
24 Isopropyl alcohol	45	4.419	4.410	0.009	98	2525972	24.0	21.1	
26 Ethyl ether	31	4.553	4.556	-0.003	92	577628	8.00	7.59	
27 1,1-Dichloroethene	96	4.839	4.837	0.002	97	712301	8.00	7.93	
29 Acrylonitrile	53	4.947	4.940	0.007	59	364558	8.00	7.66	
28 2-Methyl-2-propanol	59	4.952	4.945	0.007	95	1040034	8.00	7.39	
30 1,1,2-Trichloro-1,2,2-trif	101	5.001	5.000	0.001	89	1688606	8.00	7.71	
31 Methylene Chloride	84	5.168	5.163	0.005	95	599380	8.00	6.86	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.179	5.175	0.004	90	877345	8.00	7.12	
33 Carbon disulfide	76	5.308	5.305	0.003	98	1960534	8.00	7.23	
34 trans-1,2-Dichloroethene	96	5.934	5.928	0.006	97	748777	8.00	7.44	
35 2-Methylpentane	43	5.945	5.942	0.003	90	1313327	8.00	6.90	
36 Methyl tert-butyl ether	73	6.053	6.060	-0.007	95	2040031	8.00	7.18	
37 1,1-Dichloroethane	63	6.344	6.336	0.008	99	1363233	8.00	7.20	
38 Vinyl acetate	43	6.452	6.447	0.005	99	1755794	8.00	7.35	
39 2-Butanone (MEK)	72	6.888	6.888	0.000	97	285474	8.00	6.40	
40 Hexane	56	6.899	6.897	0.002	80	508322	8.00	7.03	
41 Isopropyl ether	45	7.066	7.068	-0.002	92	1923713	8.00	6.95	
42 cis-1,2-Dichloroethene	96	7.304	7.296	0.008	96	768159	8.00	7.45	
43 Ethyl acetate	43	7.503	7.502	0.001	97	1303761	8.00	7.08	
44 Chloroform	83	7.649	7.639	0.010	97	1895303	8.00	7.34	
45 Tert-butyl ethyl ether	59	7.740	7.740	0.000	95	1936111	8.00	7.21	
46 Tetrahydrofuran	42	8.037	8.045	-0.008	86	623673	8.00	7.16	
47 1,1,1-Trichloroethane	97	8.652	8.646	0.006	95	2383118	8.00	7.48	
48 1,2-Dichloroethane	62	8.770	8.765	0.005	99	1494126	8.00	7.23	
50 Cyclohexane	69	9.245	9.244	0.001	90	337464	8.00	7.20	
51 Benzene	78	9.256	9.254	0.002	99	1966812	8.00	7.22	
49 n-Butanol	31	9.256	9.263	-0.007	62	207693	8.00	7.17	
52 Carbon tetrachloride	117	9.277	9.275	0.002	98	2698600	8.00	7.84	
53 2,3-Dimethylpentane	71	9.396	9.389	0.007	87	481950	8.00	7.29	
54 Thiophene	84	9.547	9.538	0.009	96	1190915	8.00	7.39	
55 Tert-amyl methyl ether	73	9.784	9.794	-0.010	96	2000232	8.00	7.18	
56 Isooctane	57	10.091	10.088	0.003	95	2951276	8.00	7.11	
57 n-Heptane	71	10.523	10.519	0.004	91	739884	8.00	7.34	
58 1,2-Dichloropropane	63	10.593	10.590	0.003	81	720943	8.00	7.30	
59 Trichloroethene	130	10.631	10.627	0.004	97	1128486	8.00	7.41	
60 Dibromomethane	93	10.722	10.716	0.006	83	1088051	8.00	7.57	
61 Dichlorobromomethane	83	10.884	10.879	0.005	99	2087896	8.00	7.75	
62 1,4-Dioxane	88	10.911	10.916	-0.005	93	282923	8.00	7.32	
63 Methyl methacrylate	41	11.019	11.019	0.000	88	895381	8.00	7.39	
64 Methylcyclohexane	83	11.450	11.447	0.003	93	1561023	8.00	7.35	
65 4-Methyl-2-pentanone (MIBK	43	11.919	11.923	-0.004	97	1263084	8.00	6.25	
66 cis-1,3-Dichloropropene	75	11.968	11.965	0.003	98	1362842	8.00	7.56	
67 trans-1,3-Dichloropropene	75	12.707	12.705	0.002	96	1412541	8.00	7.59	
68 Toluene	91	12.815	12.813	0.002	94	2453112	8.00	7.19	
69 1,1,2-Trichloroethane	83	12.906	12.904	0.002	96	742949	8.00	7.36	
70 2-Methylthiophene	97	12.976	12.970	0.006	97	2103726	8.00	7.48	
71 3-Methylthiophene	97	13.181	13.179	0.002	98	2053287	8.00	7.39	
72 2-Hexanone	58	13.327	13.327	0.000	92	574857	8.00	7.34	
73 n-Octane	85	13.559	13.559	0.000	85	873938	8.00	7.41	
74 Chlorodibromomethane	129	13.618	13.617	0.001	96	2198719	8.00	8.41	
75 Ethylene Dibromide	107	13.915	13.915	0.000	97	1594818	8.00	7.79	
76 Tetrachloroethene	129	13.995	13.994	0.001	91	1166568	8.00	7.41	
77 Chlorobenzene	112	14.891	14.890	0.001	91	2107128	8.00	7.42	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	87	1907510	8.00	6.89	
79 Ethylbenzene	91	15.193	15.193	0.000	98	3355042	8.00	7.21	
80 2-Ethylthiophene	97	15.300	15.296	0.004	98	2727287	8.00	7.38	
81 m-Xylene & p-Xylene	91	15.360	15.360	0.000	98	5121493	16.0	13.9	
83 Bromoform	173	15.802	15.798	0.004	96	3579711	8.00	9.74	
82 n-Nonane	57	15.813	15.811	0.002	86	1359355	8.00	7.13	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.830	-0.001	98	2039038	8.00	8.05	
85 o-Xylene	91	15.888	15.888	0.000	99	2756502	8.00	7.07	
86 1,1,2,2-Tetrachloroethane	83	16.228	16.225	0.003	94	1748722	8.00	7.29	
87 1,2,3-Trichloropropane	110	16.390	16.386	0.004	93	700447	8.00	7.44	
88 Isopropylbenzene	105	16.487	16.487	0.000	98	3746150	8.00	7.19	
89 N-Propylbenzene	120	17.042	17.041	0.001	98	1115614	8.00	7.65	
90 2-Chlorotoluene	126	17.080	17.076	0.004	95	1049164	8.00	7.53	
91 4-Ethyltoluene	105	17.204	17.204	0.000	96	3643494	8.00	7.41	
92 1,3,5-Trimethylbenzene	120	17.285	17.285	0.000	93	1825117	8.00	7.51	
93 Alpha Methyl Styrene	118	17.533	17.534	-0.001	86	1670244	8.00	8.12	
94 n-Decane	57	17.619	17.619	0.000	94	1576873	8.00	7.12	
95 tert-Butylbenzene	119	17.743	17.740	0.003	96	3456446	8.00	7.34	
96 1,2,4-Trimethylbenzene	105	17.759	17.756	0.003	95	3172111	8.00	7.30	
97 sec-Butylbenzene	105	18.034	18.032	0.002	95	4283678	8.00	7.20	
98 1,3-Dichlorobenzene	146	18.040	18.037	0.003	95	2846055	8.00	8.23	
99 Benzyl chloride	91	18.126	18.124	0.002	97	2967385	8.00	7.95	
100 1,4-Dichlorobenzene	146	18.137	18.133	0.004	93	2748339	8.00	8.22	
101 4-Isopropyltoluene	119	18.212	18.212	0.000	94	3733305	8.00	7.33	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	98	2394684	8.00	7.27	
103 Butylcyclohexane	83	18.326	18.322	0.004	90	2060315	8.00	7.02	
104 1,2-Dichlorobenzene	146	18.514	18.514	0.000	95	2689398	8.00	8.03	
105 2,3-Dihydroindene	117	18.514	18.515	-0.001	94	2968708	8.00	7.58	
106 Indene	116	18.655	18.650	0.004	92	2312292	8.00	7.76	
107 n-Butylbenzene	91	18.671	18.671	0.000	97	3300064	8.00	7.32	
108 Undecane	57	19.016	19.016	0.000	88	1664286	8.00	7.66	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.064	19.061	0.003	97	2728651	8.00	7.62	
110 1,2-Dibromo-3-Chloropropan	157	19.151	19.150	0.001	95	1389722	8.00	9.31	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.458	0.000	97	3251199	8.00	7.82	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	95	2021228	8.00	8.08	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	2662809	8.00	8.20	
114 Dodecane	57	20.094	20.092	0.002	87	1198284	8.00	7.41	
115 1,2,4-Trichlorobenzene	180	20.251	20.247	0.004	93	3016404	8.00	9.54	
116 Naphthalene	128	20.375	20.375	0.000	97	3469184	8.00	8.45	
117 Benzo(b)thiophene	134	20.477	20.474	0.003	99	2189768	8.00	8.23	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	90	4243166	8.00	9.53	
119 1,2,3-Trichlorobenzene	180	20.650	20.650	0.000	93	2696644	8.00	8.82	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	100	1443984	25.0	24.7	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	100	1120542	25.0	24.6	
A 124 Toluene Range	1	12.815	(12.785-12.845)		0	6420237	8.00	7.37	
A 125 C8 Range	1	13.559	(13.529-13.589)		0	7637287	8.00	7.25	
S 126 Xylenes, Total	100				0		24.0	20.9	
S 127 1,2-Dichloroethene, Total	1				0		16.0	14.9	

Reagents:

40L8DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

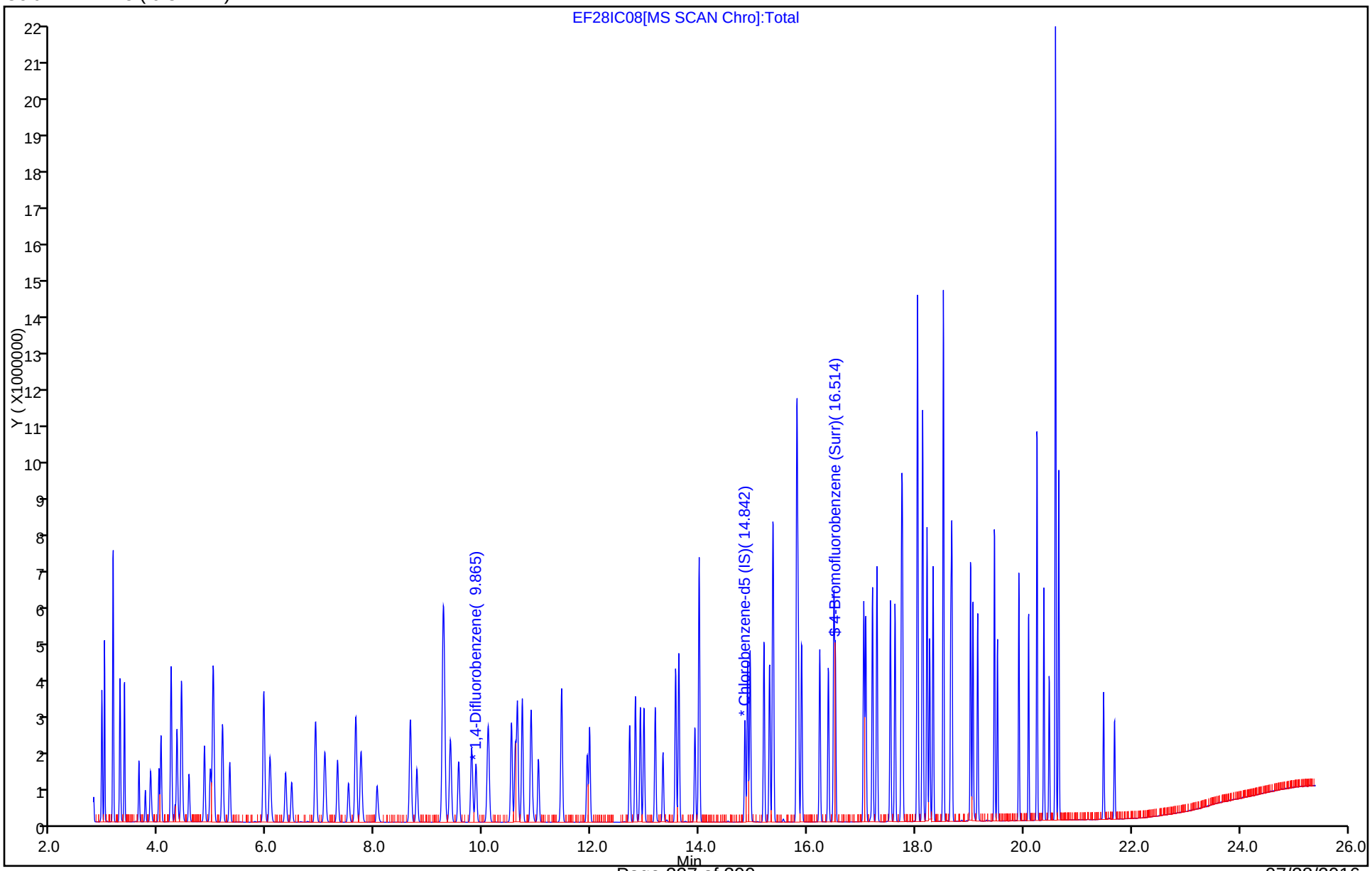
Report Date: 01-Jul-2016 17:08:51 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC08.D

Injection Date:	28-Jun-2016 20:09:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

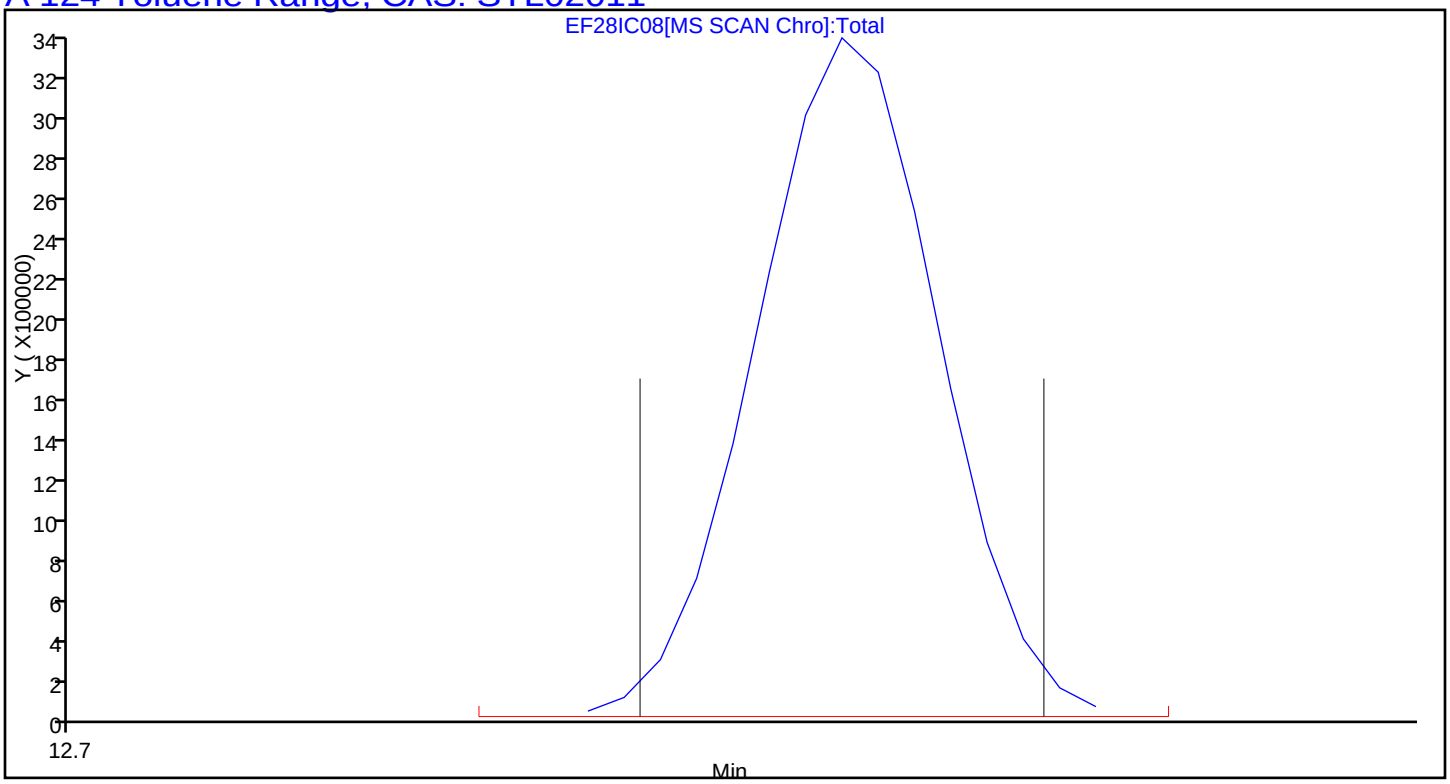


Report Date: 01-Jul-2016 17:08:51 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC08.D				
Injection Date:	28-Jun-2016 20:09:30	Instrument ID:	ME		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

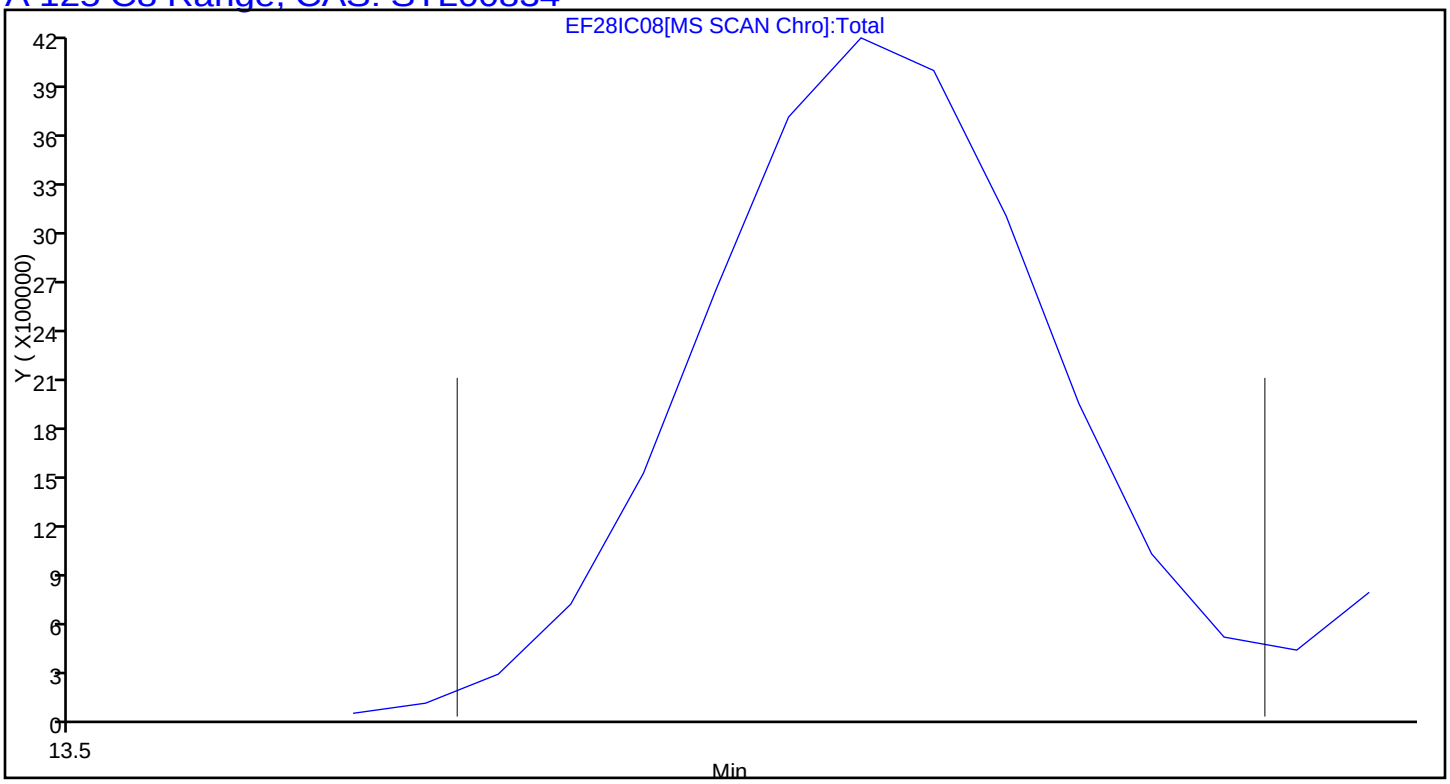


Report Date: 01-Jul-2016 17:08:51 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC08.D				
Injection Date:	28-Jun-2016 20:09:30	Instrument ID:	ME		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 28-Jun-2016 20:55:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044589,,1,9,,ICAL09
Misc. Info.: E062816I,T15,,140-0003101-010
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:08:57 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: tajh Date: 29-Jun-2016 11:47:05

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.638	7.622	0.016	93	334785	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.870	9.859	0.011	95	1451770	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.847	14.843	0.004	88	1490225	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.519	16.514	0.005	91	1127253	4.00	3.96	
6 Chlorodifluoromethane	67	2.936	2.940	-0.004	97	632557	16.0	13.6	
7 Propene	41	2.941	2.946	-0.005	95	355366	16.0	3.82	
8 Dichlorodifluoromethane	85	2.989	2.991	-0.002	96	4589896	16.0	11.8	
9 Chloromethane	52	3.140	3.142	-0.002	99	377509	16.0	12.8	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.151	3.151	0.000	85	3095724	16.0	13.1	
11 Acetaldehyde	44	3.281	3.274	0.007	98	2116835	80.0	57.8	
12 Vinyl chloride	62	3.286	3.285	0.001	99	1328019	16.0	12.9	
13 Butane	43	3.362	3.359	0.003	81	1869779	16.0	12.9	
14 Butadiene	54	3.362	3.359	0.003	78	1021729	16.0	13.8	
15 Bromomethane	94	3.631	3.626	0.005	97	1461903	16.0	14.5	
16 Chloroethane	64	3.750	3.744	0.006	87	674608	16.0	14.2	
17 Ethanol	31	3.858	3.831	0.027	99	2256890	80.0	62.5	
18 Vinyl bromide	106	4.003	3.995	0.008	97	1509923	16.0	15.2	
19 2-Methylbutane	43	4.036	4.034	0.002	88	1365305	16.0	13.8	
20 Trichlorofluoromethane	101	4.224	4.220	0.004	99	5323355	16.0	13.3	
21 Acrolein	56	4.240	4.230	0.010	97	343619	16.0	12.6	
22 Acetonitrile	40	4.305	4.289	0.016	97	484896	16.0	15.7	
23 Acetone	58	4.338	4.330	0.008	99	1494389	48.0	39.3	
25 Pentane	72	4.413	4.409	0.004	95	257920	16.0	15.3	
24 Isopropyl alcohol	45	4.435	4.410	0.025	98	4814699	48.0	38.9	
26 Ethyl ether	31	4.559	4.556	0.003	92	1184730	16.0	15.0	
27 1,1-Dichloroethene	96	4.844	4.837	0.007	99	1447033	16.0	15.5	
29 Acrylonitrile	53	4.958	4.940	0.018	93	767793	16.0	15.6	
28 2-Methyl-2-propanol	59	4.963	4.945	0.018	96	2122224	16.0	14.6	
30 1,1,2-Trichloro-1,2,2-trif	101	5.006	5.000	0.006	88	3247539	16.0	14.3	
31 Methylene Chloride	84	5.173	5.163	0.010	94	1134150	16.0	12.5	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.184	5.175	0.009	89	1536897	16.0	12.0	
33 Carbon disulfide	76	5.314	5.305	0.009	97	3614441	16.0	12.9	
34 trans-1,2-Dichloroethene	96	5.939	5.928	0.011	97	1470007	16.0	14.1	
35 2-Methylpentane	43	5.950	5.942	0.008	89	2492987	16.0	12.7	
36 Methyl tert-butyl ether	73	6.058	6.060	-0.002	95	4230169	16.0	14.4	
37 1,1-Dichloroethane	63	6.349	6.336	0.013	99	2669561	16.0	13.6	
38 Vinyl acetate	43	6.462	6.447	0.015	99	3428309	16.0	13.9	
39 2-Butanone (MEK)	72	6.899	6.888	0.011	97	624173	16.0	13.5	
40 Hexane	56	6.904	6.897	0.007	77	994621	16.0	13.3	
41 Isopropyl ether	45	7.077	7.068	0.009	91	3957110	16.0	13.8	
42 cis-1,2-Dichloroethene	96	7.309	7.296	0.013	96	1547814	16.0	14.5	
43 Ethyl acetate	43	7.514	7.502	0.012	98	2789907	16.0	14.6	
44 Chloroform	83	7.654	7.639	0.015	99	3724871	16.0	13.9	
45 Tert-butyl ethyl ether	59	7.746	7.740	0.006	95	4042274	16.0	14.5	
46 Tetrahydrofuran	42	8.042	8.045	-0.003	84	1319610	16.0	14.6	
47 1,1,1-Trichloroethane	97	8.657	8.646	0.011	97	4686421	16.0	14.2	
48 1,2-Dichloroethane	62	8.775	8.765	0.010	99	2960139	16.0	14.2	
50 Cyclohexane	69	9.250	9.244	0.006	91	677298	16.0	14.4	
51 Benzene	78	9.266	9.254	0.012	99	3900212	16.0	14.2	
49 n-Butanol	31	9.261	9.263	-0.002	62	428985	16.0	14.7	
52 Carbon tetrachloride	117	9.282	9.275	0.007	98	5301466	16.0	15.3	
53 2,3-Dimethylpentane	71	9.396	9.389	0.007	87	955338	16.0	14.4	
54 Thiophene	84	9.552	9.538	0.014	96	2357444	16.0	14.6	
55 Tert-amyl methyl ether	73	9.789	9.794	-0.005	95	4237340	16.0	14.6	
56 Isooctane	57	10.097	10.088	0.009	94	5708740	16.0	13.7	
57 n-Heptane	71	10.528	10.519	0.009	89	1498037	16.0	14.8	
58 1,2-Dichloropropane	63	10.598	10.590	0.008	81	1468376	16.0	14.8	
59 Trichloroethene	130	10.636	10.627	0.009	95	2359769	16.0	15.4	
60 Dibromomethane	93	10.728	10.716	0.012	81	2194648	16.0	15.2	
61 Dichlorobromomethane	83	10.889	10.879	0.010	98	4114062	16.0	15.2	
62 1,4-Dioxane	88	10.916	10.916	0.000	92	576665	16.0	14.8	
63 Methyl methacrylate	41	11.024	11.019	0.005	87	1949784	16.0	16.0	
64 Methylcyclohexane	83	11.455	11.447	0.008	93	3098604	16.0	14.5	
65 4-Methyl-2-pentanone (MIBK	43	11.925	11.923	0.002	96	2716993	16.0	13.4	
66 cis-1,3-Dichloropropene	75	11.973	11.965	0.008	97	2738332	16.0	15.1	
67 trans-1,3-Dichloropropene	75	12.712	12.705	0.007	96	2897048	16.0	15.0	
68 Toluene	91	12.820	12.813	0.007	94	4906094	16.0	13.9	
69 1,1,2-Trichloroethane	83	12.911	12.904	0.007	95	1532777	16.0	14.6	
70 2-Methylthiophene	97	12.976	12.970	0.006	97	4184790	16.0	14.3	
71 3-Methylthiophene	97	13.186	13.179	0.007	97	4127422	16.0	14.3	
72 2-Hexanone	58	13.332	13.327	0.005	95	1251635	16.0	15.4	
73 n-Octane	85	13.564	13.559	0.005	83	1771045	16.0	14.5	
74 Chlorodibromomethane	129	13.623	13.617	0.006	95	4387090	16.0	16.2	
75 Ethylene Dibromide	107	13.920	13.915	0.005	98	3283374	16.0	15.4	
76 Tetrachloroethene	129	13.995	13.994	0.001	91	2426549	16.0	14.8	
77 Chlorobenzene	112	14.896	14.890	0.006	90	4282825	16.0	14.5	
78 2,3-Dimethylheptane	43	14.939	14.938	0.001	85	3716232	16.0	12.9	
79 Ethylbenzene	91	15.198	15.193	0.005	97	6547804	16.0	13.6	
80 2-Ethylthiophene	97	15.300	15.296	0.004	97	5464937	16.0	14.2	
81 m-Xylene & p-Xylene	91	15.365	15.360	0.005	94	9817283	32.0	25.6	
83 Bromoform	173	15.802	15.798	0.004	92	7531151	16.0	19.7	
82 n-Nonane	57	15.813	15.811	0.002	82	2847857	16.0	14.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.834	15.830	0.004	98	4359068	16.0	16.6	
85 o-Xylene	91	15.893	15.888	0.005	98	5443715	16.0	13.5	
86 1,1,2,2-Tetrachloroethane	83	16.228	16.225	0.003	92	3569804	16.0	14.3	
87 1,2,3-Trichloropropane	110	16.390	16.386	0.004	92	1507435	16.0	15.4	
88 Isopropylbenzene	105	16.492	16.487	0.005	97	7310344	16.0	13.5	
89 N-Propylbenzene	120	17.042	17.041	0.001	94	2448426	16.0	16.2	
90 2-Chlorotoluene	126	17.080	17.076	0.004	92	2259372	16.0	15.6	
91 4-Ethyltoluene	105	17.204	17.204	0.000	94	7293226	16.0	14.3	
92 1,3,5-Trimethylbenzene	120	17.290	17.285	0.005	94	3944682	16.0	15.6	
93 Alpha Methyl Styrene	118	17.538	17.534	0.004	85	3622238	16.0	16.9	
94 n-Decane	57	17.624	17.619	0.005	94	3218041	16.0	14.0	
95 tert-Butylbenzene	119	17.743	17.740	0.003	92	7213417	16.0	14.7	
96 1,2,4-Trimethylbenzene	105	17.759	17.756	0.003	94	6458966	16.0	14.3	
97 sec-Butylbenzene	105	18.040	18.032	0.008	92	8530657	16.0	13.8	
98 1,3-Dichlorobenzene	146	18.040	18.037	0.003	94	6224576	16.0	17.3	
99 Benzyl chloride	91	18.131	18.124	0.007	95	6215272	16.0	16.0	
100 1,4-Dichlorobenzene	146	18.137	18.133	0.004	92	5966183	16.0	17.2	
101 4-Isopropyltoluene	119	18.218	18.212	0.006	92	7458324	16.0	14.1	
102 1,2,3-Trimethylbenzene	105	18.261	18.261	0.000	96	4889649	16.0	14.3	
103 Butylcyclohexane	83	18.325	18.322	0.003	88	4190904	16.0	13.7	
104 1,2-Dichlorobenzene	146	18.519	18.514	0.005	93	5870259	16.0	16.9	
105 2,3-Dihydroindene	117	18.519	18.515	0.004	95	6209689	16.0	15.3	
106 Indene	116	18.654	18.650	0.004	92	4940807	16.0	16.0	
107 n-Butylbenzene	91	18.676	18.671	0.005	95	6612869	16.0	14.1	
108 Undecane	57	19.021	19.016	0.005	87	3484263	16.0	15.4	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.064	19.061	0.003	95	5653685	16.0	15.2	
110 1,2-Dibromo-3-Chloropropan	157	19.150	19.150	0.000	94	3249951	16.0	21.0	
111 1,2,4,5-Tetramethylbenzene	119	19.463	19.458	0.005	95	6614855	16.0	15.3	
112 1,2,3,5-Tetramethylbenzene	119	19.517	19.516	0.001	96	4316826	16.0	16.6	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.911	0.000	97	5598272	16.0	16.6	
114 Dodecane	57	20.094	20.092	0.002	86	2826683	16.0	16.8	
115 1,2,4-Trichlorobenzene	180	20.250	20.247	0.003	93	6670153	16.0	20.3	
116 Naphthalene	128	20.374	20.375	-0.001	95	7052663	16.0	16.5	
117 Benzo(b)thiophene	134	20.477	20.474	0.003	98	4689856	16.0	17.0	
118 Hexachlorobutadiene	225	20.590	20.590	0.000	87	8426914	16.0	18.2	
119 1,2,3-Trichlorobenzene	180	20.649	20.650	-0.001	93	5974195	16.0	18.8	
120 2-Methylnaphthalene	142	21.480	21.480	0.000	99	2612638	50.0	43.0	
121 1-Methylnaphthalene	142	21.685	21.685	0.000	100	1997345	50.0	42.1	
A 124 Toluene Range	1	12.820	(12.790-12.850)		0	13101279	16.0	15.0	
A 125 C8 Range	1	13.557	(13.534-13.594)		0	15111445	16.0	14.3	
S 126 Xylenes, Total	100				0		48.0	39.1	
S 127 1,2-Dichloroethene, Total	1				0		32.0	28.6	

Reagents:

40L9DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

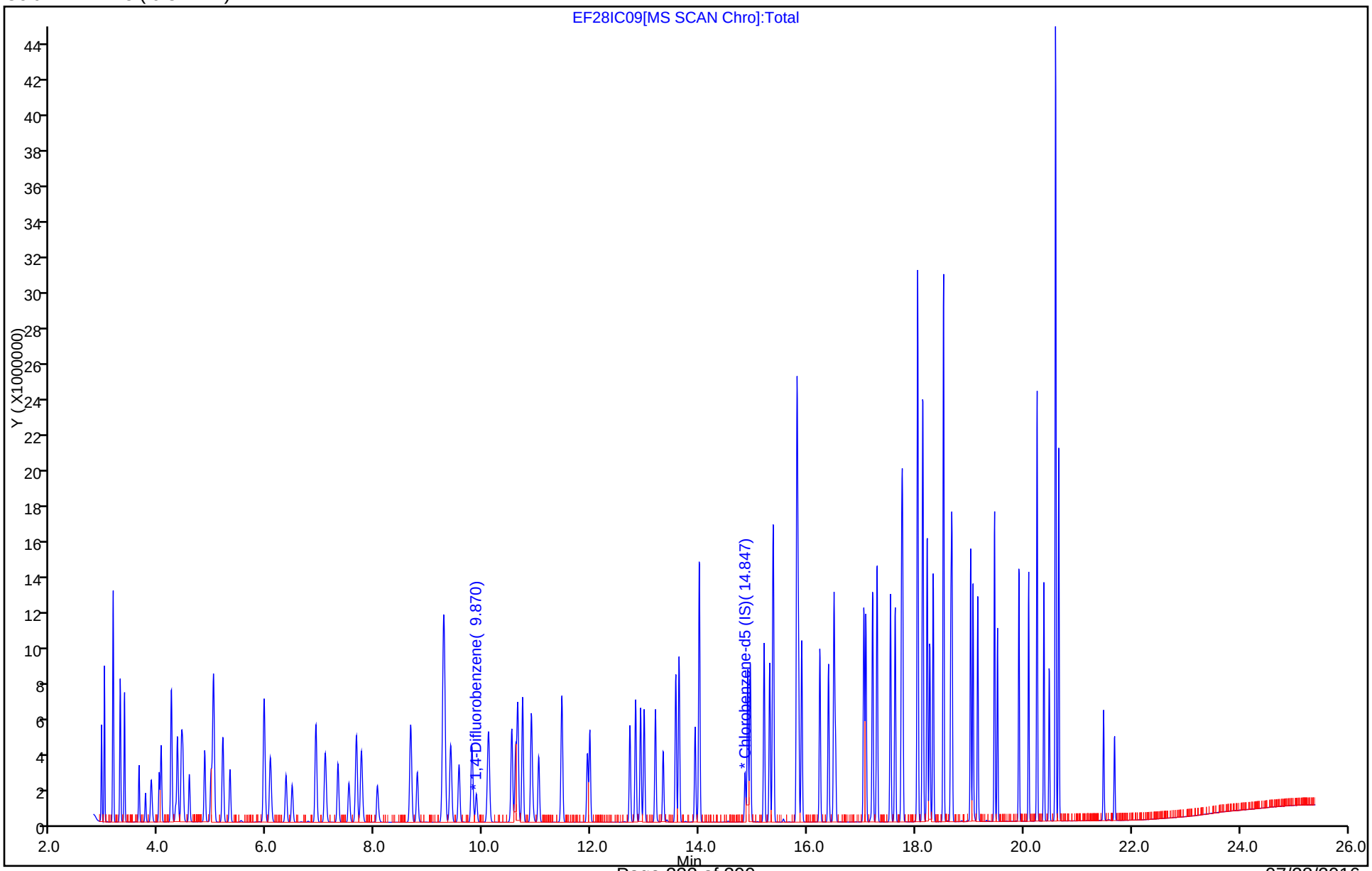
Report Date: 01-Jul-2016 17:09:00 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Injection Date:	28-Jun-2016 20:55:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

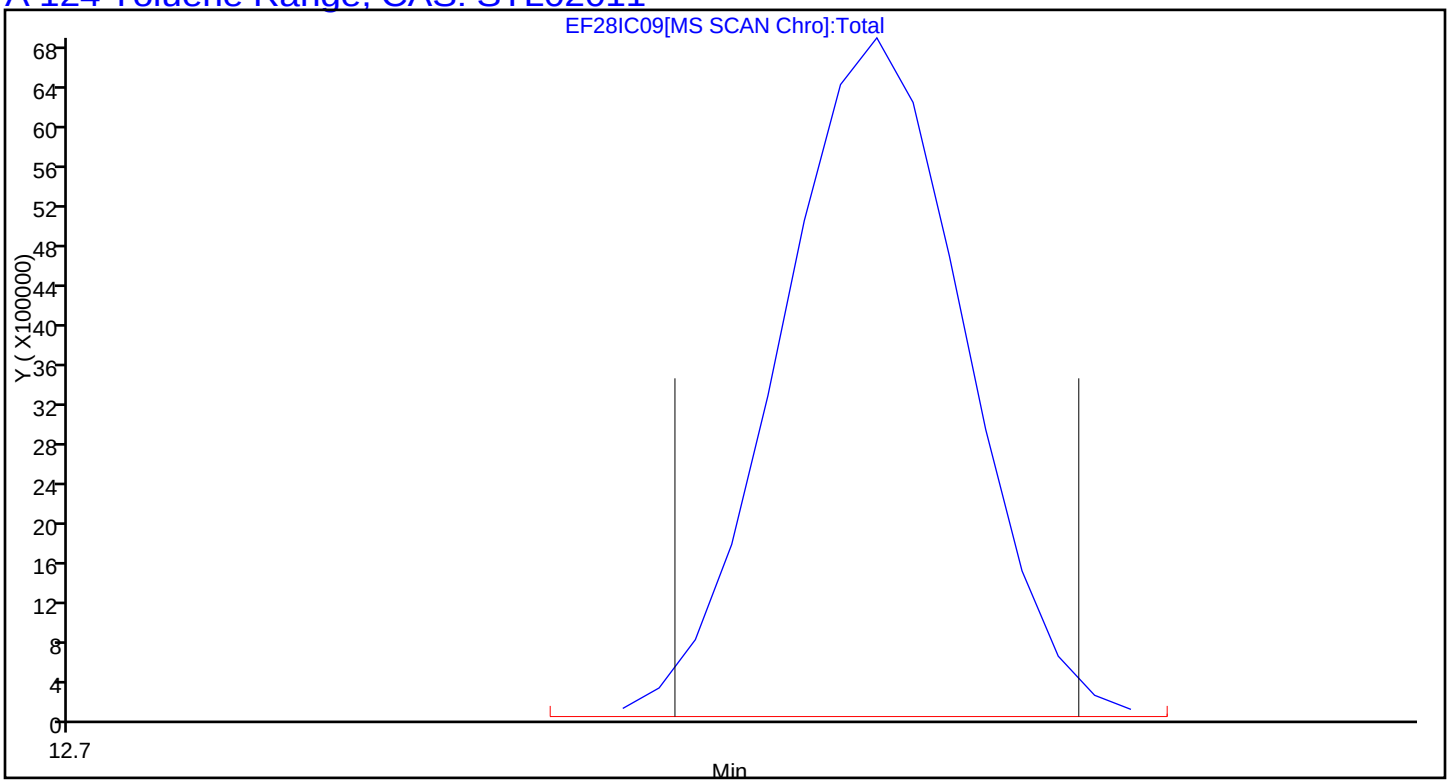


Report Date: 01-Jul-2016 17:09:00 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Injection Date:	28-Jun-2016 20:55:30	Instrument ID:	ME		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

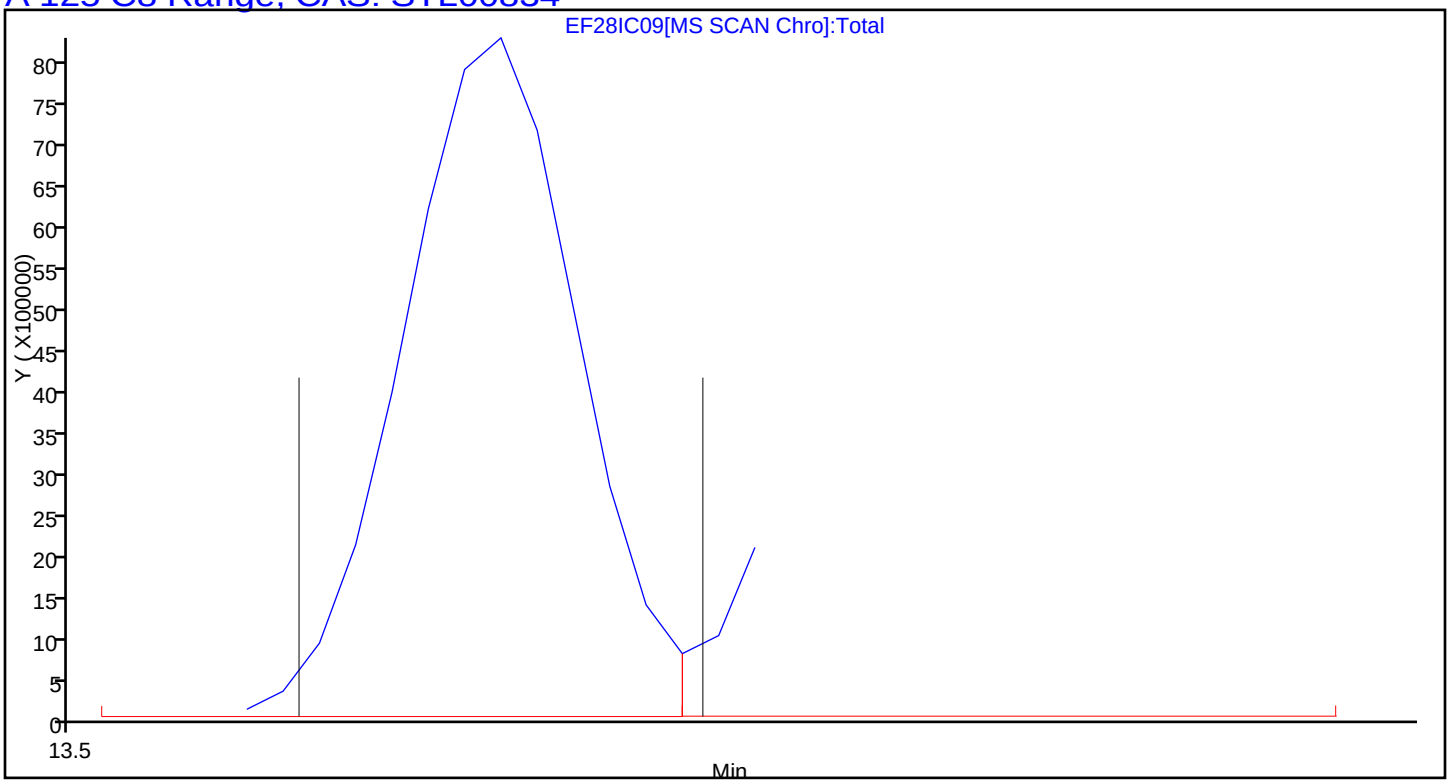


Report Date: 01-Jul-2016 17:09:00 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Injection Date:	28-Jun-2016 20:55:30	Instrument ID:	ME		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5042	0.5590 0.4610	0.5175 0.4813	0.4967 0.4379	0.5141	Ave		0.4965				7.5		30.0			
Propene	+++++ 1.1654	+++++ 1.0702	1.3313 1.0844	1.2623 0.8964	1.2696	Ave		1.1542				13.0		30.0			
Dichlorodifluoromethane	+++++ 4.4166	4.8390 4.2049	4.6794 4.1701	4.5997 3.4026	4.8596	Ave		4.3965				10.9		30.0			
Chloromethane	+++++ 0.3110	+++++ 0.2838	0.3981 0.2566	0.3567 0.2332	0.3351	Ave		0.3106				18.6		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.5211	2.7057 2.3404	2.5717 2.3442	2.5081 1.8650	2.6621	Ave		2.4398				10.9		30.0			
Acetaldehyde	+++++ 0.2760	+++++ 0.2256	+++++ 0.2022	0.3974 0.2058	0.3104	Ave		0.2696				28.1		30.0			
Vinyl chloride	1.3247 1.0033	1.1693 0.9547	1.1093 0.8894	1.1001 0.8297	1.0972	Ave		1.0531				14.4		30.0			
1,3-Butadiene	+++++ 0.7042	+++++ 0.6593	0.7516 0.6084	0.7719 0.5749	0.7683	Ave		0.6912				11.5		30.0			
Butane	+++++ 1.1108	+++++ 1.0854	1.3903 0.9510	1.3397 0.8927	1.2784	Ave		1.1498				16.7		30.0			
Bromomethane	+++++ 0.9572	1.2135 0.9001	1.0838 0.8839	1.0122 0.8550	1.0221	Ave		0.9910				12.0		30.0			
Chloroethane	+++++ 0.3713	0.4395 0.3551	0.4065 0.3441	0.3781 0.3371	0.3895	Ave		0.3777				9.0		30.0			
Ethanol	+++++ 0.1580	+++++ 0.1433	0.1952 0.1267	0.1606 0.1294	0.1687	Ave		0.1546				15.5		30.0			
Vinyl bromide	+++++ 1.2066	1.2166 1.1251	1.2066 1.1391	1.1666 1.0824	1.2299	Ave		1.1716				4.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.4563	+++++ 1.3127	1.5024 1.2679	1.4848 1.0960	1.5352	Ave		1.3793				11.6		30.0			
Trichlorofluoromethane	+++++ 4.2191	4.3771 3.8766	4.2739 3.8302	4.1645 3.4211	4.3784	Ave		4.0676				8.2		30.0			
Acrolein	+++++ 0.3452	+++++ 0.3014	0.4460 0.2782	0.3277 0.2999	0.3533	Ave		0.3360				16.5		30.0			
Acetonitrile	+++++ 0.3905	+++++ 0.3504	0.4332 0.3275	0.3310 0.3740	0.3713	Ave		0.3683				10.0		30.0			
Acetone	+++++ 0.4995	+++++ 0.3749	+++++ 0.3337	0.6209 0.3831	0.5374	Ave		0.4583				24.4		30.0			
Isopropyl alcohol	+++++ 1.6846	+++++ 1.4120	1.7563 1.3941	1.5917 1.1233	1.7285	Ave		1.5272				15.0		30.0			
Pentane	+++++ 0.1768	+++++ 0.1611	0.1866 0.1627	0.1887 0.1441	0.1856	Ave		0.1722				9.7		30.0			
Ethyl ether	+++++ 0.8543	+++++ 0.7808	0.8344 0.6842	0.7323 0.7660	0.8240	Ave		0.7823				7.7		30.0			
1,1-Dichloroethene	+++++ 1.2103	1.2889 1.1318	1.1478 1.1609	1.1752 1.1003	1.2527	Ave		1.1835				5.3		30.0			
tert-Butyl alcohol	+++++ 2.1544	2.3633 1.8642	2.1846 2.0640	2.0389 1.8350	2.1692	Ave		2.0842				8.4		30.0			
Acrylonitrile	+++++ 0.7316	0.8425 0.6684	0.7037 0.6289	0.6206 0.7025	0.7106	Ave		0.7011				9.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8940	3.0400 2.6051	2.8530 2.5798	2.8273 2.3385	2.9837	Ave		2.7652				8.6		30.0			
Methylene Chloride	+++++ 1.1059	+++++ 0.9818	1.3956 0.9738	1.1804 0.9093	1.1484	Ave		1.0993				15.0		30.0			
3-Chloropropene	+++++ 1.1096	1.3296 0.9480	1.0951 0.9570	1.0768 0.8054	1.1176	Ave		1.0549				14.7		30.0			
Carbon disulfide	+++++ 3.4879	3.7064 3.1922	3.4140 3.2589	3.3188 2.9260	3.5637	Ave		3.3585				7.2		30.0			
trans-1,2-Dichloroethene	+++++ 1.2345	1.2722 1.1378	1.2480 1.1094	1.1895 1.0359	1.2737	Ave		1.1876				7.3		30.0			
2-Methylpentane	+++++ 2.5988	2.7409 2.2724	2.6201 2.1287	2.5383 1.7920	2.7029	Ave		2.4243				13.7		30.0			
Methyl tert-butyl ether	+++++ 2.6733	+++++ 2.4385	2.4636 2.2127	2.2707 2.4681	2.5559	Ave		2.4404				6.5		30.0			
1,1-Dichloroethane	+++++ 2.5611	2.6814 2.2112	2.5084 2.1727	2.4933 2.1386	2.5672	Ave		2.4168				8.7		30.0			
Vinyl acetate	+++++ 2.2123	+++++ 2.0875	1.9035 1.8409	1.7361 2.1276	2.0974	Ave		2.0007				8.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3871	+++++ 0.3312	0.5093 0.3229	0.3971 0.3467	0.3930	Ave		0.3839				16.4		30.0			
Hexane	+++++ 1.1210	1.0912 0.9657	1.1007 0.9551	1.0917 0.8804	1.1344	Ave		1.0425				9.1		30.0			
Isopropyl ether	+++++ 3.2904	3.6307 2.9115	3.0105 2.6766	2.8081 2.7075	3.1314	Ave		3.0208				10.7		30.0			
cis-1,2-Dichloroethene	+++++ 1.2327	1.3301 1.0874	1.2146 1.0707	1.1880 1.1014	1.2398	Ave		1.1831				7.6		30.0			
Ethyl acetate	+++++ 1.7615	+++++ 1.5655	1.5737 1.5009	1.5300 1.5623	1.7015	Ave		1.5994				6.0		30.0			
Chloroform	+++++ 2.8139	2.9572 2.4353	2.8805 2.3198	2.7803 2.3852	2.8515	Ave		2.6780				9.5		30.0			
Tert-butyl ethyl ether	+++++ 3.2339	3.5685 2.8582	2.9393 2.7149	2.6805 2.8523	3.0716	Ave		2.9899				9.9		30.0			
Tetrahydrofuran	+++++ 0.9293	+++++ 0.8424	0.8383 0.7823	0.7949 0.8926	0.8890	Ave		0.8527				6.3		30.0			
1,1,1-Trichloroethane	+++++ 3.3351	3.2168 2.9132	3.2372 2.7334	3.2140 2.7851	3.3406	Ave		3.0969				8.0		30.0			
1,2-Dichloroethane	+++++ 0.4569	0.4832 0.3864	0.4749 0.3701	0.4633 0.3885	0.4718	Ave		0.4369				10.7		30.0			
1-Butanol	+++++ 0.0639	+++++ 0.0558	+++++ 0.0671	0.0551 0.0618	0.0622	Ave		0.0610				7.7		30.0			
Cyclohexane	+++++ 0.1302	0.1149 0.1101	0.1184 0.1040	0.1260 0.0955	0.1376	Ave		0.1171				11.9		30.0			
Benzene	+++++ 0.7322	0.8437 0.6046	0.7950 0.5722	0.7510 0.5312	0.7564	Ave		0.6983				16.3		30.0			
Carbon tetrachloride	0.7843 0.8287	0.7618 0.6999	0.7098 0.6615	0.8109 0.6518	0.7826	Ave		0.7435				8.7		30.0			
2,3-Dimethylpentane	+++++ 0.1712	0.1714 0.1427	0.1694 0.1404	0.1761 0.1395	0.1745	Ave		0.1606				10.3		30.0			
Thiophene	+++++ 0.4165	0.4347 0.3632	0.4135 0.3555	0.4081 0.3680	0.4313	Ave		0.3988				8.0		30.0			
Tert-amyl methyl ether	+++++ 0.6605	0.7406 0.5623	0.6416 0.5191	0.6024 0.5263	0.6679	Ave		0.6151				12.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.3875	1.5390 1.1576	1.4751 1.0883	1.4432 0.9871	1.4449	Ave		1.3153				15.7		30.0			
Heptane	+++++ 0.2442	+++++ 0.2109	0.2503 0.2088	0.2439 0.2062	0.2496	Ave		0.2306				9.0		30.0			
1,2-Dichloropropane	+++++ 0.3010	0.3185 0.2604	0.2894 0.2489	0.2858 0.2435	0.3065	Ave		0.2817				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4078 0.3542	0.3744 0.3116	0.3733 0.3033	0.3548 0.3216	0.3704	Ave		0.3524				9.7		30.0			
Dibromomethane	+++++ 0.3291	0.3266 0.2856	0.3204 0.2795	0.3280 0.2908	0.3356	Ave		0.3120				7.3		30.0			
Bromodichloromethane	0.5980 0.6148	0.5486 0.5461	0.5576 0.5252	0.5596 0.5377	0.6308	Ave		0.5687				6.5		30.0			
1,4-Dioxane	+++++ 0.0907	+++++ 0.0795	0.0796 0.0853	0.0803 0.0765	0.0906	Ave		0.0832				6.8		30.0			
Methyl methacrylate	+++++ 0.2190	0.2024 0.1965	0.1813 0.1935	0.3185 0.2086	0.2018	Ave		0.2152				20.1		30.0			
Methylcyclohexane	+++++ 0.5679	0.5877 0.4747	0.5782 0.4633	0.5735 0.4476	0.5931	Ave		0.5358				11.6		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4572	0.5094 0.3912	0.6711 0.4240	0.4244 0.3787	0.5230	Ave		0.4724				20.2		30.0			
cis-1,3-Dichloropropene	0.3836 0.4002	0.3632 0.3656	0.3419 0.3525	0.3346 0.3814	0.3874	Ave		0.3678				6.0		30.0			
trans-1,3-Dichloropropene	+++++ 0.3595	0.3152 0.3337	0.2950 0.3226	0.2686 0.3655	0.3573	Ave		0.3272				10.4		30.0			
Toluene	+++++ 0.9093	1.0070 0.7987	0.8963 0.6980	0.8459 0.7268	0.9326	Ave		0.8518				12.4		30.0			
Toluene Range	+++++ 2.0809	+++++ 1.9007	+++++ 1.6308	1.8813 1.7440	2.1031	Ave		1.8901				9.8		30.0			
1,1,2-Trichloroethane	+++++ 0.2634	0.2733 0.2315	0.2567 0.2104	0.2485 0.2212	0.2692	Ave		0.2468				9.4		30.0			
2-Methylthiophene	+++++ 0.7820	0.7234 0.6802	0.7793 0.6080	0.6860 0.6275	0.7941	Ave		0.7101				10.1		30.0			
3-Methylthiophene	+++++ 0.7359	0.7177 0.6520	0.7055 0.5863	0.6857 0.6160	0.7508	Ave		0.6812				8.6		30.0			
2-Hexanone	+++++ 0.2800	+++++ 0.2386	0.2217 0.2430	0.2392 0.2307	0.2834	Ave		0.2481				9.7		30.0			
Octane	+++++ 0.3030	0.3024 0.2605	0.2978 0.2316	0.2891 0.2326	0.3146	Ave		0.2789				11.8		30.0			
C8 Range	+++++ 2.8050	+++++ 2.3297	+++++ 2.0345	2.8095 1.9518	2.9926	Ave		2.4872				17.8		30.0			
Dibromochloromethane	0.5674 0.6659	0.5543 0.5923	0.5728 0.5443	0.5770 0.5832	0.6580	Ave		0.5906				7.3		30.0			
1,2-Dibromoethane (EDB)	0.4552 0.4797	0.4768 0.4280	0.4555 0.4034	0.4307 0.4503	0.4785	Ave		0.4509				5.8		30.0			
Tetrachloroethene	0.4875 0.4016	0.4396 0.3385	0.4357 0.3067	0.4287 0.3230	0.4309	Ave		0.3991				15.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.8566	1.0104 0.6661	0.9749 0.5494	0.9109 0.4479	0.9375	Ave		0.7942				26.7		30.0			
Chlorobenzene	+++++ 0.6770	0.7480 0.5890	0.6968 0.5278	0.6430 0.5490	0.6927	Ave		0.6404				12.2		30.0			
Ethylbenzene	+++++ 1.0567	1.1550 0.9468	0.9801 0.8178	0.8973 0.8923	1.0251	Ave		0.9714				11.0		30.0			
2-Ethylthiophene	+++++ 0.8055	0.8105 0.7294	0.7199 0.6458	0.6669 0.7164	0.7795	Ave		0.7342				8.3		30.0			
m-Xylene & p-Xylene	0.9369 0.8068	0.8738 0.6978	0.7634 0.5911	0.6968 0.6181	0.8006	Ave		0.7539				15.1		30.0			
Nonane	+++++ 0.6451	0.5885 0.5662	0.5459 0.4907	0.5382 0.4585	0.6311	Ave		0.5580				11.5		30.0			
Bromoform	+++++ 0.5090	0.3393 0.4915	0.3617 0.4772	0.3571 0.5497	0.4679	Ave		0.4442				18.0		30.0			
Styrene	0.5013 0.5292	0.4332 0.4944	0.3824 0.4484	0.3826 0.5156	0.4866	Ave		0.4637				11.9		30.0			
o-Xylene	+++++ 0.8703	0.9793 0.7561	0.8386 0.6600	0.7655 0.7338	0.8759	Ave		0.8099				12.4		30.0			
1,1,2,2-Tetrachloroethane	0.5577 0.5616	0.5348 0.5019	0.4870 0.4665	0.4817 0.4930	0.5584	Ave		0.5159				7.2		30.0			
1,2,3-Trichloropropane	+++++ 0.1561	0.1432 0.1434	0.1415 0.1353	0.1349 0.1602	0.1554	Ave		0.1463				6.7		30.0			
Isopropylbenzene	+++++ 1.1442	+++++ 1.0035	1.0700 0.8681	0.9886 0.9337	1.1229	Ave		1.0187				9.8		30.0			
Propylbenzene	+++++ 0.2806	0.2553 0.2565	0.2405 0.2426	0.2166 0.2918	0.2618	Ave		0.2557				9.2		30.0			
2-Chlorotoluene	+++++ 0.2906	0.2913 0.2672	0.2599 0.2412	0.2428 0.2871	0.2787	Ave		0.2699				7.6		30.0			
4-Ethyltoluene	+++++ 0.9839	0.8822 0.8719	0.8073 0.8004	0.7766 0.8681	0.9414	Ave		0.8665				8.2		30.0			
1,3,5-Trimethylbenzene	+++++ 0.5002	0.5144 0.4334	0.4547 0.4008	0.4225 0.4561	0.4860	Ave		0.4585				8.6		30.0			
Alpha Methyl Styrene	+++++ 0.3517	+++++ 0.3492	0.2284 0.3478	0.2209 0.4145	0.3127	Ave		0.3179				22.2		30.0			
Decane	+++++ 0.6574	0.6037 0.5756	0.5696 0.4989	0.5427 0.4758	0.6398	Ave		0.5704				11.2		30.0			
tert-Butylbenzene	+++++ 1.0212	+++++ 0.8699	0.9497 0.7834	0.8998 0.8218	1.0369	Ave		0.9118				10.6		30.0			
1,2,4-Trimethylbenzene	+++++ 0.8794	0.8435 0.7418	0.7504 0.6841	0.7285 0.7099	0.8721	Ave		0.7762				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.2919	+++++ 1.0984	1.1691 0.9877	1.0927 0.9921	1.2854	Ave		1.1310				11.0		30.0			
1,3-Dichlorobenzene	+++++ 0.4099	0.3775 0.3972	0.3536 0.4064	0.3342 0.5042	0.3891	Ave		0.3965				12.8		30.0			
Benzyl chloride	+++++ 0.4101	+++++ 0.4053	0.2838 0.4575	0.2701 0.5420	0.3568	Ave		0.3894				24.6		30.0			
1,4-Dichlorobenzene	+++++ 0.3467	0.3085 0.3409	0.2862 0.3681	0.2766 0.4691	0.3181	Ave		0.3393				17.9		30.0			
4-Isopropyltoluene	+++++ 1.0572	0.9805 0.8935	0.8980 0.8441	0.8621 0.8504	1.0514	Ave		0.9296				9.5		30.0			
1,2,3-Trimethylbenzene	+++++ 0.6839	0.6824 0.5727	0.5992 0.5466	0.5790 0.5862	0.6829	Ave		0.6166				9.2		30.0			
Butylcyclohexane	+++++ 0.7573	0.7963 0.6471	0.6759 0.5621	0.6417 0.5557	0.7464	Ave		0.6728				13.2		30.0			
Indane	+++++ 0.7243	0.6832 0.6413	0.6020 0.6072	0.5803 0.6525	0.6998	Ave		0.6488				7.9		30.0			
1,2-Dichlorobenzene	+++++ 0.4281	0.3879 0.4016	0.3773 0.4016	0.3434 0.4773	0.4106	Ave		0.4035				9.7		30.0			
Butylbenzene	+++++ 0.8271	0.6800 0.7161	0.6905 0.7000	0.6278 0.6951	0.8050	Ave		0.7177				9.2		30.0			
Indene	+++++ 0.4211	0.3055 0.3945	0.3055 0.4031	0.2953 0.4594	0.3928	Ave		0.3721				16.6		30.0			
Undecane	+++++ 0.6130	0.5334 0.5348	0.5637 0.5122	0.5086 0.4720	0.6159	Ave		0.5442				9.3		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6948	0.5622 0.5936	0.5720 0.6048	0.5150 0.6225	0.6684	Ave		0.6042				9.6		30.0			
1,2-Dibromo-3-Chloropropane	0.1652 0.1391	0.0826 0.1371	0.0917 0.1612	0.0919 0.1992	0.1259	Ave		0.1327				29.5		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8351	0.7116 0.7142	0.7250 0.7364	0.6413 0.7290	0.8195	Ave		0.7390				8.4		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.5341	0.4665 0.4486	0.4771 0.4694	0.4161 0.4778	0.5255	Ave		0.4769				8.0		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.6468	0.5792 0.5569	0.5811 0.5902	0.5017 0.6010	0.6481	Ave		0.5881				8.1		30.0			
Dodecane	+++++ 0.5636	+++++ 0.4338	+++++ 0.4825	0.4346 0.4212	0.5682	Ave		0.4840				13.8		30.0			
1,2,4-Trichlorobenzene	+++++ 0.1153	0.0949 0.1129	0.0905 0.1585	0.0762 +++++	0.1009	Ave		0.1070				24.6		30.0			
Naphthalene	0.4313 0.2773	0.1979 0.2653	0.2048 0.3417	0.1751 0.4174	0.2443	Ave		0.2839				33.0	*	30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1041	0.0933 0.1002	0.0961 0.1397	0.0715 +++++	0.0929	Ave		0.0997				20.5		30.0			
Hexachlorobutadiene	+++++ 0.4409	0.4968 0.3652	0.4626 0.3871	0.3746 0.4182	0.4657	Ave		0.4264				11.2		30.0			
1,2,3-Trichlorobenzene	+++++ 0.1169	0.0919 0.1090	0.1024 0.1470	0.0774 0.1883	0.1070	Ave		0.1175				29.8		30.0			
2-Methylnaphthalene	+++++ 0.0188	0.0182 0.0142	0.0198 0.0234	0.0101 0.0285	0.0152	Ave		0.0185				30.6		50.0			
1-Methylnaphthalene	+++++ 0.0200	0.0201 0.0147	0.0205 0.0246	0.0098 0.0272	0.0188	Ave		0.0195				27.8		50.0			
4-Bromofluorobenzene (Surr)	0.5569 0.6060	0.5729 0.6183	0.5669 0.6052	0.5617 0.6393	0.5880	Ave		0.5906				4.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 74322	3758 143302	6560 288544	15197 568696	38466	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 171785	+++++ 332692	16876 650144	38620 1164099	94985	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 651005	32532 1307229	59316 2500166	140732 4418618	363576	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 45845	+++++ 88214	5046 153848	10913 302773	25067	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 371615	18190 727582	32599 1405458	76736 2421902	199170	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 203386	+++++ 350643	+++++ 606067	60801 1336036	116129	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4184 147890	7861 296801	14061 533221	33657 1077395	82084	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 103801	+++++ 204963	9528 364739	23616 746524	57483	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 163737	+++++ 337432	17623 570149	40990 1159255	95645	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 141086	8158 279818	13738 529966	30969 1110251	76471	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 54729	2955 110409	5153 206332	11567 437796	29140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 116482	+++++ 222729	12374 379778	24561 840205	63110	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 177848	8179 349781	15295 682940	35692 1405653	92013	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 214661	+++++ 408100	19045 760188	45429 1423234	114860	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 621893	29427 1205159	54177 2296411	127417 4442645	327570	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 50881	+++++ 93702	5654 166781	10026 389500	26432	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 57557	+++++ 108943	5491 196326	10126 485627	27782	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 220910	+++++ 349669	+++++ 600267	56991 1492629	120631	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 744962	+++++ 1317035	66795 2507678	146107 4376471	387973	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 26066	+++++ 50079	2365 97557	5773 187143	13885	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 125926	+++++ 242733	10577 410197	22404 994775	61651	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 178394	8665 351859	14550 696021	35955 1428851	93723	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 317555	15888 579563	27692 1237494	62382 2382939	162292	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 107837	5664 207783	8920 377050	18989 912254	53165	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++ 426570	20438 809888	36165 1546698	86503 3036710	223225	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 163012	+++++ 305232	17691 583873	36114 1180787	85918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 163557	8939 294729	13881 573796	32947 1045840	83611	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 514119	24918 992410	43276 1953890	101542 3799723	266620	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 181960	8553 353708	15820 665147	36395 1345260	95290	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 383056	18427 706451	33213 1276291	77661 2327114	202218	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 394051	+++++ 758096	31229 1326657	69473 3205110	191223	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 377503	18027 687439	31797 1302641	76286 2777161	192069	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 326088	+++++ 648961	24129 1103728	53117 2762820	156921	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 57065	+++++ 102957	6456 193612	12150 450257	29406	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 165234	7336 300224	13952 572625	33402 1143308	84874	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	+++++ 485009	24409 905127	38161 1604773	85916 3515890	234280	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 181693	8942 338040	15396 641922	36349 1430321	92758	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 259651	+++++ 486683	19949 899864	46813 2028801	127302	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 414764	19881 757083	36514 1390825	85067 3097387	213335	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 476674	23991 888552	37259 1627729	82013 3703920	229807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 136985	+++++ 261903	10627 469029	24321 1159161	66510	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 491600	21626 905660	41035 1638831	98335 3616674	249926	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	+++++ 295685	14298 549094	26030 987874	59968 2263123	151004	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 41337	+++++ 79338	+++++ 179047	7131 360182	19897	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 84227	3400 156430	6492 277573	16308 556586	44050	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 473833	24967 859237	43574 1527500	97218 3094582	242064	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10308 536281	22543 994733	38903 1765814	104966 3797031	250454	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 110794	5072 202801	9283 374753	22790 812542	55859	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	+++++ 269521	12865 516119	22661 949009	52829 2143783	138033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 372876	18473 723980	28733 1344086	64540 3028475	180342	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 897864	45542 1645159	80847 2905240	186825 5750307	462412	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 158034	+++++ 299782	13718 557515	31573 1201125	79881	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 194759	9425 370098	15859 664536	36991 1418404	98083	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5360 229178	11078 442884	20459 809617	45929 1873495	118547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 212934	9666 405928	17561 746153	42461 1694078	107420	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	7859 397868	16234 776050	30563 1402039	72436 3132699	201889	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 58670	+++++ 112981	4364 227685	10391 445938	28993	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 141703	5990 279290	9937 516447	41235 1215024	64577	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 367492	17392 674601	31688 1236865	74236 2607782	189819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295884	15075 556003	36781 1131908	54942 2205881	167376	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	5041 259003	10749 519520	18741 940942	43317 2221824	123970	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 202943	7861 429638	13213 835409	28773 2103301	96475	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 513330	25117 1028413	40141 1807350	90623 4182412	251819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	+++++ 1174730	+++++ 2447394	+++++ 4222753	201557 10035359	567901	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	+++++ 148679	6816 298075	11494 544854	26618 1272593	72695	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 441429	18043 875867	34902 1574396	73492 3610870	214421	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 415433	17901 839568	31597 1518071	73462 3544888	202739	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 158048	+++++ 307291	9927 629308	25630 1327800	76515	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	+++++ 171049	7543 335449	13336 599701	30969 1338237	84942	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 1583480	+++++ 2999823	+++++ 5268215	300990 11231032	808090	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	5891 375901	13827 762654	25651 1409503	61819 3355987	177672	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	4726 270820	11892 551155	20400 1044626	46147 2590955	129201	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5061 226727	10964 435890	19514 794219	45924 1858547	116368	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 483560	25203 857705	43660 1422600	97584 2577374	253140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 382171	18658 758472	31203 1366684	68884 3159295	187036	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	+++++ 596545	28810 1219170	43894 2117749	96127 5134454	276806	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	+++++ 454691	20217 939238	32238 1672366	71448 4122460	210486	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19454 910856	43588 1796987	68375 3061379	149302 7113518	432360	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	+++++ 364149	14679 729041	24448 1270603	57661 2638502	170403	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	+++++ 287325	8464 632872	16198 1235633	38261 3162893	126351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5204 298757	10805 636582	17123 1161198	40993 2966957	131396	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	+++++ 491312	24427 973620	37556 1708918	82015 4222274	236527	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	5790 317051	13340 646257	21810 1208064	51611 2836714	150790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 88107	3572 184661	6337 350332	14455 921976	41958	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 645900	+++++ 1292194	47917 2248024	105917 5373006	303206	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 158414	6367 330331	10769 628117	23208 1679331	70689	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 164057	7267 344057	11641 624631	26016 1651961	75246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 555410	22005 1122676	36155 2072618	83203 4995270	254212	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 282382	12831 558077	20363 1037781	45264 2624406	131247	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 198517	+++++ 449633	10227 900610	23661 2385158	84426	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 371127	15057 741112	25509 1291827	58146 2738103	172771	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 576459	+++++ 1120112	42532 2028581	96405 4729064	279995	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	+++++ 496438	21039 955201	33604 1771506	78046 4084905	235496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 729282	+++++ 1414365	52355 2557663	117070 5708680	347096	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 231407	9415 511453	15837 1052391	35808 2901271	105055	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 231497	+++++ 521842	12711 1184773	28941 3118761	96342	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 195721	7696 438982	12819 953235	29631 2699517	85902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 596789	24457 1150454	40217 2185786	92356 4893500	283900	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 386097	17021 737400	26836 1415266	62027 3373450	184398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	+++++ 427484	19863 833271	30267 1455558	68748 3197669	201539	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	+++++ 408894	17042 825803	26958 1572283	62168 3754466	188971	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 241683	9676 517072	16895 1039806	36785 2746451	110886	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 466916	16960 922062	30924 1812485	67262 3999716	217364	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 237730	7619 507931	13681 1043744	31634 2643801	106078	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 346076	13304 688596	25243 1326289	54486 2716283	166313	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 392201	14022 764381	25618 1566098	55179 3582044	180487	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	1715 78535	2060 176596	4107 417334	9842 1146153	33994	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 471438	17750 919685	32467 1906908	68705 4194777	221281	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 301527	11637 577643	21367 1215600	44578 2749344	141907	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 365106	14446 717139	26023 1528285	53749 3458409	175011	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 318147	+++++ 558539	+++++ 1249421	46563 2423987	153441	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 65109	2368 145399	4052 410410	8167 +++++	27246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	4478 156536	4935 341566	9172 884843	18754 2401988	65976	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 58741	2326 129062	4302 361623	7658 +++++	25086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	+++++ 248901	12392 470300	20717 1002249	40131 2406632	125753	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 66002	2292 140342	4585 380574	8296 1083656	28890	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 33085	1420 57318	2771 189512	3375 511700	12857	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 35332	1563 59070	2867 198948	3284 489210	15840	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	590004 685127	729043 796104	640074 783587	601768 919690	634109	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Jun-2016 15:49:30 ALS Bottle#: 7 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044591
Misc. Info.: J062216,T15,,140-0003070-002
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:11:59 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:40:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.389	9.389	0.000	90	322287	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.552	11.552	0.000	95	1341042	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.232	16.231	0.001	88	1059355	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.856	17.854	0.002	91	590004	4.00	3.77	
6 Chlorodifluoromethane	67	3.924	3.925	-0.001	81	1653	0.0392	0.0413	
7 Propene	41	3.940	3.939	0.001	79	5861	0.0392	0.0630	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	98	16428	0.0392	0.0464	
9 Chloromethane	52	4.198	4.196	0.002	49	2354	0.0392	0.0941	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	90	9437	0.0392	0.0480	
11 Acetaldehyde	44	4.365	4.364	0.001	84	10708	0.1960	0.4930	
12 Vinyl chloride	62	4.386	4.384	0.002	95	4184	0.0392	0.0493	
14 Butadiene	54	4.483	4.479	0.004	69	2754	0.0392	0.0494	
13 Butane	43	4.478	4.480	-0.002	81	5568	0.0392	0.0601	
15 Bromomethane	94	4.838	4.837	0.001	94	4296	0.0392	0.0538	
16 Chloroethane	64	4.989	4.991	-0.002	41	1583	0.0392	0.0520	
17 Ethanol	31	5.080	5.081	-0.001	91	5501	0.1960	0.4417	
18 Vinyl bromide	106	5.322	5.323	-0.001	94	4323	0.0392	0.0458	
19 2-Methylbutane	43	5.371	5.372	-0.001	86	5837	0.0392	0.0525	
20 Trichlorofluoromethane	101	5.613	5.611	0.002	97	14017	0.0392	0.0428	
21 Acrolein	56	5.623	5.623	0.000	86	3200	0.0392	0.1182	
23 Acetone	58	5.753	5.747	0.006	98	9794	0.1176	0.2653	
24 Isopropyl alcohol	45	5.828	5.819	0.009	90	16924	0.1176	0.1375	
26 Ethyl ether	31	6.038	6.027	0.011	79	2328	0.0392	0.0369	
27 1,1-Dichloroethene	96	6.360	6.368	-0.008	91	4004	0.0392	0.0420	
28 2-Methyl-2-propanol	59	6.473	6.457	0.016	92	6792	0.0392	0.0404	
29 Acrylonitrile	53	6.484	6.479	0.005	51	2168	0.0392	0.0384	
30 1,1,2-Trichloro-1,2,2-trif	101	6.549	6.548	0.001	94	9961	0.0392	0.0447	
31 Methylene Chloride	84	6.737	6.739	-0.002	94	7919	0.0392	0.0894	
32 3-Chloro-1-propene	39	6.753	6.753	0.000	58	4691	0.0392	0.0552	
33 Carbon disulfide	76	6.920	6.916	0.004	98	12081	0.0392	0.0446	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	7.587	7.587	0.000	93	4204	0.0392	0.0439	
35 2-Methylpentane	43	7.598	7.597	0.001	95	8763	0.0392	0.0449	
36 Methyl tert-butyl ether	73	7.727	7.715	0.012	96	8273	0.0392	0.0421	
37 1,1-Dichloroethane	63	8.017	8.025	-0.008	97	8643	0.0392	0.0444	
38 Vinyl acetate	43	8.130	8.125	0.005	99	6636	0.0392	0.0412	
39 2-Butanone (MEK)	72	8.614	8.597	0.017	83	1558	0.0392	0.0504	
40 Hexane	56	8.614	8.613	0.001	79	3649	0.0392	0.0434	
41 Isopropyl ether	45	8.781	8.773	0.008	96	9162	0.0392	0.0376	
42 cis-1,2-Dichloroethene	96	9.039	9.044	-0.005	92	4186	0.0392	0.0439	
43 Ethyl acetate	43	9.233	9.224	0.009	95	5581	0.0392	0.0433	
44 Chloroform	83	9.389	9.395	-0.006	28	10067	0.0392	0.0467	
45 Tert-butyl ethyl ether	59	9.481	9.471	0.010	94	9080	0.0392	0.0377	
46 Tetrahydrofuran	42	9.846	9.821	0.025	88	2708	0.0392	0.0394	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	94	10468	0.0392	0.0420	
48 1,2-Dichloroethane	62	10.551	10.556	-0.005	96	6592	0.0392	0.0450	
50 Cyclohexane	69	11.024	11.031	-0.007	69	1658	0.0392	0.0422	
51 Benzene	78	11.024	11.031	-0.007	97	12693	0.0392	0.0542	
52 Carbon tetrachloride	117	11.057	11.055	0.002	95	10308	0.0392	0.0414	
53 2,3-Dimethylpentane	71	11.132	11.134	-0.002	85	2257	0.0392	0.0419	
54 Thiophene	84	11.304	11.302	0.002	96	6313	0.0392	0.0472	
55 Tert-amyl methyl ether	73	11.487	11.480	0.007	93	7657	0.0392	0.0470	
56 Isooctane	57	11.761	11.759	0.002	98	22025	0.0392	0.0499	
57 n-Heptane	71	12.122	12.122	0.000	81	3150	0.0392	0.0408	
58 1,2-Dichloropropane	63	12.235	12.227	0.008	73	3825	0.0392	0.0405	
59 Trichloroethene	130	12.262	12.257	0.005	92	5360	0.0392	0.0454	
60 Dibromomethane	93	12.353	12.348	0.005	92	4622	0.0392	0.0442	
62 Dichlorobromomethane	83	12.488	12.487	0.001	98	7859	0.0392	0.0412	
61 1,4-Dioxane	88	12.515	12.501	0.014	13	896	0.0392	0.0321	
63 Methyl methacrylate	41	12.563	12.558	0.005	82	2510	0.0392	0.0348	
64 Methylcyclohexane	83	13.015	13.014	0.001	91	8188	0.0392	0.0456	
65 4-Methyl-2-pentanone (MIBK	43	13.408	13.399	0.009	94	6521	0.0392	0.0412	
66 cis-1,3-Dichloropropene	75	13.461	13.466	-0.005	92	5041	0.0392	0.0409	
67 trans-1,3-Dichloropropene	75	14.145	14.149	-0.004	93	4402	0.0392	0.0508	
68 Toluene	91	14.274	14.277	-0.003	92	10890	0.0392	0.0483	
69 1,1,2-Trichloroethane	83	14.354	14.349	0.005	92	2857	0.0392	0.0437	
70 2-Methylthiophene	97	14.430	14.429	0.001	97	8764	0.0392	0.0466	
71 3-Methylthiophene	97	14.629	14.628	0.001	97	8057	0.0392	0.0447	
72 2-Hexanone	58	14.726	14.717	0.009	93	2820	0.0392	0.0429	
73 n-Octane	85	14.930	14.931	-0.001	91	3317	0.0392	0.0449	
74 Chlorodibromomethane	129	15.048	15.053	-0.005	94	5891	0.0392	0.0377	
75 Ethylene Dibromide	107	15.344	15.344	0.000	98	4726	0.0392	0.0396	
76 Tetrachloroethene	129	15.409	15.408	0.001	93	5061	0.0392	0.0479	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	93	11055	0.0392	0.0526	
78 Chlorobenzene	112	16.280	16.279	0.001	92	8514	0.0392	0.0502	
79 Ethylbenzene	91	16.560	16.557	0.003	97	12503	0.0392	0.0486	
80 2-Ethylthiophene	97	16.657	16.661	-0.004	95	9313	0.0392	0.0479	
81 m-Xylene & p-Xylene	91	16.711	16.715	-0.004	98	19454	0.0784	0.0974	
82 n-Nonane	57	17.109	17.109	0.000	90	6648	0.0392	0.0450	
83 Bromoform	173	17.179	17.179	0.000	86	3700	0.0392	0.0315	
84 Styrene	104	17.179	17.181	-0.002	94	5204	0.0392	0.0424	
85 o-Xylene	91	17.243	17.242	0.001	96	10551	0.0392	0.0492	
86 1,1,2,2-Tetrachloroethane	83	17.561	17.563	-0.002	93	5790	0.0392	0.0424	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.717	17.720	-0.004	94	1702	0.0392	0.0439	
88 Isopropylbenzene	105	17.819	17.815	0.004	96	14105	0.0392	0.0523	
89 N-Propylbenzene	120	18.330	18.333	-0.003	99	3033	0.0392	0.0448	
90 2-Chlorotoluene	126	18.384	18.384	0.000	95	3310	0.0392	0.0463	
91 4-Ethyltoluene	105	18.480	18.477	0.003	98	10973	0.0392	0.0478	
92 1,3,5-Trimethylbenzene	120	18.540	18.545	-0.005	90	5497	0.0392	0.0453	
93 Alpha Methyl Styrene	118	18.771	18.771	0.000	87	3023	0.0392	0.0359	
94 n-Decane	57	18.803	18.805	-0.002	90	7045	0.0392	0.0466	
95 tert-Butylbenzene	119	18.959	18.958	0.001	91	12275	0.0392	0.0508	
96 1,2,4-Trimethylbenzene	105	18.970	18.971	-0.001	95	9466	0.0392	0.0460	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	98	14891	0.0392	0.0497	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	93	5642	0.0392	0.0537	
99 Benzyl chloride	91	19.314	19.315	-0.001	94	4534	0.0392	0.0440	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	92	4961	0.0392	0.0552	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	97	13149	0.0392	0.0534	
102 1,2,3-Trimethylbenzene	105	19.427	19.432	-0.005	97	7660	0.0392	0.0469	
103 Butylcyclohexane	83	19.476	19.476	0.000	87	8374	0.0392	0.0470	
104 2,3-Dihydroindene	117	19.675	19.676	-0.001	93	8931	0.0392	0.0520	
105 1,2-Dichlorobenzene	146	19.680	19.680	0.000	73	5322	0.0392	0.0498	
106 n-Butylbenzene	91	19.798	19.797	0.001	95	9034	0.0392	0.0475	
107 Indene	116	19.804	19.805	-0.001	66	4541	0.0392	0.0461	
108 Undecane	57	20.083	20.083	0.000	94	7167	0.0392	0.0497	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.159	20.158	0.001	96	8332	0.0392	0.0521	
110 1,2-Dibromo-3-Chloropropan	157	20.272	20.271	0.001	61	1715	0.0392	0.0488	
111 1,2,4,5-Tetramethylbenzene	119	20.546	20.545	0.001	95	12171	0.0392	0.0622	
112 1,2,3,5-Tetramethylbenzene	119	20.605	20.603	0.002	92	6633	0.0392	0.0525	
113 1,2,3,4-Tetramethylbenzene	119	21.020	21.019	0.001	94	8743	0.0392	0.0561	
114 Dodecane	57	21.165	21.159	0.006	93	6654	0.0392	0.0519	
115 1,2,4-Trichlorobenzene	180	21.391	21.399	-0.008	85	1889	0.0392	0.0666	
116 Naphthalene	128	21.536	21.540	-0.004	96	4478	0.0392	0.0596	
117 Benzo(b)thiophene	134	21.638	21.633	0.005	95	2717	0.0392	0.1029	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	94	5921	0.0392	0.0524	
119 1,2,3-Trichlorobenzene	180	21.773	21.772	0.001	88	1851	0.0392	0.0595	
120 2-Methylnaphthalene	142	22.311	22.314	-0.003	95	1614	0.1225	0.3289	
121 1-Methylnaphthalene	142	22.440	22.439	0.001	94	1445	0.1225	0.2805	
A 124 Toluene Range	1	14.274	(14.244-14.304)		0	22619	0.0392	0.0452	
S 126 Xylenes, Total	100				0		0.1176	0.1466	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0878	

Reagents:

40L12DNP_00005	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

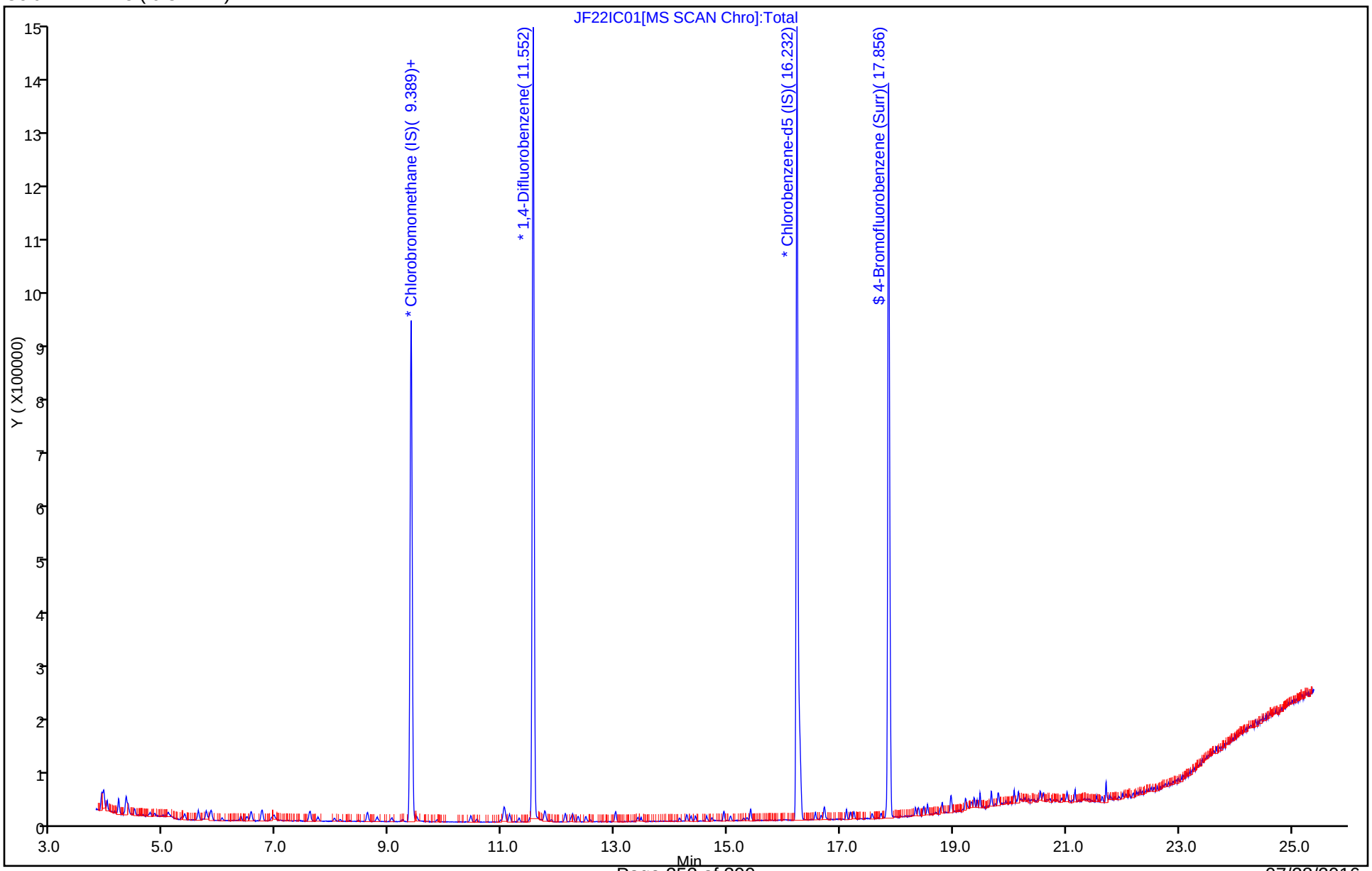
Report Date: 27-Jun-2016 15:12:00 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC01.D

Injection Date:	22-Jun-2016 15:49:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

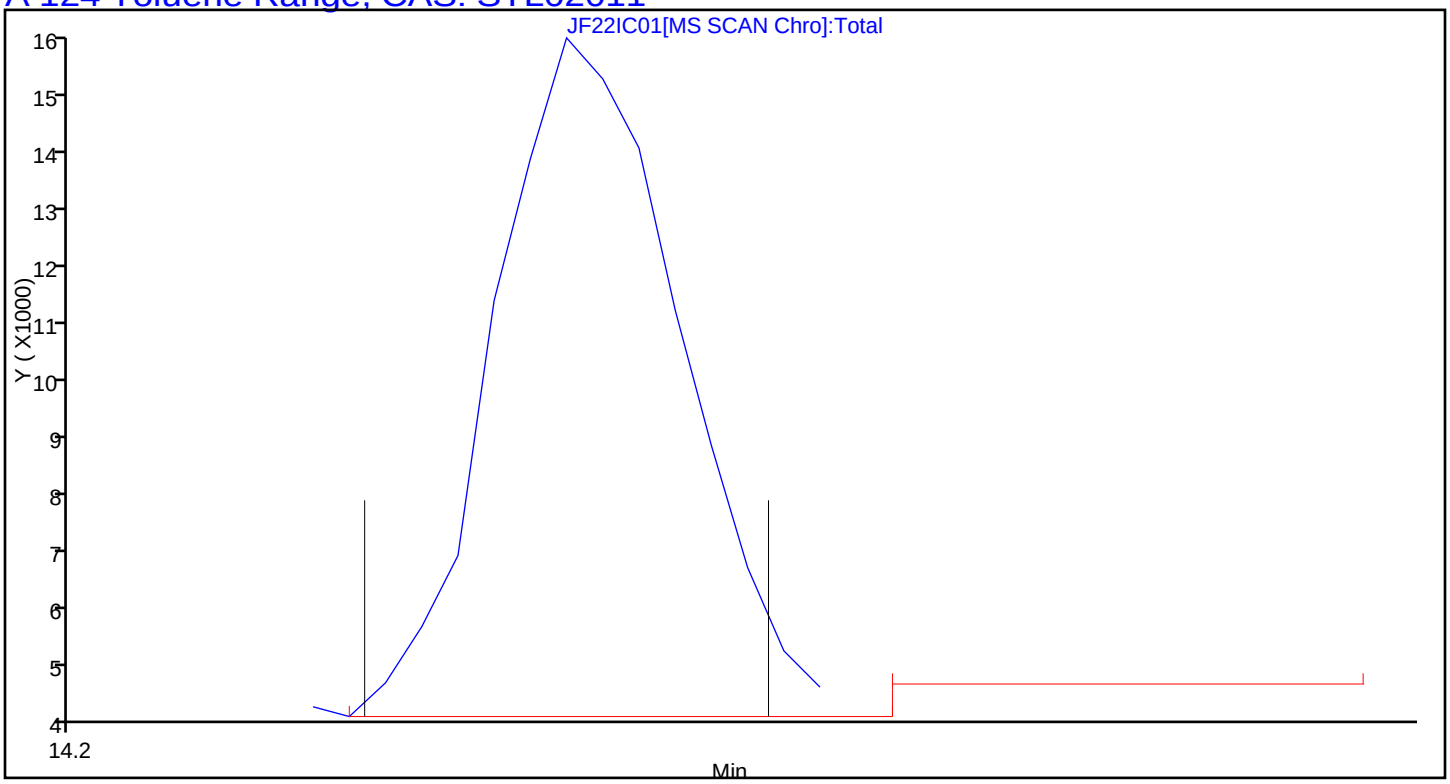


Report Date: 27-Jun-2016 15:12:01 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC01.D				
Injection Date:	22-Jun-2016 15:49:30	Instrument ID:	MJ		
Lims ID:	IC L1				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Jun-2016 16:44:30 ALS Bottle#: 7 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044591
Misc. Info.: J062216,T15,,140-0003070-003
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:04 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:41:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.387	9.389	-0.002	90	343006	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.550	11.552	-0.002	95	1509826	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.230	16.231	-0.001	87	1272601	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	729043	4.00	3.88	
6 Chlorodifluoromethane	67	3.927	3.925	0.002	96	3758	0.0784	0.0883	
7 Propene	41	3.943	3.939	0.004	96	10186	0.0784	0.1029	
8 Dichlorodifluoromethane	85	3.992	3.995	-0.003	99	32532	0.0784	0.0863	
9 Chloromethane	52	4.191	4.196	-0.005	52	2941	0.0784	0.1104	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	88	18190	0.0784	0.0869	
11 Acetaldehyde	44	4.363	4.364	-0.001	97	24483	0.3920	1.06	
12 Vinyl chloride	62	4.384	4.384	0.000	96	7861	0.0784	0.0871	
14 Butadiene	54	4.476	4.479	-0.003	74	5823	0.0784	0.0982	
13 Butane	43	4.481	4.480	0.001	80	10001	0.0784	0.1014	
15 Bromomethane	94	4.831	4.837	-0.006	97	8158	0.0784	0.0960	
16 Chloroethane	64	4.992	4.991	0.001	91	2955	0.0784	0.0912	
17 Ethanol	31	5.073	5.081	-0.008	94	12837	0.3920	0.9686	
18 Vinyl bromide	106	5.326	5.323	0.003	96	8179	0.0784	0.0814	
19 2-Methylbutane	43	5.374	5.372	0.002	88	11034	0.0784	0.0933	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	98	29427	0.0784	0.0844	
21 Acrolein	56	5.622	5.623	-0.001	39	7980	0.0784	0.2770	
22 Acetonitrile	40	5.702	5.698	0.004	97	3596	0.0784	0.1139	
23 Acetone	58	5.751	5.747	0.004	99	23950	0.2352	0.6095	
24 Isopropyl alcohol	45	5.821	5.819	0.002	93	38136	0.2352	0.2912	
25 Pentane	72	5.848	5.845	0.003	96	1132	0.0784	0.0766	
26 Ethyl ether	31	6.031	6.027	0.004	91	6312	0.0784	0.0941	
27 1,1-Dichloroethene	96	6.369	6.368	0.001	93	8665	0.0784	0.0854	
28 2-Methyl-2-propanol	59	6.466	6.457	0.009	92	15888	0.0784	0.0889	
29 Acrylonitrile	53	6.477	6.479	-0.002	93	5664	0.0784	0.0942	
30 1,1,2-Trichloro-1,2,2-trif	101	6.547	6.548	-0.001	95	20438	0.0784	0.0862	
31 Methylene Chloride	84	6.741	6.739	0.002	97	12357	0.0784	0.1311	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.751	6.753	-0.002	97	8939	0.0784	0.0988	
33 Carbon disulfide	76	6.913	6.916	-0.003	98	24918	0.0784	0.0865	
34 trans-1,2-Dichloroethene	96	7.591	7.587	0.004	94	8553	0.0784	0.0840	
35 2-Methylpentane	43	7.591	7.597	-0.006	94	18427	0.0784	0.0886	
36 Methyl tert-butyl ether	73	7.725	7.715	0.010	97	20924	0.0784	0.1000	
37 1,1-Dichloroethane	63	8.021	8.025	-0.004	99	18027	0.0784	0.0870	
38 Vinyl acetate	43	8.123	8.125	-0.002	100	16495	0.0784	0.0961	
39 2-Butanone (MEK)	72	8.602	8.597	0.005	86	3657	0.0784	0.1111	
40 Hexane	56	8.607	8.613	-0.006	73	7336	0.0784	0.0821	
41 Isopropyl ether	45	8.779	8.773	0.006	97	24409	0.0784	0.0942	
42 cis-1,2-Dichloroethene	96	9.043	9.044	-0.001	98	8942	0.0784	0.0881	
43 Ethyl acetate	43	9.231	9.224	0.007	98	12337	0.0784	0.0900	
44 Chloroform	83	9.393	9.395	-0.002	29	19881	0.0784	0.0866	
45 Tert-butyl ethyl ether	59	9.479	9.471	0.008	94	23991	0.0784	0.0936	
46 Tetrahydrofuran	42	9.834	9.821	0.013	92	6902	0.0784	0.0944	
47 1,1,1-Trichloroethane	97	10.442	10.443	-0.001	97	21626	0.0784	0.0814	
48 1,2-Dichloroethane	62	10.560	10.556	0.004	96	14298	0.0784	0.0867	
49 n-Butanol	31	10.969	10.957	0.012	78	1466	0.0784	0.0637	
50 Cyclohexane	69	11.033	11.031	0.002	68	3400	0.0784	0.0769	
51 Benzene	78	11.028	11.031	-0.003	97	24967	0.0784	0.0947	
52 Carbon tetrachloride	117	11.050	11.055	-0.005	97	22543	0.0784	0.0803	
53 2,3-Dimethylpentane	71	11.141	11.134	0.007	89	5072	0.0784	0.0836	
54 Thiophene	84	11.297	11.302	-0.005	98	12865	0.0784	0.0855	
55 Tert-amyl methyl ether	73	11.485	11.480	0.005	96	18473	0.0784	0.0944	
56 Isooctane	57	11.760	11.759	0.001	98	45542	0.0784	0.0917	
57 n-Heptane	71	12.120	12.122	-0.002	87	7734	0.0784	0.0889	
58 1,2-Dichloropropane	63	12.228	12.227	0.001	87	9425	0.0784	0.0886	
59 Trichloroethene	130	12.255	12.257	-0.002	92	11078	0.0784	0.0833	
60 Dibromomethane	93	12.341	12.348	-0.007	95	9666	0.0784	0.0821	
62 Dichlorobromomethane	83	12.481	12.487	-0.006	98	16234	0.0784	0.0756	
61 1,4-Dioxane	88	12.513	12.501	0.012	68	2200	0.0784	0.0700	
63 Methyl methacrylate	41	12.561	12.558	0.003	91	5990	0.0784	0.0737	
64 Methylcyclohexane	83	13.013	13.014	-0.001	90	17392	0.0784	0.0860	
65 4-Methyl-2-pentanone (MIBK	43	13.406	13.399	0.007	95	15075	0.0784	0.0845	
66 cis-1,3-Dichloropropene	75	13.470	13.466	0.004	92	10749	0.0784	0.0774	
67 trans-1,3-Dichloropropene	75	14.148	14.149	-0.001	98	7861	0.0784	0.0755	
68 Toluene	91	14.272	14.277	-0.005	93	25117	0.0784	0.0927	
69 1,1,2-Trichloroethane	83	14.347	14.349	-0.002	91	6816	0.0784	0.0868	
70 2-Methylthiophene	97	14.428	14.429	-0.001	96	18043	0.0784	0.0799	
71 3-Methylthiophene	97	14.627	14.628	-0.001	98	17901	0.0784	0.0826	
72 2-Hexanone	58	14.724	14.717	0.007	96	5502	0.0784	0.0697	
73 n-Octane	85	14.934	14.931	0.003	90	7543	0.0784	0.0850	
74 Chlorodibromomethane	129	15.052	15.053	-0.001	96	13827	0.0784	0.0736	
75 Ethylene Dibromide	107	15.342	15.344	-0.002	95	11892	0.0784	0.0829	
76 Tetrachloroethene	129	15.407	15.408	-0.001	94	10964	0.0784	0.0863	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	93	25203	0.0784	0.0997	
78 Chlorobenzene	112	16.278	16.279	-0.001	65	18658	0.0784	0.0916	
79 Ethylbenzene	91	16.558	16.557	0.001	99	28810	0.0784	0.0932	
80 2-Ethylthiophene	97	16.660	16.661	-0.001	98	20217	0.0784	0.0865	
81 m-Xylene & p-Xylene	91	16.714	16.715	-0.001	99	43588	0.1568	0.1817	
82 n-Nonane	57	17.112	17.109	0.003	88	14679	0.0784	0.0827	
83 Bromoform	173	17.177	17.179	-0.002	80	8464	0.0784	0.0599	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.182	17.181	0.001	97	10805	0.0784	0.0732	
85 o-Xylene	91	17.241	17.242	-0.001	99	24427	0.0784	0.0948	
86 1,1,2,2-Tetrachloroethane	83	17.564	17.563	0.001	96	13340	0.0784	0.0813	
87 1,2,3-Trichloropropane	110	17.715	17.720	-0.005	95	3572	0.0784	0.0768	
88 Isopropylbenzene	105	17.812	17.815	-0.003	90	31762	0.0784	0.0980	
89 N-Propylbenzene	120	18.333	18.333	0.000	99	6367	0.0784	0.0783	
90 2-Chlorotoluene	126	18.382	18.384	-0.002	96	7267	0.0784	0.0846	
91 4-Ethyltoluene	105	18.479	18.477	0.002	98	22005	0.0784	0.0798	
92 1,3,5-Trimethylbenzene	120	18.549	18.545	0.004	92	12831	0.0784	0.0880	
93 Alpha Methyl Styrene	118	18.769	18.771	-0.002	88	5508	0.0784	0.0545	
94 n-Decane	57	18.807	18.805	0.002	89	15057	0.0784	0.0830	
95 tert-Butylbenzene	119	18.957	18.958	-0.001	90	28142	0.0784	0.0970	
96 1,2,4-Trimethylbenzene	105	18.974	18.971	0.003	96	21039	0.0784	0.0852	
97 sec-Butylbenzene	105	19.221	19.218	0.003	98	33229	0.0784	0.0923	
98 1,3-Dichlorobenzene	146	19.248	19.244	0.004	97	9415	0.0784	0.0746	
99 Benzyl chloride	91	19.318	19.315	0.003	96	7380	0.0784	0.0596	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	91	7696	0.0784	0.0713	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	96	24457	0.0784	0.0827	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	98	17021	0.0784	0.0868	
103 Butylcyclohexane	83	19.479	19.476	0.003	89	19863	0.0784	0.0928	
104 2,3-Dihydroindene	117	19.678	19.676	0.002	92	17042	0.0784	0.0826	
105 1,2-Dichlorobenzene	146	19.678	19.680	-0.002	73	9676	0.0784	0.0754	
106 n-Butylbenzene	91	19.797	19.797	0.000	97	16960	0.0784	0.0743	
107 Indene	116	19.802	19.805	-0.003	50	7619	0.0784	0.0644	
108 Undecane	57	20.082	20.083	-0.001	92	13304	0.0784	0.0768	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.157	20.158	-0.001	97	14022	0.0784	0.0729	
110 1,2-Dibromo-3-Chloropropan	157	20.275	20.271	0.004	87	2060	0.0784	0.0488	
111 1,2,4,5-Tetramethylbenzene	119	20.544	20.545	-0.001	96	17750	0.0784	0.0755	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	93	11637	0.0784	0.0767	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	96	14446	0.0784	0.0772	
114 Dodecane	57	21.158	21.159	-0.001	94	10958	0.0784	0.0712	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	89	2368	0.0784	0.0695	
116 Naphthalene	128	21.540	21.540	0.000	96	4935	0.0784	0.0546	
117 Benzo(b)thiophene	134	21.636	21.633	0.003	94	2326	0.0784	0.0734	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	12392	0.0784	0.0913	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	92	2292	0.0784	0.0613	
120 2-Methylnaphthalene	142	22.314	22.314	0.000	94	1420	0.2450	0.2409	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	95	1563	0.2450	0.2525	
A 124 Toluene Range	1	14.272	(14.242-14.302)		0	52921	0.0784	0.0880	
S 126 Xylenes, Total	100				0		0.2352	0.2765	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1721	

Reagents:

40L12DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

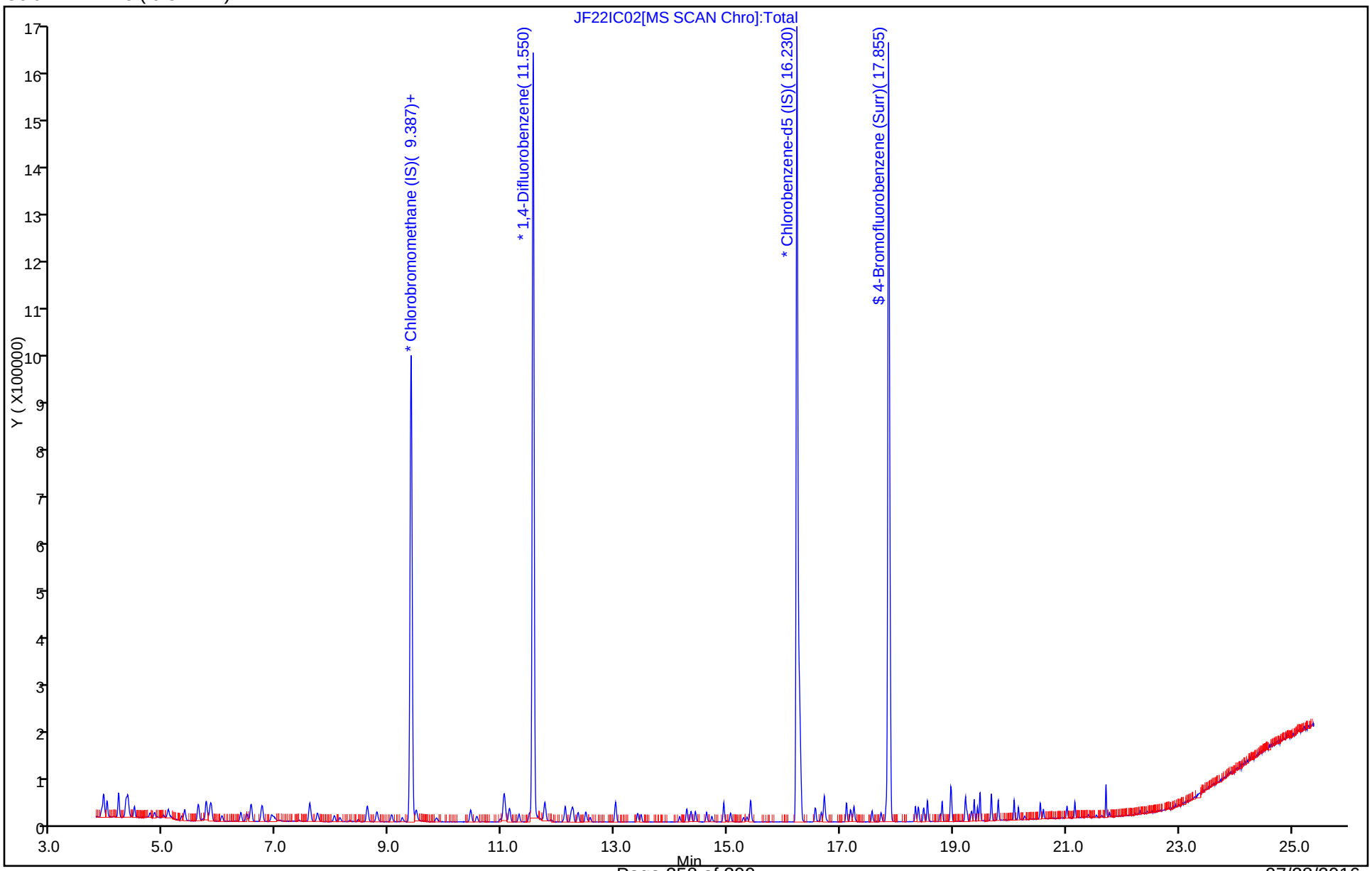
Report Date: 27-Jun-2016 15:12:05 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC02.D

Injection Date:	22-Jun-2016 16:44:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

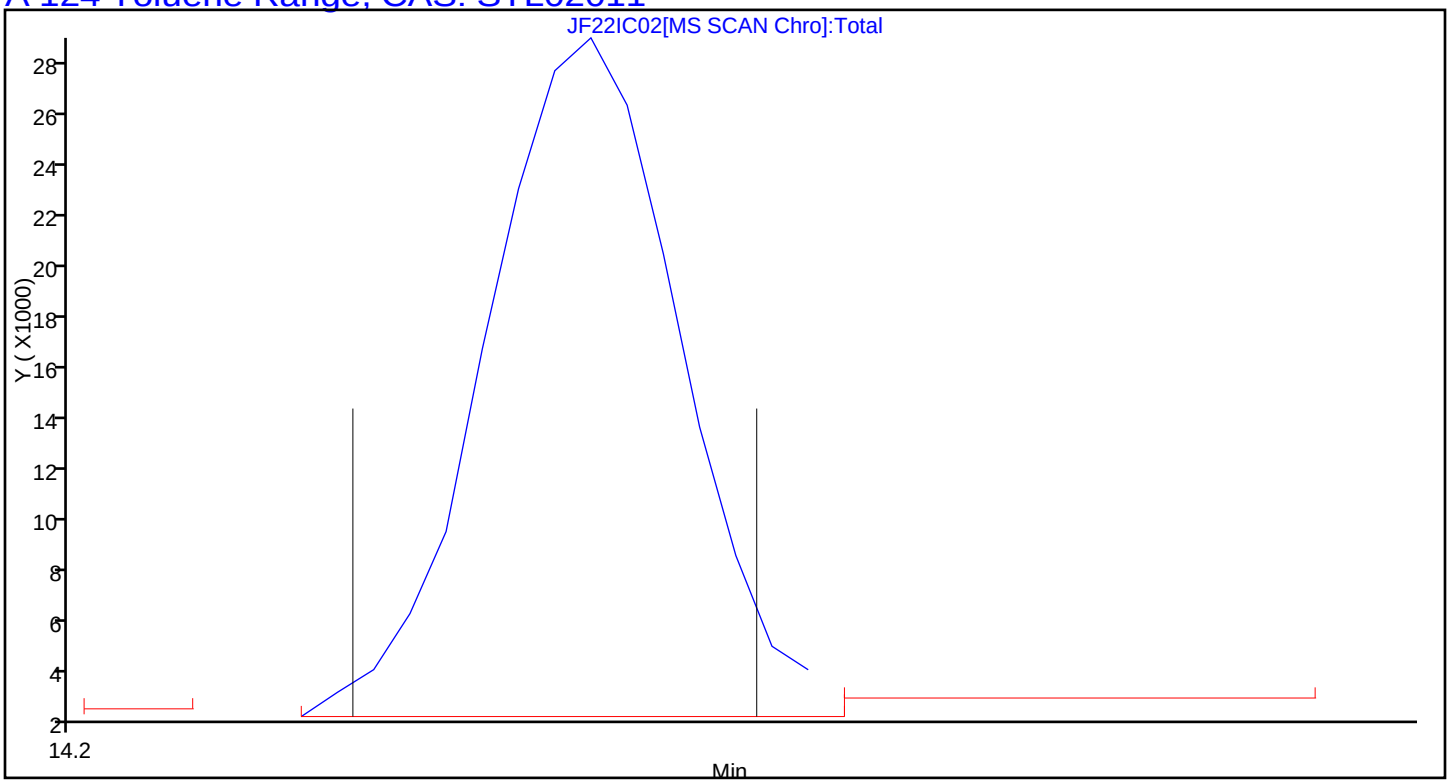


Report Date: 27-Jun-2016 15:12:05 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC02.D				
Injection Date:	22-Jun-2016 16:44:30	Instrument ID:	MJ		
Lims ID:	IC L2				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Jun-2016 17:38:30 ALS Bottle#: 8 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044592
Misc. Info.: J062216,T15,,140-0003070-004
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:09 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:42:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.389	9.389	0.000	90	319566	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	95	1381724	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	89	1128997	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.856	17.854	0.002	91	640074	4.00	3.84	
6 Chlorodifluoromethane	67	3.929	3.925	0.004	95	6560	0.1587	0.1654	
7 Propene	41	3.939	3.939	0.000	98	16876	0.1587	0.1830	
8 Dichlorodifluoromethane	85	3.998	3.995	0.003	99	59316	0.1587	0.1689	
9 Chloromethane	52	4.203	4.196	0.007	52	5046	0.1587	0.2033	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	88	32599	0.1587	0.1672	
11 Acetaldehyde	44	4.370	4.364	0.006	98	43064	0.7933	2.00	
12 Vinyl chloride	62	4.386	4.384	0.002	97	14061	0.1587	0.1671	
14 Butadiene	54	4.483	4.479	0.004	71	9528	0.1587	0.1725	
13 Butane	43	4.483	4.480	0.003	82	17623	0.1587	0.1919	
15 Bromomethane	94	4.838	4.837	0.001	95	13738	0.1587	0.1735	
16 Chloroethane	64	4.994	4.991	0.003	94	5153	0.1587	0.1708	
17 Ethanol	31	5.080	5.081	-0.001	93	12374	0.7933	1.00	
18 Vinyl bromide	106	5.322	5.323	-0.001	98	15295	0.1587	0.1634	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	19045	0.1587	0.1728	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	54177	0.1587	0.1667	
21 Acrolein	56	5.623	5.623	0.000	89	5654	0.1587	0.2107	
22 Acetonitrile	40	5.693	5.698	-0.005	99	5491	0.1587	0.1866	
23 Acetone	58	5.758	5.747	0.011	98	41326	0.4760	1.13	
24 Isopropyl alcohol	45	5.817	5.819	-0.002	96	66795	0.4760	0.5475	
25 Pentane	72	5.844	5.845	-0.001	95	2365	0.1587	0.1719	
26 Ethyl ether	31	6.032	6.027	0.005	92	10577	0.1587	0.1692	
27 1,1-Dichloroethene	96	6.371	6.368	0.003	93	14550	0.1587	0.1539	
28 2-Methyl-2-propanol	59	6.462	6.457	0.005	93	27692	0.1587	0.1663	
29 Acrylonitrile	53	6.478	6.479	-0.001	94	8920	0.1587	0.1593	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	96	36165	0.1587	0.1637	
31 Methylene Chloride	84	6.737	6.739	-0.002	98	17691	0.1587	0.2014	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.753	6.753	0.000	95	13881	0.1587	0.1647	
33 Carbon disulfide	76	6.920	6.916	0.004	98	43276	0.1587	0.1613	
34 trans-1,2-Dichloroethene	96	7.587	7.587	0.000	94	15820	0.1587	0.1667	
35 2-Methylpentane	43	7.603	7.597	0.006	93	33213	0.1587	0.1715	
36 Methyl tert-butyl ether	73	7.732	7.715	0.017	96	31229	0.1587	0.1602	
37 1,1-Dichloroethane	63	8.022	8.025	-0.003	99	31797	0.1587	0.1647	
38 Vinyl acetate	43	8.125	8.125	-0.001	100	24129	0.1587	0.1510	
39 2-Butanone (MEK)	72	8.603	8.597	0.006	86	6456	0.1587	0.2105	
40 Hexane	56	8.614	8.613	0.001	78	13952	0.1587	0.1675	
41 Isopropyl ether	45	8.775	8.773	0.002	96	38161	0.1587	0.1581	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	98	15396	0.1587	0.1629	
43 Ethyl acetate	43	9.222	9.224	-0.002	98	19949	0.1587	0.1561	
44 Chloroform	83	9.394	9.395	-0.001	41	36514	0.1587	0.1707	
45 Tert-butyl ethyl ether	59	9.469	9.471	-0.002	95	37259	0.1587	0.1560	
46 Tetrahydrofuran	42	9.835	9.821	0.014	92	10627	0.1587	0.1560	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	95	41035	0.1587	0.1659	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	97	26030	0.1587	0.1725	
49 n-Butanol	31	10.959	10.957	0.002	84	2938	0.1587	0.1395	
50 Cyclohexane	69	11.035	11.031	0.004	71	6492	0.1587	0.1605	
51 Benzene	78	11.029	11.031	-0.002	97	43574	0.1587	0.1806	
52 Carbon tetrachloride	117	11.056	11.055	0.001	97	38903	0.1587	0.1515	
53 2,3-Dimethylpentane	71	11.132	11.134	-0.002	89	9283	0.1587	0.1673	
54 Thiophene	84	11.304	11.302	0.002	99	22661	0.1587	0.1645	
55 Tert-amyl methyl ether	73	11.487	11.480	0.007	95	28733	0.1587	0.1655	
56 Isooctane	57	11.761	11.759	0.002	98	80847	0.1587	0.1779	
57 n-Heptane	71	12.121	12.122	-0.001	90	13718	0.1587	0.1722	
58 1,2-Dichloropropane	63	12.229	12.227	0.002	89	15859	0.1587	0.1630	
59 Trichloroethene	130	12.256	12.257	-0.001	95	20459	0.1587	0.1681	
60 Dibromomethane	93	12.353	12.348	0.005	94	17561	0.1587	0.1630	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	30563	0.1587	0.1556	
61 1,4-Dioxane	88	12.514	12.501	0.013	87	4364	0.1587	0.1518	
63 Methyl methacrylate	41	12.563	12.558	0.005	90	9937	0.1587	0.1337	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	31688	0.1587	0.1712	
65 4-Methyl-2-pentanone (MIBK	43	13.402	13.399	0.003	96	36781	0.1587	0.2254	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	18741	0.1587	0.1475	
67 trans-1,3-Dichloropropene	75	14.150	14.149	0.001	97	13213	0.1587	0.1431	
68 Toluene	91	14.279	14.277	0.002	93	40141	0.1587	0.1670	
69 1,1,2-Trichloroethane	83	14.349	14.349	0.000	97	11494	0.1587	0.1650	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	34902	0.1587	0.1742	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	31597	0.1587	0.1643	
72 2-Hexanone	58	14.720	14.717	0.003	96	9927	0.1587	0.1418	
73 n-Octane	85	14.930	14.931	-0.001	91	13336	0.1587	0.1694	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	25651	0.1587	0.1539	
75 Ethylene Dibromide	107	15.349	15.344	0.005	97	20400	0.1587	0.1603	
76 Tetrachloroethene	129	15.408	15.408	0.000	94	19514	0.1587	0.1732	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	95	43660	0.1587	0.1948	
78 Chlorobenzene	112	16.280	16.279	0.001	78	31203	0.1587	0.1726	
79 Ethylbenzene	91	16.560	16.557	0.003	99	43894	0.1587	0.1601	
80 2-Ethylthiophene	97	16.662	16.661	0.001	96	32238	0.1587	0.1556	
81 m-Xylene & p-Xylene	91	16.716	16.715	0.001	99	68375	0.3173	0.3213	
82 n-Nonane	57	17.108	17.109	-0.001	88	24448	0.1587	0.1552	
83 Bromoform	173	17.178	17.179	-0.001	85	16198	0.1587	0.1292	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.184	17.181	0.003	98	17123	0.1587	0.1308	
85 o-Xylene	91	17.243	17.242	0.001	98	37556	0.1587	0.1643	
86 1,1,2,2-Tetrachloroethane	83	17.565	17.563	0.002	95	21810	0.1587	0.1498	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	96	6337	0.1587	0.1535	
88 Isopropylbenzene	105	17.818	17.815	0.003	92	47917	0.1587	0.1666	
89 N-Propylbenzene	120	18.335	18.333	0.002	99	10769	0.1587	0.1492	
90 2-Chlorotoluene	126	18.389	18.384	0.005	97	11641	0.1587	0.1528	
91 4-Ethyltoluene	105	18.475	18.477	-0.002	98	36155	0.1587	0.1478	
92 1,3,5-Trimethylbenzene	120	18.545	18.545	0.000	92	20363	0.1587	0.1573	
93 Alpha Methyl Styrene	118	18.776	18.771	0.005	86	10227	0.1587	0.1140	
94 n-Decane	57	18.808	18.805	0.003	89	25509	0.1587	0.1584	
95 tert-Butylbenzene	119	18.959	18.958	0.001	94	42532	0.1587	0.1653	
96 1,2,4-Trimethylbenzene	105	18.975	18.971	0.004	96	33604	0.1587	0.1534	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	98	52355	0.1587	0.1640	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	97	15837	0.1587	0.1415	
99 Benzyl chloride	91	19.314	19.315	-0.001	96	12711	0.1587	0.1157	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	94	12819	0.1587	0.1339	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	96	40217	0.1587	0.1533	
102 1,2,3-Trimethylbenzene	105	19.438	19.432	0.006	97	26836	0.1587	0.1542	
103 Butylcyclohexane	83	19.475	19.476	-0.001	89	30267	0.1587	0.1594	
104 2,3-Dihydroindene	117	19.674	19.676	-0.002	94	26958	0.1587	0.1472	
105 1,2-Dichlorobenzene	146	19.680	19.680	0.000	96	16895	0.1587	0.1484	
106 n-Butylbenzene	91	19.798	19.797	0.001	97	30924	0.1587	0.1527	
107 Indene	116	19.803	19.805	-0.002	93	13681	0.1587	0.1302	
108 Undecane	57	20.083	20.083	0.000	92	25243	0.1587	0.1643	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	97	25618	0.1587	0.1502	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	88	4107	0.1587	0.1097	
111 1,2,4,5-Tetramethylbenzene	119	20.546	20.545	0.001	96	32467	0.1587	0.1557	
112 1,2,3,5-Tetramethylbenzene	119	20.605	20.603	0.002	95	21367	0.1587	0.1587	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	26023	0.1587	0.1568	
114 Dodecane	57	21.159	21.159	0.000	97	24486	0.1587	0.1792	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	91	4052	0.1587	0.1341	
116 Naphthalene	128	21.541	21.540	0.001	97	9172	0.1587	0.1145	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	96	4302	0.1587	0.1529	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	94	20717	0.1587	0.1721	
119 1,2,3-Trichlorobenzene	180	21.778	21.772	0.006	94	4585	0.1587	0.1383	
120 2-Methylnaphthalene	142	22.316	22.314	0.002	95	2771	0.4958	0.5299	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	93	2867	0.4958	0.5222	
A 124 Toluene Range	1	14.279	(14.249-14.309)		0	91878	0.1587	0.1722	
S 126 Xylenes, Total	100				0		0.4760	0.4856	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3296	

Reagents:

40L3DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

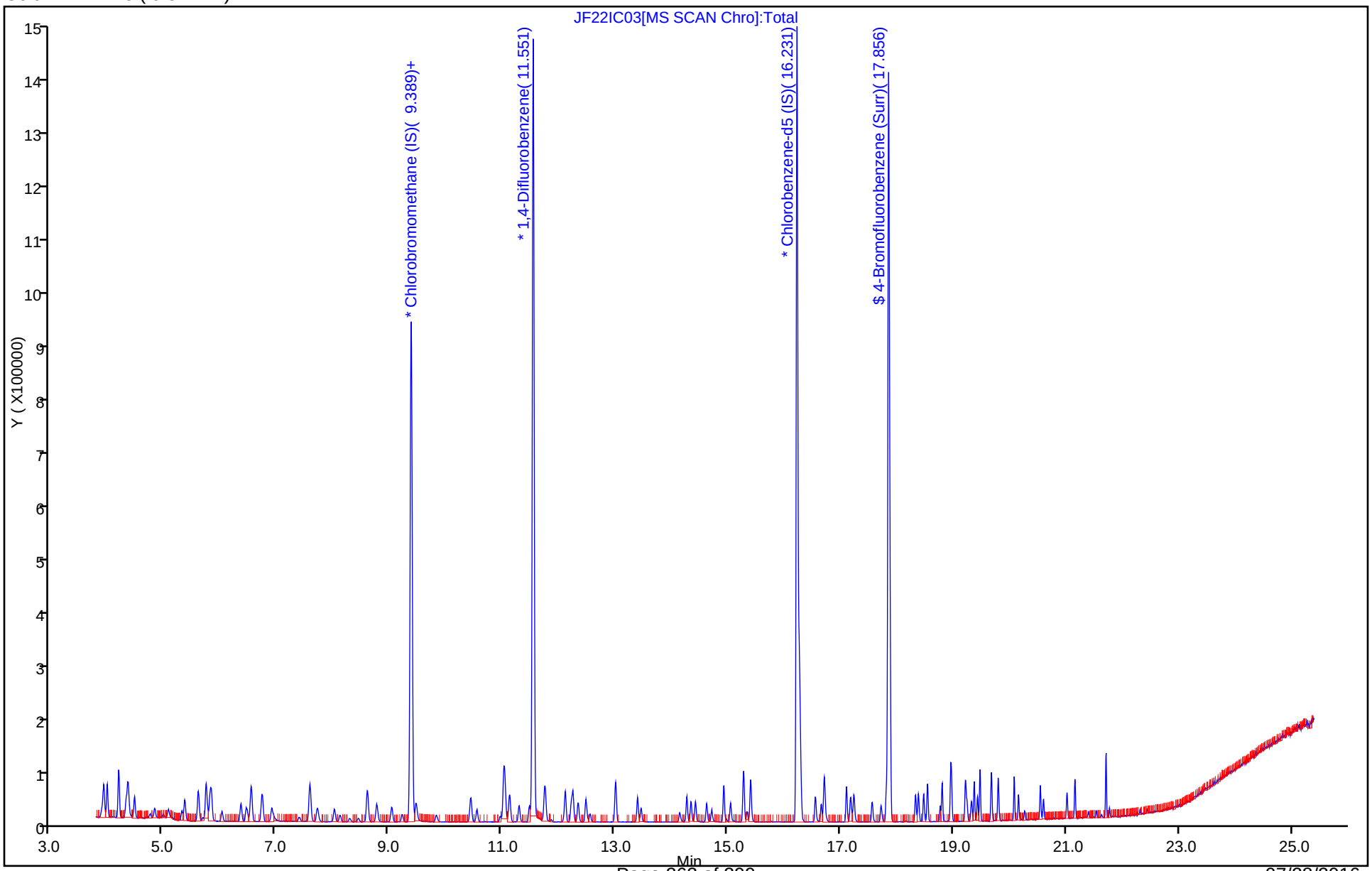
Report Date: 27-Jun-2016 15:12:10 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC03.D

Injection Date:	22-Jun-2016 17:38:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

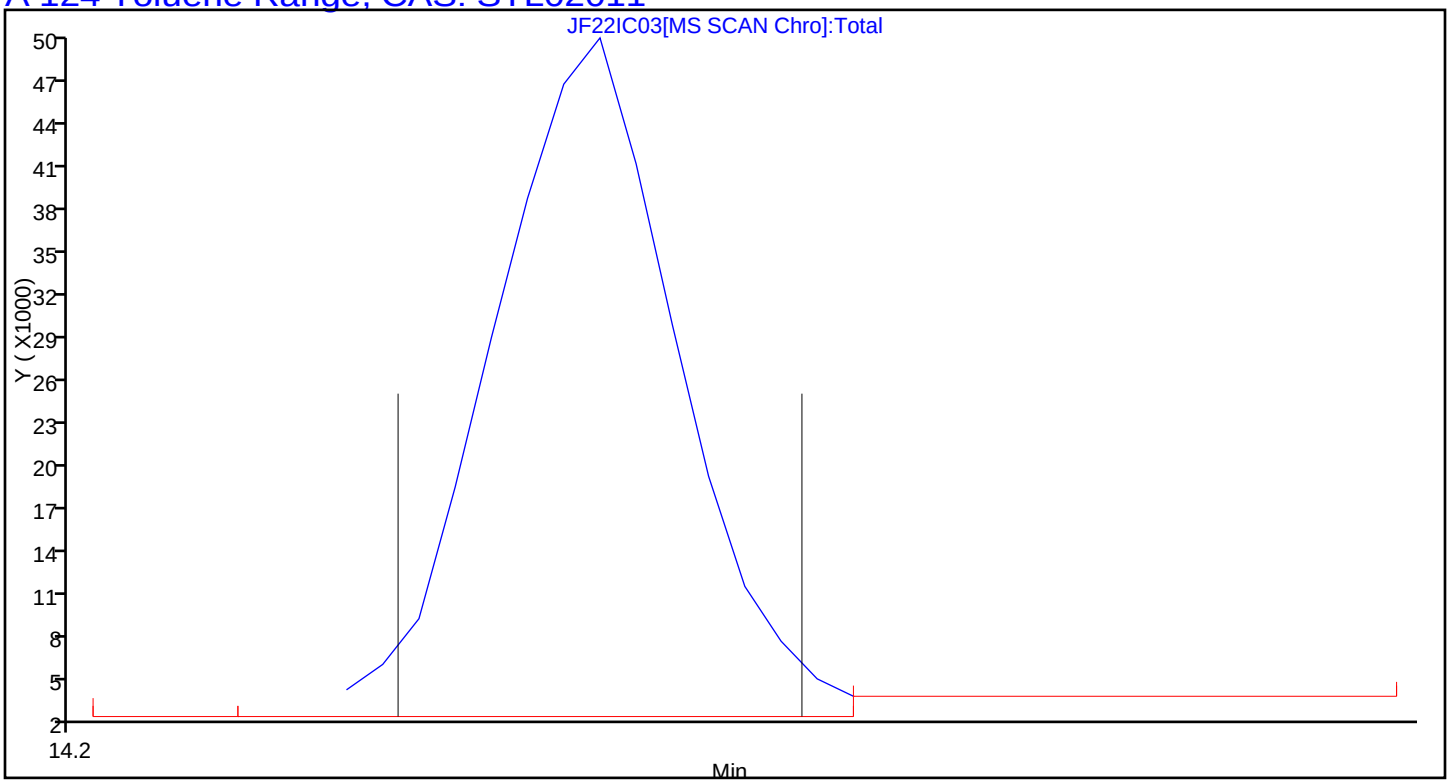


Report Date: 27-Jun-2016 15:12:10 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC03.D				
Injection Date:	22-Jun-2016 17:38:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Jun-2016 18:32:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044590
Misc. Info.: J062216,T15,,140-0003070-005
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:14 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 22-Jun-2016 20:12:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	93	305958	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.550	11.552	-0.002	96	1294497	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	88	1071346	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	601768	4.00	3.80	
6 Chlorodifluoromethane	67	3.922	3.925	-0.003	95	15197	0.4000	0.4002	
7 Propene	41	3.938	3.939	-0.001	98	38620	0.4000	0.4374	
8 Dichlorodifluoromethane	85	3.998	3.995	0.003	99	140732	0.4000	0.4185	
9 Chloromethane	52	4.197	4.196	0.001	55	10913	0.4000	0.4593	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	88	76736	0.4000	0.4112	
11 Acetaldehyde	44	4.369	4.364	0.005	97	60801	2.00	2.95	
12 Vinyl chloride	62	4.385	4.384	0.001	98	33657	0.4000	0.4179	
14 Butadiene	54	4.476	4.479	-0.003	72	23616	0.4000	0.4467	
13 Butane	43	4.482	4.480	0.002	82	40990	0.4000	0.4661	
15 Bromomethane	94	4.837	4.837	0.000	97	30969	0.4000	0.4086	
16 Chloroethane	64	4.987	4.991	-0.004	96	11567	0.4000	0.4004	
17 Ethanol	31	5.079	5.081	-0.002	92	24561	2.00	2.08	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	35692	0.4000	0.3983	
19 2-Methylbutane	43	5.375	5.372	0.003	90	45429	0.4000	0.4306	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	99	127417	0.4000	0.4095	
21 Acrolein	56	5.622	5.623	-0.001	89	10026	0.4000	0.3902	
22 Acetonitrile	40	5.692	5.698	-0.006	97	10126	0.4000	0.3595	
23 Acetone	58	5.746	5.747	-0.001	98	56991	1.20	1.63	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	91	146107	1.20	1.25	
25 Pentane	72	5.843	5.845	-0.002	98	5773	0.4000	0.4382	
26 Ethyl ether	31	6.031	6.027	0.004	88	22404	0.4000	0.3744	
27 1,1-Dichloroethene	96	6.365	6.368	-0.003	93	35955	0.4000	0.3972	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.006	93	62382	0.4000	0.3913	
29 Acrylonitrile	53	6.478	6.479	-0.001	91	18989	0.4000	0.3541	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	96	86503	0.4000	0.4090	
31 Methylene Chloride	84	6.741	6.739	0.002	98	36114	0.4000	0.4295	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	95	32947	0.4000	0.4083	
33 Carbon disulfide	76	6.913	6.916	-0.003	99	101542	0.4000	0.3953	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	93	36395	0.4000	0.4006	
35 2-Methylpentane	43	7.597	7.597	-0.001	93	77661	0.4000	0.4188	
36 Methyl tert-butyl ether	73	7.715	7.715	0.000	97	69473	0.4000	0.3722	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	99	76286	0.4000	0.4127	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	53117	0.4000	0.3471	
39 2-Butanone (MEK)	72	8.597	8.597	0.000	86	12150	0.4000	0.4137	
40 Hexane	56	8.613	8.613	0.000	85	33402	0.4000	0.4189	
41 Isopropyl ether	45	8.775	8.773	0.002	97	85916	0.4000	0.3718	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	99	36349	0.4000	0.4017	
43 Ethyl acetate	43	9.226	9.224	0.002	99	46813	0.4000	0.3827	
44 Chloroform	83	9.393	9.395	-0.002	94	85067	0.4000	0.4153	
45 Tert-butyl ethyl ether	59	9.474	9.471	0.003	95	82013	0.4000	0.3586	
46 Tetrahydrofuran	42	9.829	9.821	0.008	94	24321	0.4000	0.3729	
47 1,1,1-Trichloroethane	97	10.442	10.443	-0.001	96	98335	0.4000	0.4151	
48 1,2-Dichloroethane	62	10.555	10.556	-0.001	98	59968	0.4000	0.4241	
49 n-Butanol	31	10.959	10.957	0.002	80	7131	0.4000	0.3614	
50 Cyclohexane	69	11.029	11.031	-0.002	73	16308	0.4000	0.4304	
51 Benzene	78	11.034	11.031	0.003	97	97218	0.4000	0.4302	
52 Carbon tetrachloride	117	11.055	11.055	0.000	97	104966	0.4000	0.4363	
53 2,3-Dimethylpentane	71	11.136	11.134	0.002	88	22790	0.4000	0.4384	
54 Thiophene	84	11.298	11.302	-0.004	100	52829	0.4000	0.4093	
55 Tert-amyl methyl ether	73	11.480	11.480	0.000	96	64540	0.4000	0.3918	
56 Isooctane	57	11.760	11.759	0.001	98	186825	0.4000	0.4389	
57 n-Heptane	71	12.121	12.122	-0.001	89	31573	0.4000	0.4231	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	89	36991	0.4000	0.4057	
59 Trichloroethene	130	12.255	12.257	-0.002	94	45929	0.4000	0.4028	
60 Dibromomethane	93	12.347	12.348	-0.001	93	42461	0.4000	0.4206	
62 Dichlorobromomethane	83	12.486	12.487	-0.001	99	72436	0.4000	0.3936	
61 1,4-Dioxane	88	12.503	12.501	0.002	78	10391	0.4000	0.3859	
63 Methyl methacrylate	41	12.551	12.558	-0.007	88	41235	0.4000	0.5921	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	74236	0.4000	0.4282	
65 4-Methyl-2-pentanone (MIBK	43	13.401	13.399	0.002	96	54942	0.4000	0.3594	
66 cis-1,3-Dichloropropene	75	13.465	13.466	-0.001	94	43317	0.4000	0.3639	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	28773	0.4000	0.3284	
68 Toluene	91	14.278	14.277	0.001	93	90623	0.4000	0.3972	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	98	26618	0.4000	0.4028	
70 2-Methylthiophene	97	14.428	14.429	-0.001	97	73492	0.4000	0.3864	
71 3-Methylthiophene	97	14.627	14.628	-0.001	99	73462	0.4000	0.4026	
72 2-Hexanone	58	14.719	14.717	0.002	95	25630	0.4000	0.3857	
73 n-Octane	85	14.934	14.931	0.003	91	30969	0.4000	0.4145	
74 Chlorodibromomethane	129	15.052	15.053	-0.001	98	61819	0.4000	0.3908	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	97	46147	0.4000	0.3821	
76 Tetrachloroethene	129	15.407	15.408	-0.001	94	45924	0.4000	0.4296	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	95	97584	0.4000	0.4588	
78 Chlorobenzene	112	16.279	16.279	0.000	94	68884	0.4000	0.4016	
79 Ethylbenzene	91	16.553	16.557	-0.004	99	96127	0.4000	0.3695	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	71448	0.4000	0.3633	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	99	149302	0.8000	0.7394	
82 n-Nonane	57	17.107	17.109	-0.002	88	57661	0.4000	0.3858	
83 Bromoform	173	17.183	17.179	0.004	92	38261	0.4000	0.3216	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.183	17.181	0.002	99	40993	0.4000	0.3300	
85 o-Xylene	91	17.242	17.242	0.000	97	82015	0.4000	0.3781	
86 1,1,2,2-Tetrachloroethane	83	17.565	17.563	0.002	96	51611	0.4000	0.3735	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	97	14455	0.4000	0.3690	
88 Isopropylbenzene	105	17.812	17.815	-0.003	93	105917	0.4000	0.3882	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	23208	0.4000	0.3389	
90 2-Chlorotoluene	126	18.382	18.384	-0.002	97	26016	0.4000	0.3599	
91 4-Ethyltoluene	105	18.479	18.477	0.002	98	83203	0.4000	0.3585	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	45264	0.4000	0.3686	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	84	23661	0.4000	0.2779	
94 n-Decane	57	18.802	18.805	-0.003	89	58146	0.4000	0.3806	
95 tert-Butylbenzene	119	18.958	18.958	0.000	91	96405	0.4000	0.3947	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	78046	0.4000	0.3754	
97 sec-Butylbenzene	105	19.216	19.218	-0.002	98	117070	0.4000	0.3865	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	98	35808	0.4000	0.3372	
99 Benzyl chloride	91	19.313	19.315	-0.002	97	28941	0.4000	0.2775	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	94	29631	0.4000	0.3261	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	96	92356	0.4000	0.3709	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	99	62027	0.4000	0.3756	
103 Butylcyclohexane	83	19.474	19.476	-0.002	88	68748	0.4000	0.3815	
104 2,3-Dihydroindene	117	19.673	19.676	-0.003	94	62168	0.4000	0.3577	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	96	36785	0.4000	0.3404	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	67262	0.4000	0.3499	
107 Indene	116	19.808	19.805	0.003	91	31634	0.4000	0.3174	
108 Undecane	57	20.082	20.083	-0.001	93	54486	0.4000	0.3738	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	98	55179	0.4000	0.3410	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	93	9842	0.4000	0.2770	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	96	68705	0.4000	0.3471	
112 1,2,3,5-Tetramethylbenzene	119	20.599	20.603	-0.004	95	44578	0.4000	0.3490	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	97	53749	0.4000	0.3412	
114 Dodecane	57	21.158	21.159	-0.001	96	46563	0.4000	0.3592	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	93	8167	0.4000	0.2849	
116 Naphthalene	128	21.540	21.540	0.000	98	18754	0.4000	0.2466	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	97	7658	0.4000	0.2869	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	40131	0.4000	0.3514	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	94	8296	0.4000	0.2636	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	97	3375	1.25	0.6801	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	95	3284	1.25	0.6303	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	201557	0.4000	0.3981	
A 125 C8 Range	1	14.919	(14.901-14.937)		0	300990	0.4000	0.4518	
S 126 Xylenes, Total	100				0		1.20	1.12	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.8023	

Reagents:

40L4DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

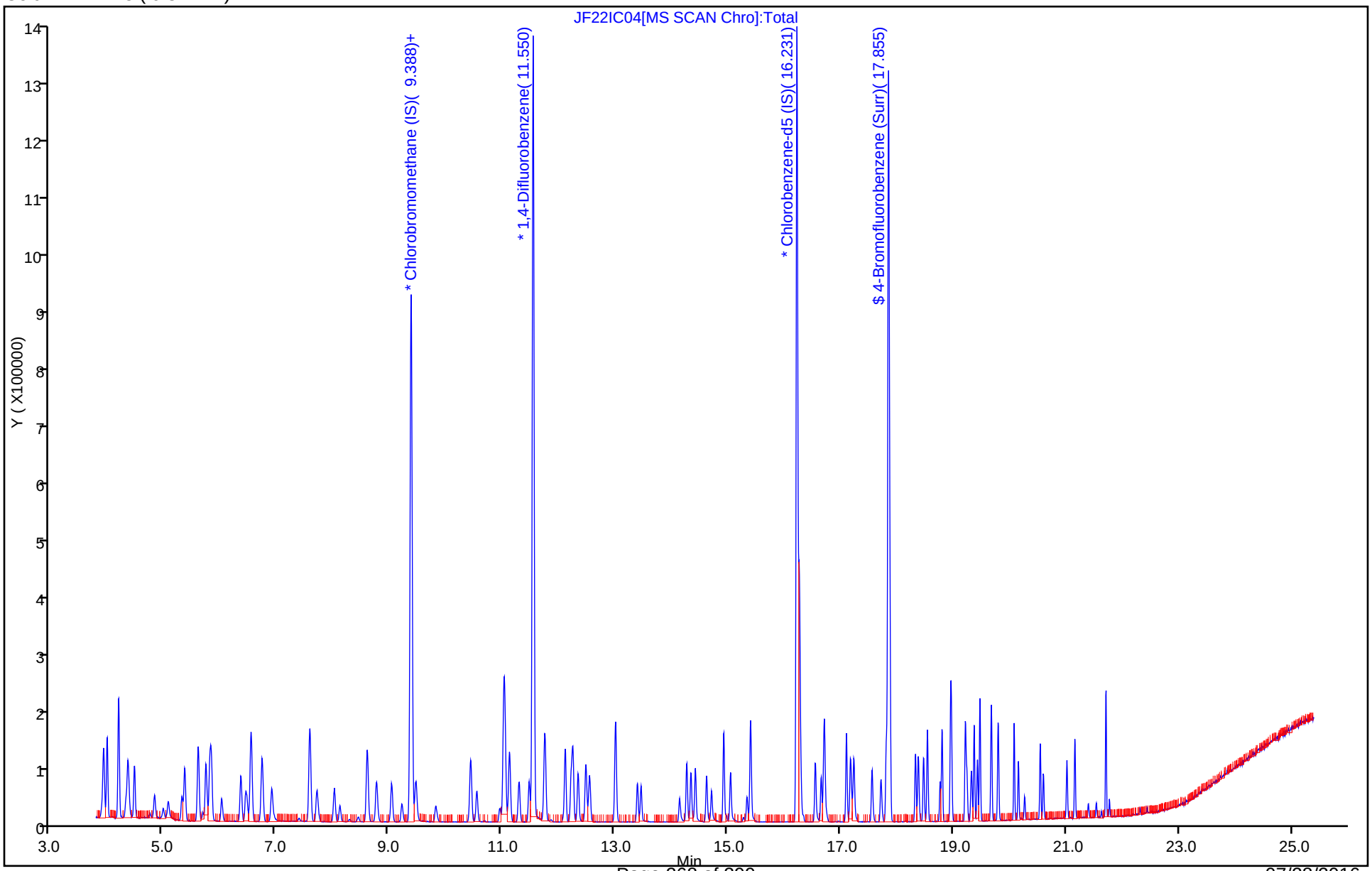
Report Date: 27-Jun-2016 15:12:15 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D

Injection Date:	22-Jun-2016 18:32:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

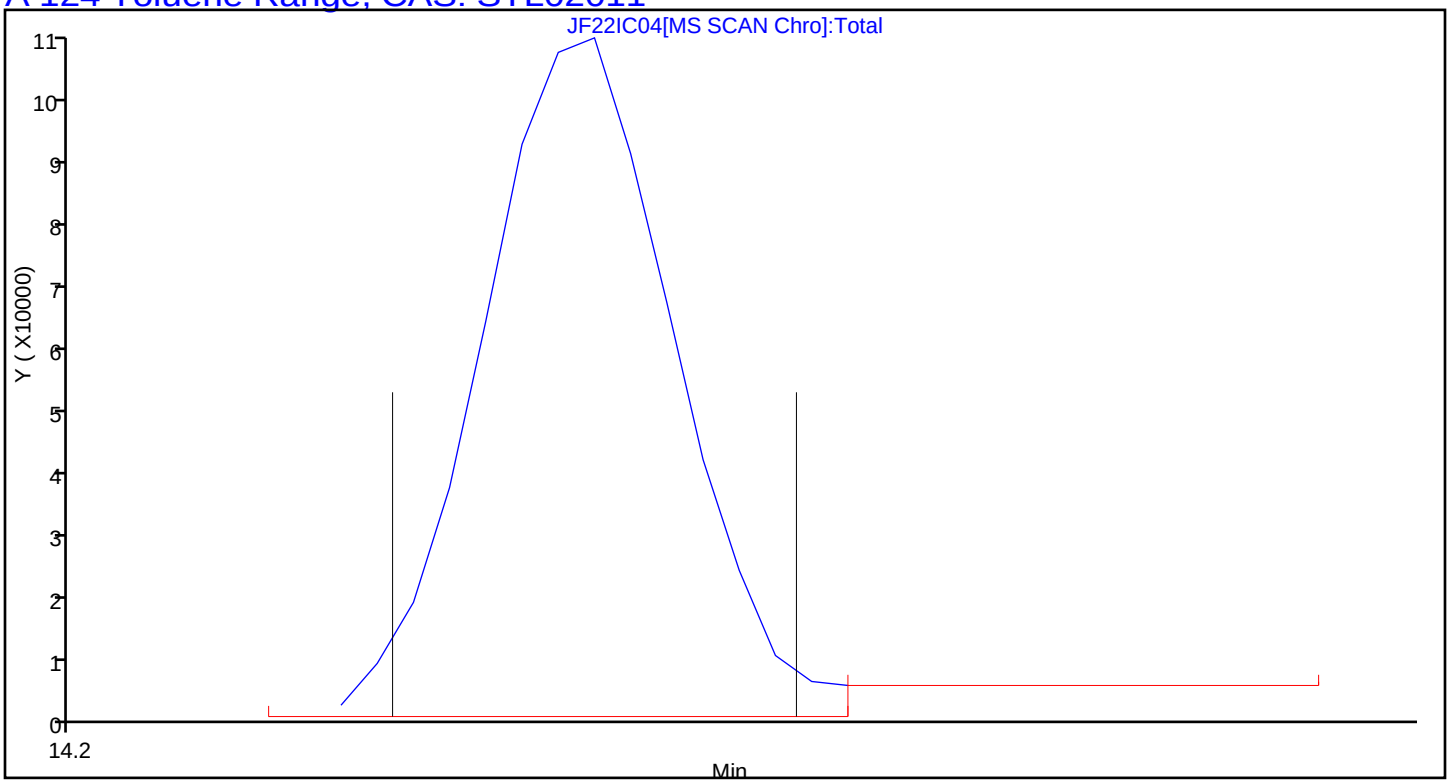


Report Date: 27-Jun-2016 15:12:15 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D				
Injection Date:	22-Jun-2016 18:32:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

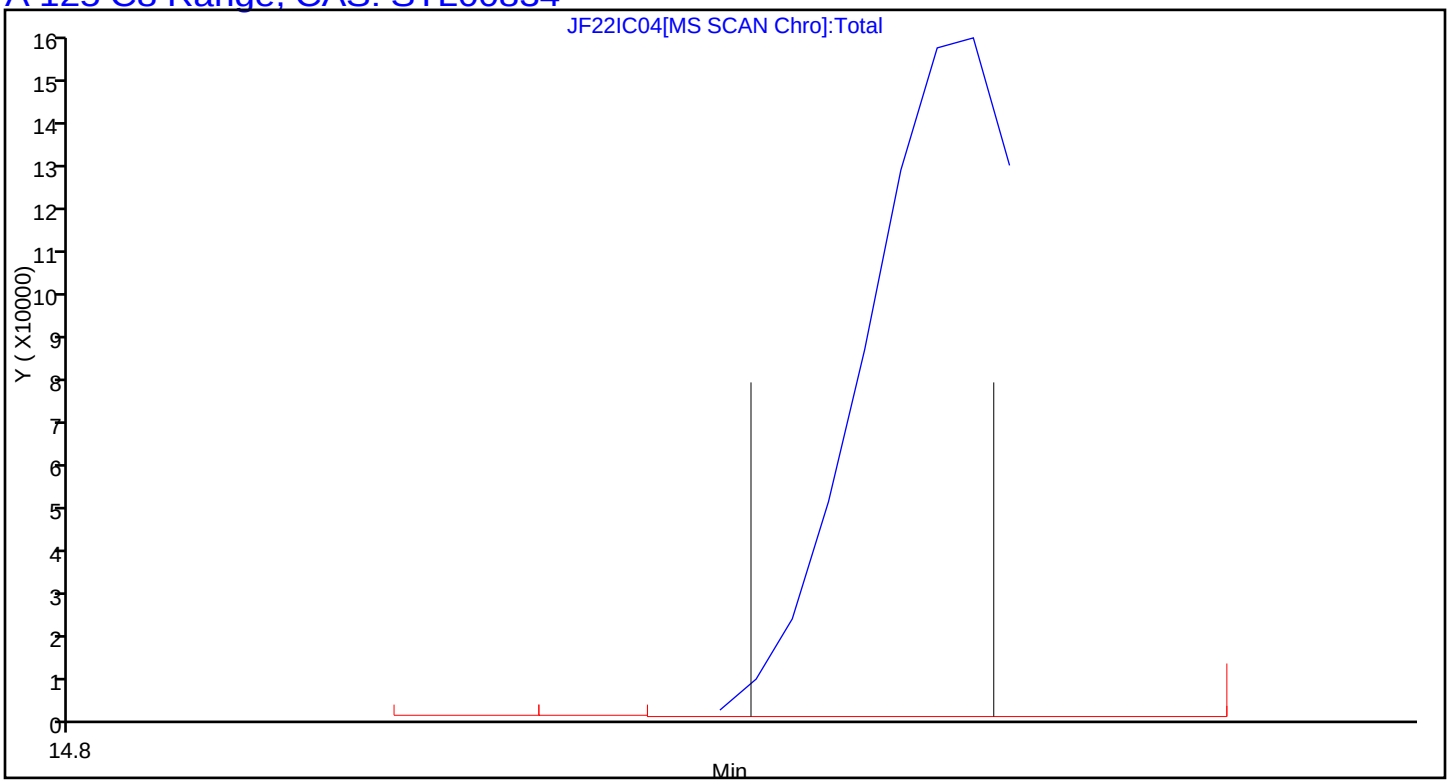


Report Date: 27-Jun-2016 15:12:15 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D				
Injection Date:	22-Jun-2016 18:32:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Jun-2016 19:26:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044585
Misc. Info.: J062216,T15,,140-0003070-006
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:18 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:44:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	92	298784	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.550	11.552	-0.002	95	1278099	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.230	16.231	-0.001	87	1078392	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	634109	4.00	3.98	
6 Chlorodifluoromethane	67	3.922	3.925	-0.003	96	38466	1.00	1.04	
7 Propene	41	3.938	3.939	-0.001	99	94985	1.00	1.10	
8 Dichlorodifluoromethane	85	3.992	3.995	-0.003	99	363576	1.00	1.11	
9 Chloromethane	52	4.197	4.196	0.000	98	25067	1.00	1.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	93	199170	1.00	1.09	
11 Acetaldehyde	44	4.363	4.364	-0.001	96	116129	5.01	5.77	
12 Vinyl chloride	62	4.379	4.384	-0.005	99	82084	1.00	1.04	
14 Butadiene	54	4.476	4.479	-0.003	76	57483	1.00	1.11	
13 Butane	43	4.476	4.480	-0.004	81	95645	1.00	1.11	
15 Bromomethane	94	4.837	4.837	0.000	97	76471	1.00	1.03	
16 Chloroethane	64	4.993	4.991	0.002	97	29140	1.00	1.03	
17 Ethanol	31	5.079	5.081	-0.002	91	63110	5.01	5.47	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	92013	1.00	1.05	
19 2-Methylbutane	43	5.369	5.372	-0.003	90	114860	1.00	1.11	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	99	327570	1.00	1.08	
21 Acrolein	56	5.617	5.623	-0.006	91	26432	1.00	1.05	
22 Acetonitrile	40	5.697	5.698	-0.001	98	27782	1.00	1.01	
23 Acetone	58	5.746	5.747	-0.001	98	120631	3.01	3.52	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	92	387973	3.01	3.40	
25 Pentane	72	5.843	5.845	-0.002	98	13885	1.00	1.08	
26 Ethyl ether	31	6.026	6.027	-0.001	92	61651	1.00	1.06	
27 1,1-Dichloroethene	96	6.370	6.368	0.002	93	93723	1.00	1.06	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.007	93	162292	1.00	1.04	
29 Acrylonitrile	53	6.477	6.479	-0.002	94	53165	1.00	1.02	
30 1,1,2-Trichloro-1,2,2-trif	101	6.547	6.548	-0.001	96	223225	1.00	1.08	
31 Methylene Chloride	84	6.741	6.739	0.002	98	85918	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	97	83611	1.00	1.06	
33 Carbon disulfide	76	6.913	6.916	-0.003	98	266620	1.00	1.06	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	94	95290	1.00	1.07	
35 2-Methylpentane	43	7.596	7.597	-0.001	94	202218	1.00	1.12	
36 Methyl tert-butyl ether	73	7.709	7.715	-0.006	97	191223	1.00	1.05	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	100	192069	1.00	1.06	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	156921	1.00	1.05	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	29406	1.00	1.03	
40 Hexane	56	8.613	8.613	0.000	88	84874	1.00	1.09	
41 Isopropyl ether	45	8.769	8.773	-0.004	97	234280	1.00	1.04	
42 cis-1,2-Dichloroethene	96	9.043	9.044	-0.001	99	92758	1.00	1.05	
43 Ethyl acetate	43	9.221	9.224	-0.003	99	127302	1.00	1.07	
44 Chloroform	83	9.393	9.395	-0.002	95	213335	1.00	1.07	
45 Tert-butyl ethyl ether	59	9.468	9.471	-0.003	95	229807	1.00	1.03	
46 Tetrahydrofuran	42	9.818	9.821	-0.003	91	66510	1.00	1.04	
47 1,1,1-Trichloroethane	97	10.442	10.443	-0.001	96	249926	1.00	1.08	
48 1,2-Dichloroethane	62	10.555	10.556	-0.001	99	151004	1.00	1.08	
49 n-Butanol	31	10.953	10.957	-0.004	79	19897	1.00	1.02	
50 Cyclohexane	69	11.028	11.031	-0.003	84	44050	1.00	1.18	
51 Benzene	78	11.034	11.031	0.003	98	242064	1.00	1.08	
52 Carbon tetrachloride	117	11.055	11.055	0.000	97	250454	1.00	1.05	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	88	55859	1.00	1.09	
54 Thiophene	84	11.297	11.302	-0.005	100	138033	1.00	1.08	
55 Tert-amyl methyl ether	73	11.475	11.480	-0.005	96	180342	1.00	1.09	
56 Isooctane	57	11.760	11.759	0.001	98	462412	1.00	1.10	
57 n-Heptane	71	12.120	12.122	-0.002	90	79881	1.00	1.08	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	90	98083	1.00	1.09	
59 Trichloroethene	130	12.255	12.257	-0.002	95	118547	1.00	1.05	
60 Dibromomethane	93	12.346	12.348	-0.002	95	107420	1.00	1.08	
62 Dichlorobromomethane	83	12.486	12.487	-0.001	99	201889	1.00	1.11	
61 1,4-Dioxane	88	12.497	12.501	-0.004	87	28993	1.00	1.09	
63 Methyl methacrylate	41	12.556	12.558	-0.002	91	64577	1.00	0.9392	
64 Methylcyclohexane	83	13.013	13.014	-0.001	92	189819	1.00	1.11	
65 4-Methyl-2-pentanone (MIBK	43	13.395	13.399	-0.004	96	167376	1.00	1.11	
66 cis-1,3-Dichloropropene	75	13.465	13.466	-0.001	94	123970	1.00	1.05	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	96475	1.00	1.09	
68 Toluene	91	14.278	14.277	0.001	93	251819	1.00	1.10	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	98	72695	1.00	1.09	
70 2-Methylthiophene	97	14.428	14.429	-0.001	97	214421	1.00	1.12	
71 3-Methylthiophene	97	14.627	14.628	-0.001	99	202739	1.00	1.10	
72 2-Hexanone	58	14.713	14.717	-0.004	95	76515	1.00	1.14	
73 n-Octane	85	14.934	14.931	0.003	92	84942	1.00	1.13	
74 Chlorodibromomethane	129	15.052	15.053	-0.001	98	177672	1.00	1.12	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	98	129201	1.00	1.06	
76 Tetrachloroethene	129	15.407	15.408	-0.001	95	116368	1.00	1.08	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	95	253140	1.00	1.18	
78 Chlorobenzene	112	16.279	16.279	0.000	93	187036	1.00	1.08	
79 Ethylbenzene	91	16.559	16.557	0.002	99	276806	1.00	1.06	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	210486	1.00	1.06	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	99	432360	2.00	2.13	
82 n-Nonane	57	17.107	17.109	-0.002	89	170403	1.00	1.13	
83 Bromoform	173	17.177	17.179	-0.002	92	126351	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.183	17.181	0.002	99	131396	1.00	1.05	
85 o-Xylene	91	17.242	17.242	0.000	97	236527	1.00	1.08	
86 1,1,2,2-Tetrachloroethane	83	17.564	17.563	0.001	98	150790	1.00	1.08	
87 1,2,3-Trichloropropane	110	17.720	17.720	0.000	97	41958	1.00	1.06	
88 Isopropylbenzene	105	17.817	17.815	0.002	95	303206	1.00	1.10	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	70689	1.00	1.03	
90 2-Chlorotoluene	126	18.382	18.384	-0.002	97	75246	1.00	1.03	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	254212	1.00	1.09	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	131247	1.00	1.06	
93 Alpha Methyl Styrene	118	18.769	18.771	-0.002	86	84426	1.00	0.9852	
94 n-Decane	57	18.807	18.805	0.002	89	172771	1.00	1.12	
95 tert-Butylbenzene	119	18.958	18.958	0.000	89	279995	1.00	1.14	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	235496	1.00	1.13	
97 sec-Butylbenzene	105	19.216	19.218	-0.002	98	347096	1.00	1.14	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	99	105055	1.00	0.9827	
99 Benzyl chloride	91	19.318	19.315	0.003	97	96342	1.00	0.9178	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	94	85902	1.00	0.9391	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	97	283900	1.00	1.13	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	98	184398	1.00	1.11	
103 Butylcyclohexane	83	19.474	19.476	-0.002	89	201539	1.00	1.11	
104 2,3-Dihydroindene	117	19.679	19.676	0.003	93	188971	1.00	1.08	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	95	110886	1.00	1.02	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	217364	1.00	1.12	
107 Indene	116	19.808	19.805	0.003	92	106078	1.00	1.06	
108 Undecane	57	20.082	20.083	-0.001	93	166313	1.00	1.13	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.157	20.158	-0.001	98	180487	1.00	1.11	
110 1,2-Dibromo-3-Chloropropan	157	20.270	20.271	-0.001	94	33994	1.00	0.9505	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	96	221281	1.00	1.11	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	95	141907	1.00	1.10	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	96	175011	1.00	1.10	
114 Dodecane	57	21.158	21.159	-0.001	97	153441	1.00	1.18	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	94	27246	1.00	0.9441	
116 Naphthalene	128	21.540	21.540	0.000	99	65976	1.00	0.8620	
117 Benzo(b)thiophene	134	21.631	21.633	-0.002	99	25086	1.00	0.9337	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	125753	1.00	1.09	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	95	28890	1.00	0.9121	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	97	12857	3.13	2.57	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	97	15840	3.13	3.02	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	567901	1.00	1.11	
A 125 C8 Range	1	14.930	(14.901-14.958)		0	808090	1.00	1.21	
S 126 Xylenes, Total	100				0		3.00	3.21	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.12	

Reagents:

40L5DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

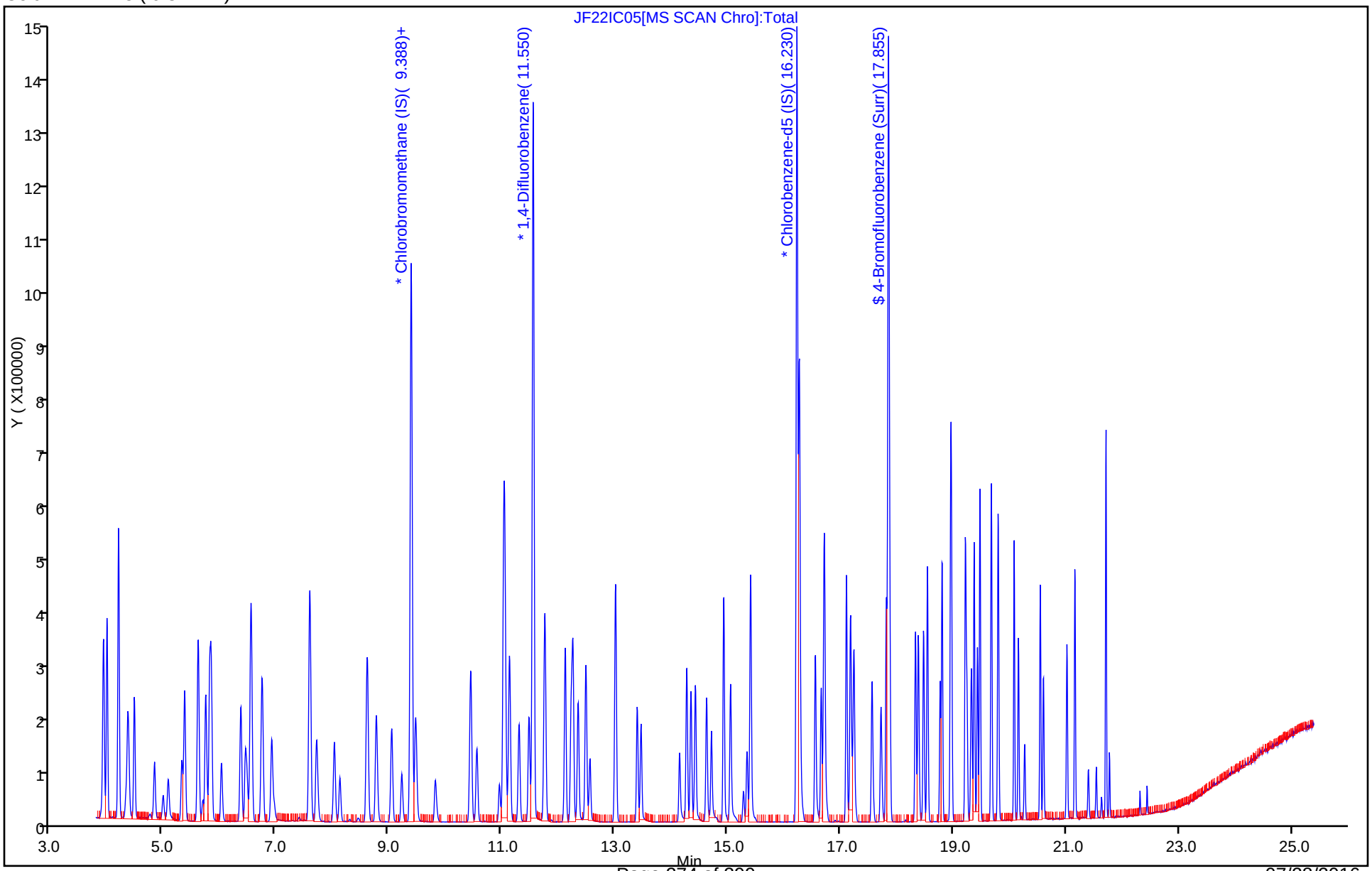
Report Date: 27-Jun-2016 15:12:20 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D

Injection Date:	22-Jun-2016 19:26:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

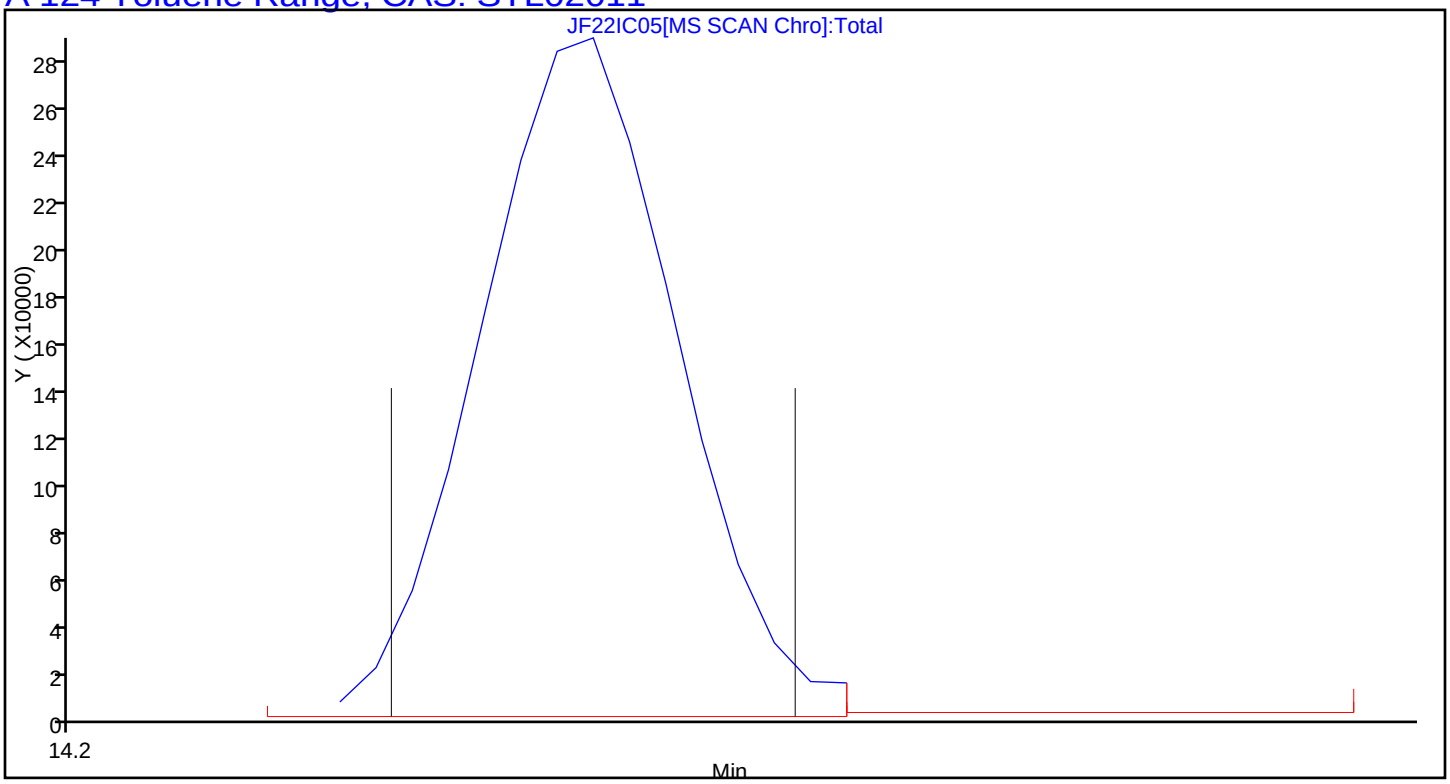


Report Date: 27-Jun-2016 15:12:20 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D				
Injection Date:	22-Jun-2016 19:26:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

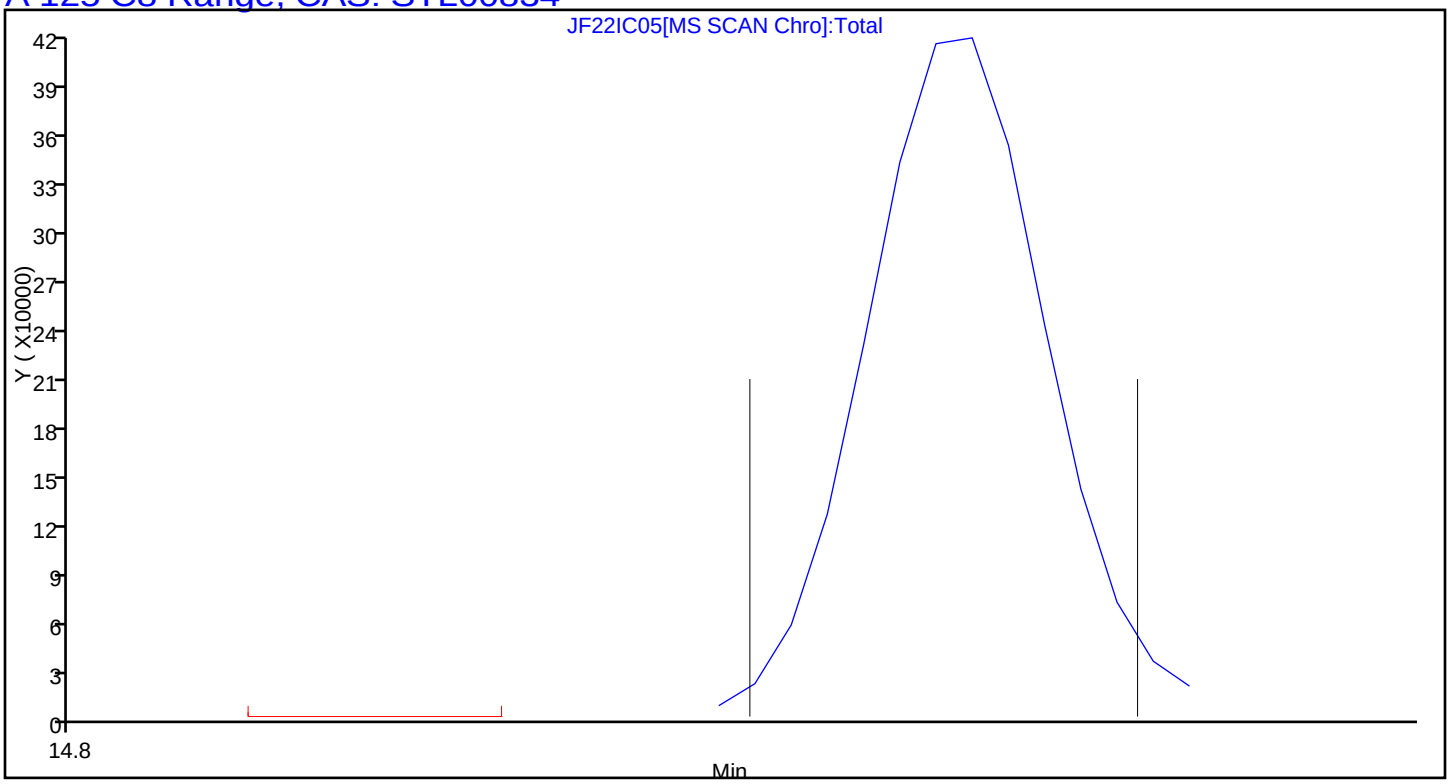


Report Date: 27-Jun-2016 15:12:20 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D				
Injection Date:	22-Jun-2016 19:26:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 22-Jun-2016 20:20:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044586
Misc. Info.: J062216,T15,,140-0003070-003
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:23 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 14:46:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	94	295193	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	96	1295936	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	87	1130543	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	685127	4.00	4.10	
6 Chlorodifluoromethane	67	3.923	3.925	-0.002	95	74322	2.00	2.03	
7 Propene	41	3.939	3.939	0.000	99	171785	2.00	2.02	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	99	651005	2.00	2.01	
9 Chloromethane	52	4.197	4.196	0.001	98	45845	2.00	2.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.197	4.201	-0.004	98	371615	2.00	2.06	
11 Acetaldehyde	44	4.364	4.364	0.000	93	203386	9.99	10.2	
12 Vinyl chloride	62	4.385	4.384	0.001	99	147890	2.00	1.90	
14 Butadiene	54	4.477	4.479	-0.002	79	103801	2.00	2.03	
13 Butane	43	4.477	4.480	-0.003	80	163737	2.00	1.93	
15 Bromomethane	94	4.837	4.837	0.000	97	141086	2.00	1.93	
16 Chloroethane	64	4.993	4.991	0.002	96	54729	2.00	1.96	
17 Ethanol	31	5.079	5.081	-0.002	91	116482	9.99	10.2	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	177848	2.00	2.06	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	214661	2.00	2.11	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	621893	2.00	2.07	
21 Acrolein	56	5.623	5.623	0.000	91	50881	2.00	2.05	
22 Acetonitrile	40	5.698	5.698	0.000	97	57557	2.00	2.12	
23 Acetone	58	5.741	5.747	-0.006	98	220910	5.99	6.53	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	95	744962	5.99	6.61	
25 Pentane	72	5.848	5.845	0.003	98	26066	2.00	2.05	
26 Ethyl ether	31	6.021	6.027	-0.006	89	125926	2.00	2.18	
27 1,1-Dichloroethene	96	6.370	6.368	0.002	93	178394	2.00	2.04	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.006	93	317555	2.00	2.06	
29 Acrylonitrile	53	6.478	6.479	-0.001	93	107837	2.00	2.08	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	96	426570	2.00	2.09	
31 Methylene Chloride	84	6.736	6.739	-0.003	98	163012	2.00	2.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	96	163557	2.00	2.10	
33 Carbon disulfide	76	6.914	6.916	-0.002	99	514119	2.00	2.07	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	94	181960	2.00	2.08	
35 2-Methylpentane	43	7.591	7.597	-0.006	93	383056	2.00	2.14	
36 Methyl tert-butyl ether	73	7.710	7.715	-0.005	96	394051	2.00	2.19	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	100	377503	2.00	2.12	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	326088	2.00	2.21	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	57065	2.00	2.01	
40 Hexane	56	8.614	8.613	0.001	89	165234	2.00	2.15	
41 Isopropyl ether	45	8.770	8.773	-0.003	97	485009	2.00	2.18	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	99	181693	2.00	2.08	
43 Ethyl acetate	43	9.221	9.224	-0.003	99	259651	2.00	2.20	
44 Chloroform	83	9.394	9.395	-0.001	96	414764	2.00	2.10	
45 Tert-butyl ethyl ether	59	9.469	9.471	-0.002	94	476674	2.00	2.16	
46 Tetrahydrofuran	42	9.813	9.821	-0.008	93	136985	2.00	2.18	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	491600	2.00	2.15	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	98	295685	2.00	2.09	
49 n-Butanol	31	10.948	10.957	-0.009	80	41337	2.00	2.09	
50 Cyclohexane	69	11.029	11.031	-0.002	94	84227	2.00	2.22	
51 Benzene	78	11.029	11.031	-0.002	98	473833	2.00	2.09	
52 Carbon tetrachloride	117	11.056	11.055	0.001	99	536281	2.00	2.23	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	89	110794	2.00	2.13	
54 Thiophene	84	11.303	11.302	0.001	100	269521	2.00	2.09	
55 Tert-amyl methyl ether	73	11.475	11.480	-0.005	97	372876	2.00	2.14	
56 Isooctane	57	11.755	11.759	-0.004	99	897864	2.00	2.11	
57 n-Heptane	71	12.121	12.122	-0.001	89	158034	2.00	2.12	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	90	194759	2.00	2.13	
59 Trichloroethene	130	12.255	12.257	-0.002	95	229178	2.00	2.01	
60 Dibromomethane	93	12.347	12.348	-0.001	95	212934	2.00	2.11	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	397868	2.00	2.16	
61 1,4-Dioxane	88	12.492	12.501	-0.009	87	58670	2.00	2.18	
63 Methyl methacrylate	41	12.557	12.558	-0.001	92	141703	2.00	2.03	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	367492	2.00	2.12	
65 4-Methyl-2-pentanone (MIBK	43	13.396	13.399	-0.003	96	295884	2.00	1.93	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	259003	2.00	2.17	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	202943	2.00	2.19	
68 Toluene	91	14.278	14.277	0.001	93	513330	2.00	2.13	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	98	148679	2.00	2.13	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	441429	2.00	2.20	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	415433	2.00	2.16	
72 2-Hexanone	58	14.714	14.717	-0.003	96	158048	2.00	2.25	
73 n-Octane	85	14.929	14.931	-0.002	91	171049	2.00	2.17	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	375901	2.00	2.25	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	99	270820	2.00	2.13	
76 Tetrachloroethene	129	15.408	15.408	0.000	95	226727	2.00	2.01	
77 2,3-Dimethylheptane	43	16.269	16.269	-0.001	95	483560	2.00	2.15	
78 Chlorobenzene	112	16.279	16.279	0.000	94	382171	2.00	2.11	
79 Ethylbenzene	91	16.559	16.557	0.002	99	596545	2.00	2.17	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	454691	2.00	2.19	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	100	910856	3.99	4.27	
82 n-Nonane	57	17.108	17.109	-0.001	88	364149	2.00	2.31	
83 Bromoform	173	17.178	17.179	-0.001	91	287325	2.00	2.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.178	17.181	-0.003	99	298757	2.00	2.28	
85 o-Xylene	91	17.242	17.242	0.000	98	491312	2.00	2.15	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	317051	2.00	2.17	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	98	88107	2.00	2.13	
88 Isopropylbenzene	105	17.818	17.815	0.003	96	645900	2.00	2.24	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	158414	2.00	2.19	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	97	164057	2.00	2.15	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	555410	2.00	2.27	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	282382	2.00	2.18	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	86	198517	2.00	2.21	
94 n-Decane	57	18.802	18.805	-0.003	89	371127	2.00	2.30	
95 tert-Butylbenzene	119	18.958	18.958	0.000	90	576459	2.00	2.24	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	496438	2.00	2.26	
97 sec-Butylbenzene	105	19.216	19.218	-0.002	98	729282	2.00	2.28	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	99	231407	2.00	2.06	
99 Benzyl chloride	91	19.313	19.315	-0.002	97	231497	2.00	2.10	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	95	195721	2.00	2.04	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	96	596789	2.00	2.27	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	98	386097	2.00	2.22	
103 Butylcyclohexane	83	19.475	19.476	-0.001	89	427484	2.00	2.25	
104 2,3-Dihydroindene	117	19.679	19.676	0.003	93	408894	2.00	2.23	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	96	241683	2.00	2.12	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	466916	2.00	2.30	
107 Indene	116	19.803	19.805	-0.002	90	237730	2.00	2.26	
108 Undecane	57	20.083	20.083	0.000	93	346076	2.00	2.25	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	97	392201	2.00	2.30	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	96	78535	2.00	2.09	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	96	471438	2.00	2.26	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	95	301527	2.00	2.24	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	365106	2.00	2.20	
114 Dodecane	57	21.158	21.159	-0.001	97	318147	2.00	2.33	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	94	65109	2.00	2.15	
116 Naphthalene	128	21.540	21.540	0.000	99	156536	2.00	1.95	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	99	58741	2.00	2.09	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	96	248901	2.00	2.07	
119 1,2,3-Trichlorobenzene	180	21.772	21.772	0.000	94	66002	2.00	1.99	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	99	33085	6.24	6.32	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	97	35332	6.24	6.43	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	1174730	2.00	2.20	
A 125 C8 Range	1	14.930	(14.891-14.970)		0	1583480	2.00	2.25	
S 126 Xylenes, Total	100				0		5.99	6.42	
S 127 1,2-Dichloroethene, Total	1				0		3.99	4.16	

Reagents:

40L6DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

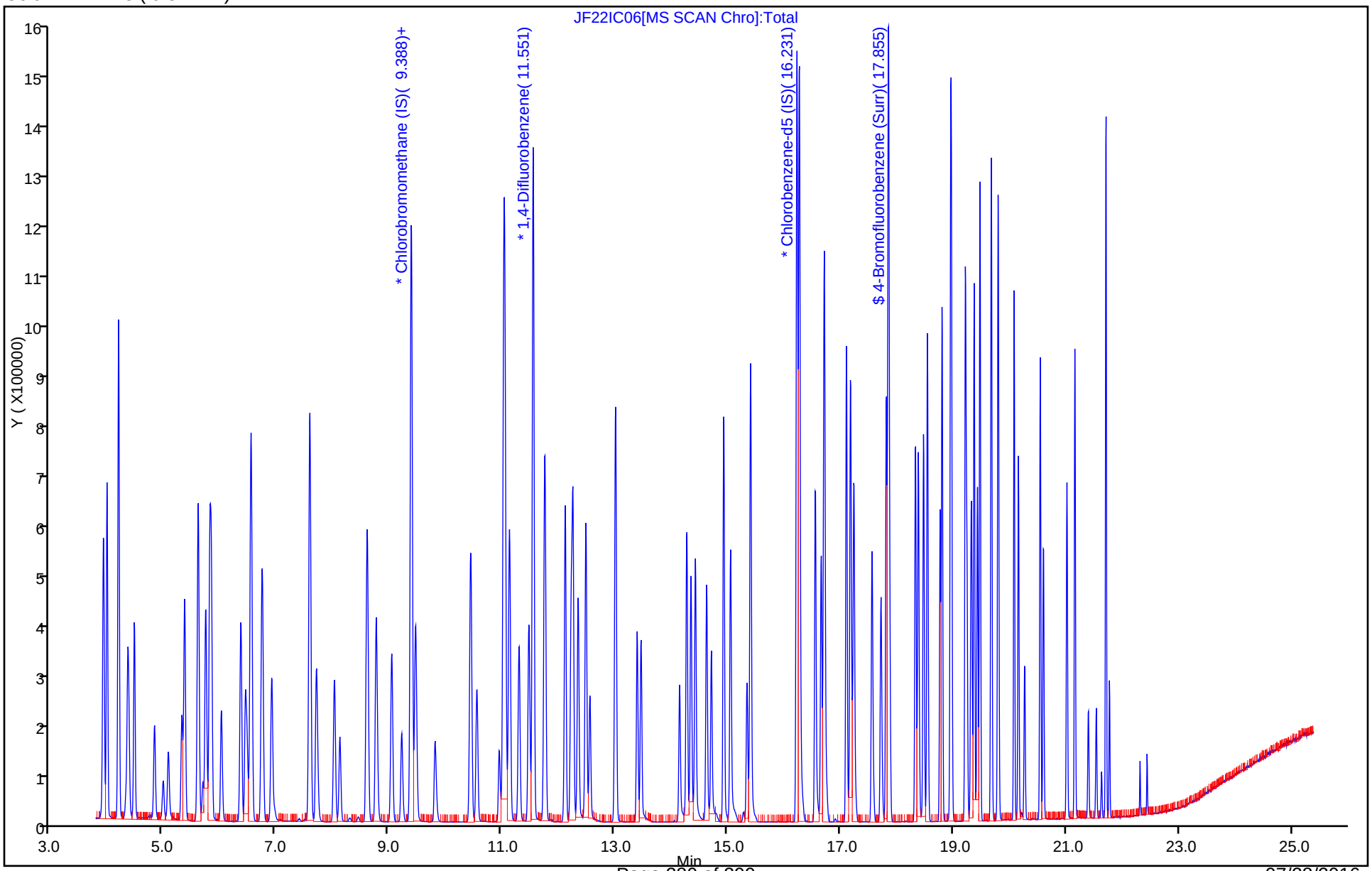
Report Date: 27-Jun-2016 15:12:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D

Injection Date:	22-Jun-2016 20:20:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

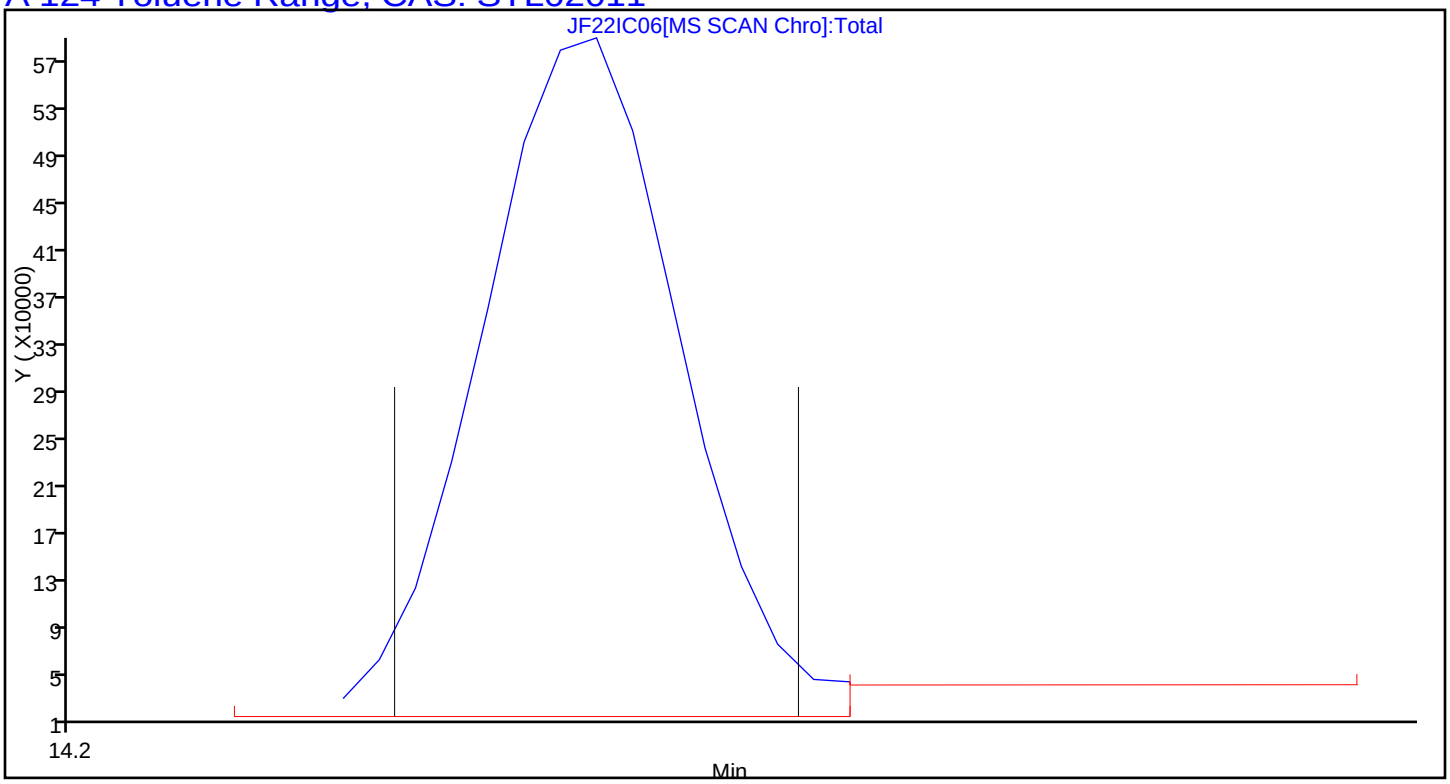


Report Date: 27-Jun-2016 15:12:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D				
Injection Date:	22-Jun-2016 20:20:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

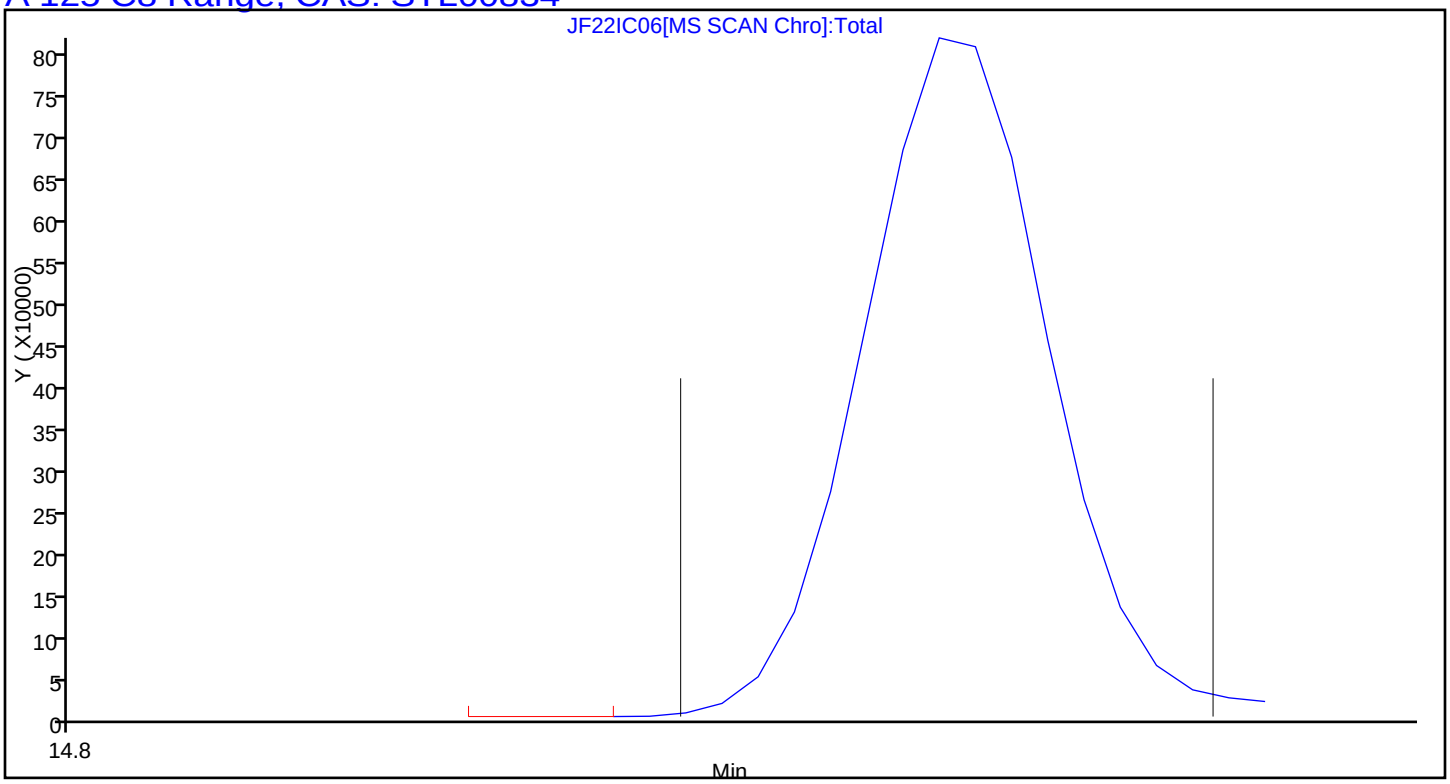


Report Date: 27-Jun-2016 15:12:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D				
Injection Date:	22-Jun-2016 20:20:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Jun-2016 21:14:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044587
Misc. Info.: J062216,T15,,140-0003070-008
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:29 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 14:46:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	91	310883	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	95	1421150	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	87	1287644	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.850	17.854	-0.004	92	796104	4.00	4.19	
6 Chlorodifluoromethane	67	3.928	3.925	0.003	95	143302	4.00	3.71	
7 Propene	41	3.939	3.939	0.000	99	332692	4.00	3.71	
8 Dichlorodifluoromethane	85	3.998	3.995	0.003	99	1307229	4.00	3.83	
9 Chloromethane	52	4.197	4.196	0.001	52	88214	4.00	3.65	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	87	727582	4.00	3.84	
11 Acetaldehyde	44	4.364	4.364	0.000	95	350643	20.0	16.7	
12 Vinyl chloride	62	4.386	4.384	0.002	99	296801	4.00	3.63	
14 Butadiene	54	4.482	4.479	0.003	75	204963	4.00	3.82	
13 Butane	43	4.482	4.480	0.002	81	337432	4.00	3.78	
15 Bromomethane	94	4.837	4.837	0.000	97	279818	4.00	3.63	
16 Chloroethane	64	4.993	4.991	0.002	96	110409	4.00	3.76	
17 Ethanol	31	5.085	5.081	0.004	91	222729	20.0	18.5	
18 Vinyl bromide	106	5.322	5.323	-0.001	98	349781	4.00	3.84	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	408100	4.00	3.81	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	1205159	4.00	3.81	
21 Acrolein	56	5.628	5.623	0.005	90	93702	4.00	3.59	
22 Acetonitrile	40	5.698	5.698	0.000	99	108943	4.00	3.81	
23 Acetone	58	5.741	5.747	-0.006	97	349669	12.0	9.82	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	96	1317035	12.0	11.1	
25 Pentane	72	5.843	5.845	-0.002	99	50079	4.00	3.74	
26 Ethyl ether	31	6.021	6.027	-0.006	90	242733	4.00	3.99	
27 1,1-Dichloroethene	96	6.371	6.368	0.003	94	351859	4.00	3.83	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.006	92	579563	4.00	3.58	
29 Acrylonitrile	53	6.478	6.479	-0.001	94	207783	4.00	3.81	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	97	809888	4.00	3.77	
31 Methylene Chloride	84	6.742	6.739	0.003	98	305232	4.00	3.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.753	6.753	0.000	97	294729	4.00	3.59	
33 Carbon disulfide	76	6.919	6.916	0.003	98	992410	4.00	3.80	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	95	353708	4.00	3.83	
35 2-Methylpentane	43	7.597	7.597	0.000	94	706451	4.00	3.75	
36 Methyl tert-butyl ether	73	7.705	7.715	-0.010	96	758096	4.00	4.00	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	100	687439	4.00	3.66	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	648961	4.00	4.17	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	102957	4.00	3.45	
40 Hexane	56	8.614	8.613	0.001	90	300224	4.00	3.71	
41 Isopropyl ether	45	8.770	8.773	-0.003	97	905127	4.00	3.86	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	99	338040	4.00	3.68	
43 Ethyl acetate	43	9.222	9.224	-0.002	100	486683	4.00	3.92	
44 Chloroform	83	9.399	9.395	0.004	97	757083	4.00	3.64	
45 Tert-butyl ethyl ether	59	9.464	9.471	-0.007	94	888552	4.00	3.82	
46 Tetrahydrofuran	42	9.808	9.821	-0.013	93	261903	4.00	3.95	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	905660	4.00	3.76	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	98	549094	4.00	3.54	
49 n-Butanol	31	10.949	10.957	-0.009	78	79338	4.00	3.66	
50 Cyclohexane	69	11.035	11.031	0.004	74	156430	4.00	3.76	
51 Benzene	78	11.035	11.031	0.004	98	859237	4.00	3.46	
52 Carbon tetrachloride	117	11.056	11.055	0.001	97	994733	4.00	3.77	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	90	202801	4.00	3.55	
54 Thiophene	84	11.304	11.302	0.002	99	516119	4.00	3.64	
55 Tert-amyl methyl ether	73	11.476	11.480	-0.004	97	723980	4.00	3.66	
56 Isooctane	57	11.761	11.759	0.002	99	1645159	4.00	3.52	
57 n-Heptane	71	12.121	12.122	-0.001	89	299782	4.00	3.66	
58 1,2-Dichloropropane	63	12.229	12.227	0.002	90	370098	4.00	3.70	
59 Trichloroethene	130	12.256	12.257	-0.001	95	442884	4.00	3.54	
60 Dibromomethane	93	12.347	12.348	-0.001	96	405928	4.00	3.66	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	776050	4.00	3.84	
61 1,4-Dioxane	88	12.492	12.501	-0.009	84	112981	4.00	3.82	
63 Methyl methacrylate	41	12.557	12.558	-0.001	91	279290	4.00	3.65	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	674601	4.00	3.54	
65 4-Methyl-2-pentanone (MIBK	43	13.396	13.399	-0.003	95	556003	4.00	3.31	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	519520	4.00	3.98	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	429638	4.00	4.08	
68 Toluene	91	14.278	14.277	0.001	93	1028413	4.00	3.75	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	99	298075	4.00	3.75	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	875867	4.00	3.83	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	839568	4.00	3.83	
72 2-Hexanone	58	14.714	14.717	-0.003	96	307291	4.00	3.85	
73 n-Octane	85	14.929	14.931	-0.002	90	335449	4.00	3.74	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	762654	4.00	4.01	
75 Ethylene Dibromide	107	15.344	15.344	0.000	98	551155	4.00	3.80	
76 Tetrachloroethene	129	15.408	15.408	0.000	96	435890	4.00	3.39	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	93	857705	4.00	3.35	
78 Chlorobenzene	112	16.280	16.279	0.001	94	758472	4.00	3.68	
79 Ethylbenzene	91	16.554	16.557	-0.003	99	1219170	4.00	3.90	
80 2-Ethylthiophene	97	16.662	16.661	0.001	97	939238	4.00	3.97	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	100	1796987	8.00	7.40	
82 n-Nonane	57	17.108	17.109	-0.001	87	729041	4.00	4.06	
83 Bromoform	173	17.178	17.179	-0.001	94	632872	4.00	4.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.178	17.181	-0.003	99	636582	4.00	4.26	
85 o-Xylene	91	17.242	17.242	0.000	98	973620	4.00	3.73	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	646257	4.00	3.89	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	98	184661	4.00	3.92	
88 Isopropylbenzene	105	17.813	17.815	-0.002	96	1292194	4.00	3.94	
89 N-Propylbenzene	120	18.335	18.333	0.001	99	330331	4.00	4.01	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	97	344057	4.00	3.96	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	1122676	4.00	4.02	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	558077	4.00	3.78	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	87	449633	4.00	4.39	
94 n-Decane	57	18.803	18.805	-0.002	90	741112	4.00	4.04	
95 tert-Butylbenzene	119	18.959	18.958	0.001	91	1120112	4.00	3.82	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	955201	4.00	3.82	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	97	1414365	4.00	3.88	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	98	511453	4.00	4.01	
99 Benzyl chloride	91	19.314	19.315	-0.001	98	521842	4.00	4.16	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	93	438982	4.00	4.02	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	96	1150454	4.00	3.84	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	98	737400	4.00	3.71	
103 Butylcyclohexane	83	19.475	19.476	-0.001	90	833271	4.00	3.85	
104 2,3-Dihydroindene	117	19.674	19.676	-0.002	94	825803	4.00	3.95	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	97	517072	4.00	3.98	
106 n-Butylbenzene	91	19.798	19.797	0.001	98	922062	4.00	3.99	
107 Indene	116	19.803	19.805	-0.002	88	507931	4.00	4.24	
108 Undecane	57	20.083	20.083	0.000	93	688596	4.00	3.93	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	98	764381	4.00	3.93	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	98	176596	4.00	4.14	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	97	919685	4.00	3.87	
112 1,2,3,5-Tetramethylbenzene	119	20.599	20.603	-0.004	95	577643	4.00	3.76	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	717139	4.00	3.79	
114 Dodecane	57	21.159	21.159	0.000	97	558539	4.00	3.58	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	94	145399	4.00	4.22	
116 Naphthalene	128	21.541	21.540	0.001	99	341566	4.00	3.74	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	99	129062	4.00	4.02	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	96	470300	4.00	3.43	
119 1,2,3-Trichlorobenzene	180	21.772	21.772	0.000	96	140342	4.00	3.71	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	100	57318	12.5	9.61	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	99	59070	12.5	9.43	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	2447394	4.00	4.02	
A 125 C8 Range	1	14.943	(14.891-15.013)		0	2999823	4.00	3.75	
S 126 Xylenes, Total	100				0		12.0	11.1	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.51	

Reagents:

40L7DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

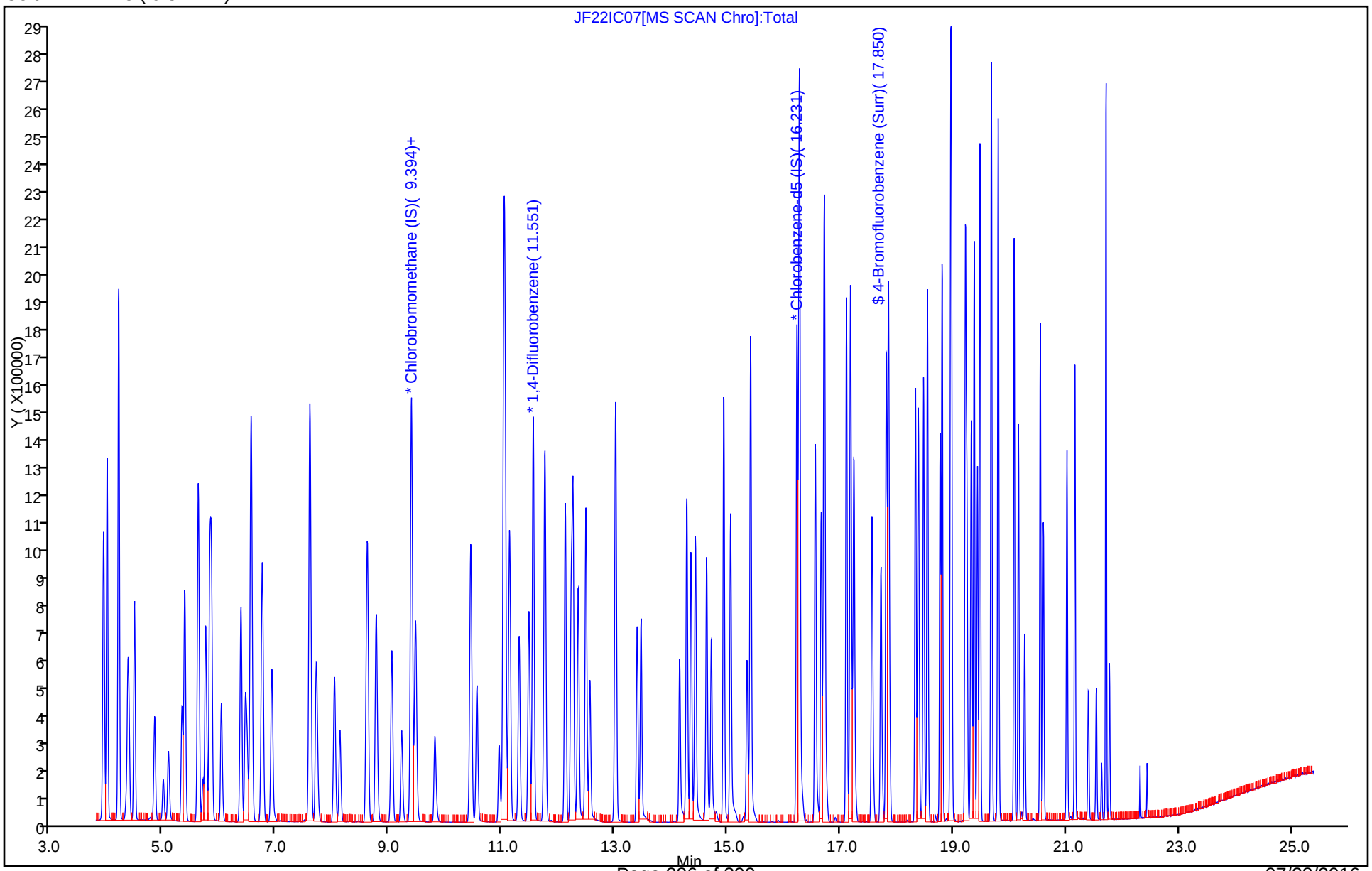
Report Date: 27-Jun-2016 15:12:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D

Injection Date:	22-Jun-2016 21:14:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

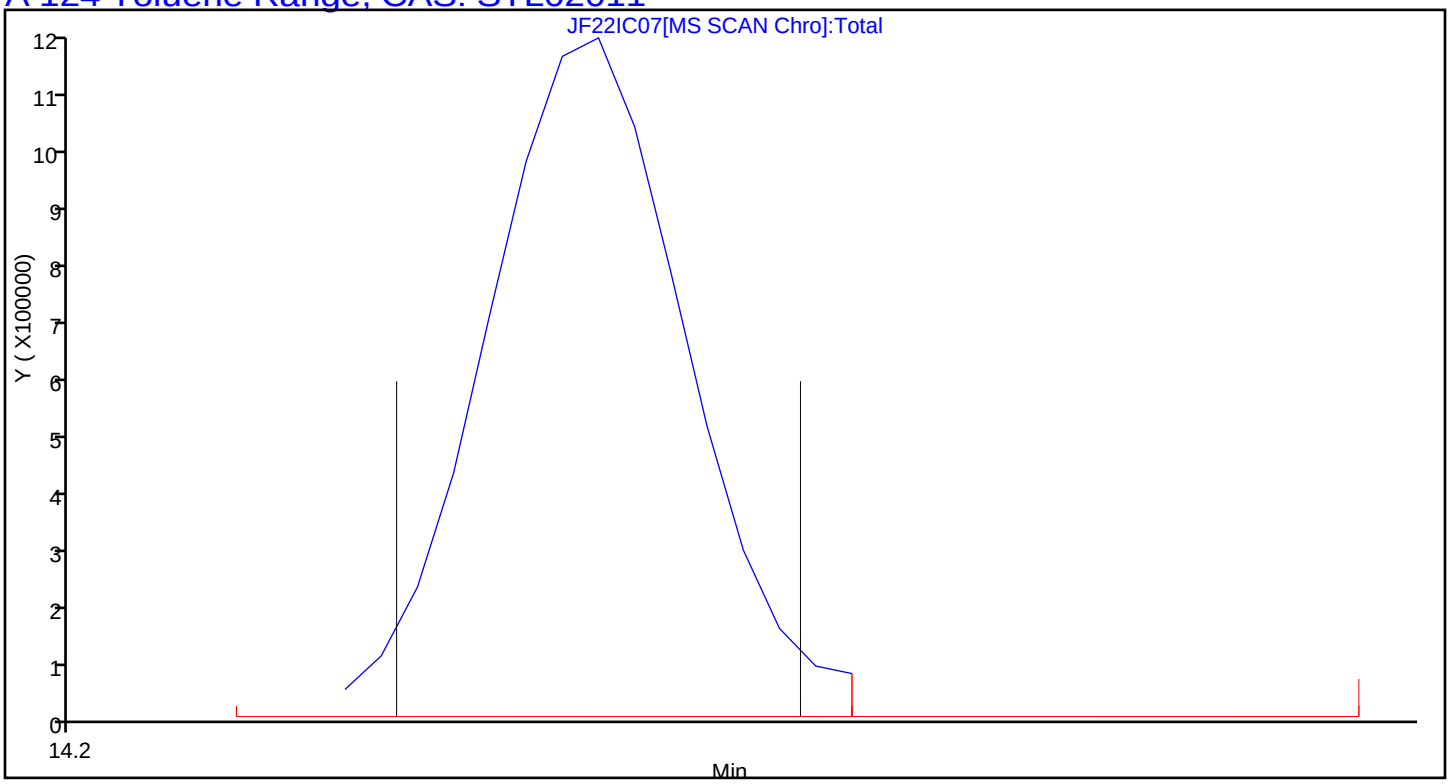


Report Date: 27-Jun-2016 15:12:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D				
Injection Date:	22-Jun-2016 21:14:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

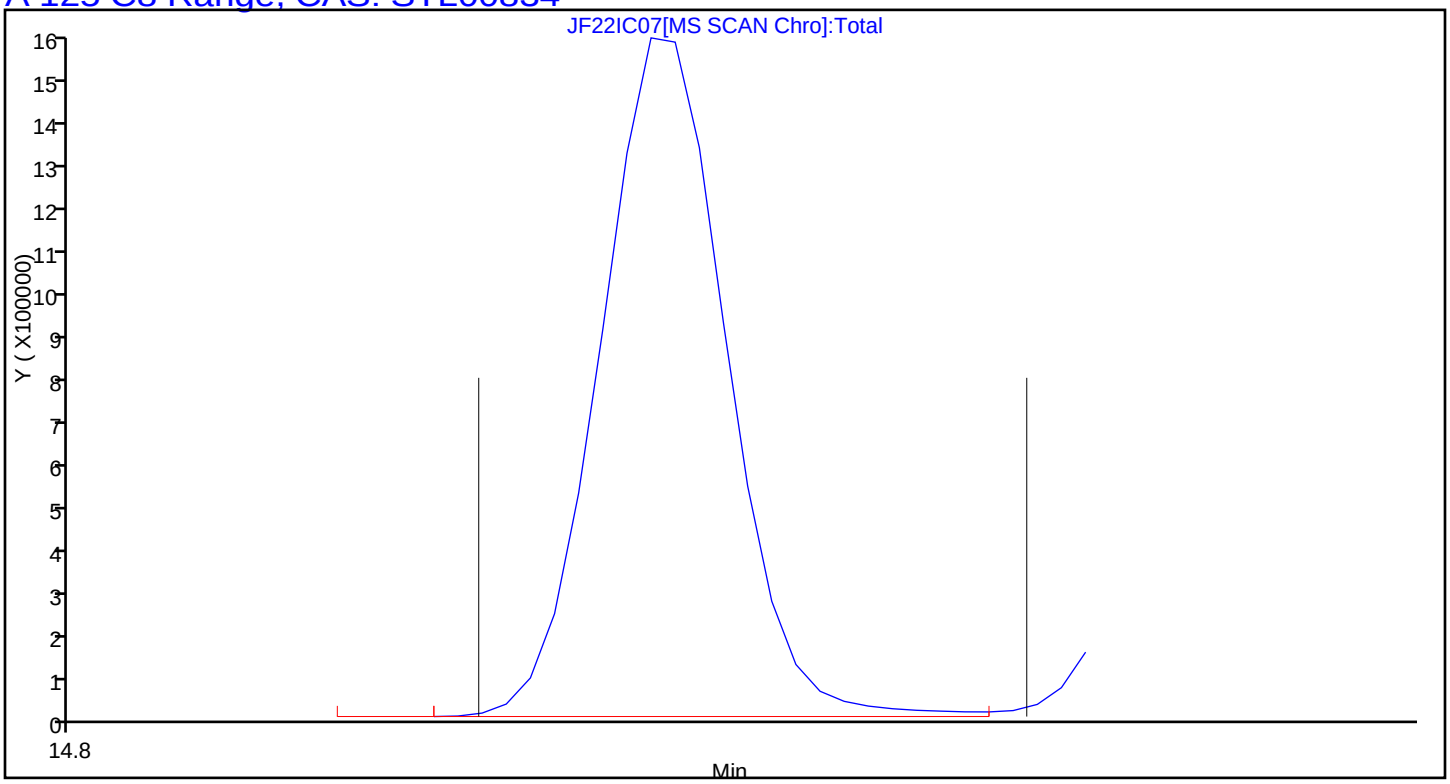


Report Date: 27-Jun-2016 15:12:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D				
Injection Date:	22-Jun-2016 21:14:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 22-Jun-2016 22:07:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044588
Misc. Info.: J062216,T15,,140-0003070-009
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:34 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 08:43:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.389	9.389	0.000	92	299776	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.557	11.552	0.005	95	1334753	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.232	16.231	0.001	87	1294721	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.851	17.854	-0.003	92	783587	4.00	4.10	
6 Chlorodifluoromethane	67	3.923	3.925	-0.002	95	288544	8.00	7.76	
7 Propene	41	3.934	3.939	-0.005	99	650144	8.00	7.52	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	99	2500166	8.00	7.59	
9 Chloromethane	52	4.192	4.196	-0.004	51	153848	8.00	6.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.198	4.201	-0.003	87	1405458	8.00	7.69	
11 Acetaldehyde	44	4.359	4.364	-0.005	93	606067	40.0	30.0	
12 Vinyl chloride	62	4.381	4.384	-0.003	99	533221	8.00	6.76	
14 Butadiene	54	4.478	4.479	-0.001	77	364739	8.00	7.04	
13 Butane	43	4.478	4.480	-0.002	80	570149	8.00	6.62	
15 Bromomethane	94	4.838	4.837	0.001	98	529966	8.00	7.14	
16 Chloroethane	64	4.989	4.991	-0.002	95	206332	8.00	7.29	
17 Ethanol	31	5.085	5.081	0.004	90	379778	40.0	32.8	
18 Vinyl bromide	106	5.322	5.323	-0.001	98	682940	8.00	7.78	
19 2-Methylbutane	43	5.371	5.372	-0.002	88	760188	8.00	7.35	
20 Trichlorofluoromethane	101	5.607	5.611	-0.004	99	2296411	8.00	7.53	
21 Acrolein	56	5.623	5.623	0.000	91	166781	8.00	6.62	
22 Acetonitrile	40	5.699	5.698	0.001	99	196326	8.00	7.11	
23 Acetone	58	5.742	5.747	-0.005	97	600267	24.0	17.5	
24 Isopropyl alcohol	45	5.817	5.819	-0.002	96	2507678	24.0	21.9	
25 Pentane	72	5.844	5.845	-0.001	100	97557	8.00	7.56	
26 Ethyl ether	31	6.021	6.027	-0.006	87	410197	8.00	7.00	
27 1,1-Dichloroethene	96	6.366	6.368	-0.002	94	696021	8.00	7.85	
28 2-Methyl-2-propanol	59	6.452	6.457	-0.005	92	1237494	8.00	7.92	
29 Acrylonitrile	53	6.479	6.479	0.000	93	377050	8.00	7.18	
30 1,1,2-Trichloro-1,2,2-trif	101	6.549	6.548	0.001	97	1546698	8.00	7.46	
31 Methylene Chloride	84	6.737	6.739	-0.002	97	583873	8.00	7.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.753	6.753	0.000	98	573796	8.00	7.26	
33 Carbon disulfide	76	6.914	6.916	-0.002	99	1953890	8.00	7.76	
34 trans-1,2-Dichloroethene	96	7.587	7.587	0.000	95	665147	8.00	7.47	
35 2-Methylpentane	43	7.598	7.597	0.001	93	1276291	8.00	7.02	
36 Methyl tert-butyl ether	73	7.705	7.715	-0.010	96	1326657	8.00	7.25	
37 1,1-Dichloroethane	63	8.028	8.025	0.003	100	1302641	8.00	7.19	
38 Vinyl acetate	43	8.125	8.125	0.000	100	1103728	8.00	7.36	
39 2-Butanone (MEK)	72	8.587	8.597	-0.010	97	193612	8.00	6.73	
40 Hexane	56	8.614	8.613	0.001	91	572625	8.00	7.33	
41 Isopropyl ether	45	8.765	8.773	-0.008	97	1604773	8.00	7.09	
42 cis-1,2-Dichloroethene	96	9.045	9.044	0.001	98	641922	8.00	7.24	
43 Ethyl acetate	43	9.222	9.224	-0.002	99	899864	8.00	7.51	
44 Chloroform	83	9.400	9.395	0.005	96	1390825	8.00	6.93	
45 Tert-butyl ethyl ether	59	9.464	9.471	-0.007	94	1627729	8.00	7.26	
46 Tetrahydrofuran	42	9.803	9.821	-0.018	92	469029	8.00	7.34	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	1638831	8.00	7.06	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	98	987874	8.00	6.78	
49 n-Butanol	31	10.944	10.957	-0.013	82	179047	8.00	8.80	
50 Cyclohexane	69	11.030	11.031	-0.001	92	277573	8.00	7.10	
51 Benzene	78	11.035	11.031	0.004	99	1527500	8.00	6.56	
52 Carbon tetrachloride	117	11.057	11.055	0.002	98	1765814	8.00	7.12	
53 2,3-Dimethylpentane	71	11.132	11.134	-0.002	90	374753	8.00	6.99	
54 Thiophene	84	11.304	11.302	0.002	99	949009	8.00	7.13	
55 Tert-amyl methyl ether	73	11.476	11.480	-0.004	97	1344086	8.00	6.75	
56 Isooctane	57	11.756	11.759	-0.003	98	2905240	8.00	6.62	
57 n-Heptane	71	12.122	12.122	0.000	88	557515	8.00	7.25	
58 1,2-Dichloropropane	63	12.224	12.227	-0.003	91	664536	8.00	7.07	
59 Trichloroethene	130	12.256	12.257	-0.001	95	809617	8.00	6.89	
60 Dibromomethane	93	12.348	12.348	0.000	96	746153	8.00	7.17	
62 Dichlorobromomethane	83	12.488	12.487	0.001	99	1402039	8.00	7.39	
61 1,4-Dioxane	88	12.493	12.501	-0.008	83	227685	8.00	8.20	
63 Methyl methacrylate	41	12.557	12.558	-0.001	90	516447	8.00	7.19	
64 Methylcyclohexane	83	13.015	13.014	0.001	93	1236865	8.00	6.92	
65 4-Methyl-2-pentanone (MIBK	43	13.397	13.399	-0.002	95	1131908	8.00	7.18	
66 cis-1,3-Dichloropropene	75	13.467	13.466	0.001	93	940942	8.00	7.67	
67 trans-1,3-Dichloropropene	75	14.150	14.149	0.001	97	835409	8.00	7.89	
68 Toluene	91	14.279	14.277	0.002	93	1807350	8.00	6.56	
69 1,1,2-Trichloroethane	83	14.349	14.349	0.000	99	544854	8.00	6.82	
70 2-Methylthiophene	97	14.430	14.429	0.001	97	1574396	8.00	6.85	
71 3-Methylthiophene	97	14.629	14.628	0.001	99	1518071	8.00	6.88	
72 2-Hexanone	58	14.709	14.717	-0.008	97	629308	8.00	7.84	
73 n-Octane	85	14.930	14.931	-0.001	88	599701	8.00	6.64	
74 Chlorodibromomethane	129	15.054	15.053	0.001	97	1409503	8.00	7.37	
75 Ethylene Dibromide	107	15.344	15.344	0.000	98	1044626	8.00	7.16	
76 Tetrachloroethene	129	15.409	15.408	0.001	96	794219	8.00	6.15	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	91	1422600	8.00	5.53	
78 Chlorobenzene	112	16.280	16.279	0.001	93	1366684	8.00	6.59	
79 Ethylbenzene	91	16.554	16.557	-0.003	98	2117749	8.00	6.74	
80 2-Ethylthiophene	97	16.662	16.661	0.001	97	1672366	8.00	7.04	
81 m-Xylene & p-Xylene	91	16.716	16.715	0.001	99	3061379	16.0	12.5	
82 n-Nonane	57	17.108	17.109	-0.001	87	1270603	8.00	7.03	
83 Bromoform	173	17.178	17.179	-0.001	96	1235633	8.00	8.59	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.178	17.181	-0.003	98	1161198	8.00	7.74	
85 o-Xylene	91	17.243	17.242	0.001	99	1708918	8.00	6.52	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	1208064	8.00	7.24	
87 1,2,3-Trichloropropane	110	17.722	17.720	0.002	97	350332	8.00	7.40	
88 Isopropylbenzene	105	17.813	17.815	-0.002	97	2248024	8.00	6.82	
89 N-Propylbenzene	120	18.330	18.333	-0.003	99	628117	8.00	7.59	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	96	624631	8.00	7.15	
91 4-Ethyltoluene	105	18.475	18.477	-0.002	97	2072618	8.00	7.39	
92 1,3,5-Trimethylbenzene	120	18.545	18.545	0.000	93	1037781	8.00	6.99	
93 Alpha Methyl Styrene	118	18.771	18.771	0.000	87	900610	8.00	8.75	
94 n-Decane	57	18.803	18.805	-0.002	91	1291827	8.00	7.00	
95 tert-Butylbenzene	119	18.959	18.958	0.001	90	2028581	8.00	6.87	
96 1,2,4-Trimethylbenzene	105	18.970	18.971	-0.001	95	1771506	8.00	7.05	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	97	2557663	8.00	6.99	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	98	1052391	8.00	8.20	
99 Benzyl chloride	91	19.314	19.315	-0.001	98	1184773	8.00	9.40	
100 1,4-Dichlorobenzene	146	19.325	19.329	-0.004	93	953235	8.00	8.68	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	95	2185786	8.00	7.26	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	98	1415266	8.00	7.09	
103 Butylcyclohexane	83	19.475	19.476	-0.001	90	1455558	8.00	6.68	
104 2,3-Dihydroindene	117	19.675	19.676	-0.002	94	1572283	8.00	7.49	
105 1,2-Dichlorobenzene	146	19.680	19.680	0.000	96	1039806	8.00	7.96	
106 n-Butylbenzene	91	19.793	19.797	-0.004	98	1812485	8.00	7.80	
107 Indene	116	19.804	19.805	-0.001	88	1043744	8.00	8.66	
108 Undecane	57	20.083	20.083	0.000	93	1326289	8.00	7.53	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.159	20.158	0.001	98	1566098	8.00	8.01	
110 1,2-Dibromo-3-Chloropropan	157	20.266	20.271	-0.005	98	417334	8.00	9.72	
111 1,2,4,5-Tetramethylbenzene	119	20.546	20.545	0.001	97	1906908	8.00	7.97	
112 1,2,3,5-Tetramethylbenzene	119	20.600	20.603	-0.003	95	1215600	8.00	7.87	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	1528285	8.00	8.03	
114 Dodecane	57	21.159	21.159	0.000	99	1249421	8.00	7.98	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	95	410410	8.00	11.8	
116 Naphthalene	128	21.541	21.540	0.001	98	884843	8.00	9.63	
117 Benzo(b)thiophene	134	21.633	21.633	0.000	99	361623	8.00	11.2	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	95	1002249	8.00	7.26	
119 1,2,3-Trichlorobenzene	180	21.772	21.772	0.000	96	380574	8.00	10.0	
120 2-Methylnaphthalene	142	22.316	22.314	0.002	99	189512	25.0	31.6	
121 1-Methylnaphthalene	142	22.440	22.439	0.001	99	198948	25.0	31.6	
A 124 Toluene Range	1	14.279	(14.249-14.309)		0	4222753	8.00	6.90	
A 125 C8 Range	1	14.946	(14.897-15.019)		0	5268215	8.00	6.54	
S 126 Xylenes, Total	100				0		24.0	19.1	
S 127 1,2-Dichloroethene, Total	1				0		16.0	14.7	

Reagents:

40L8DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

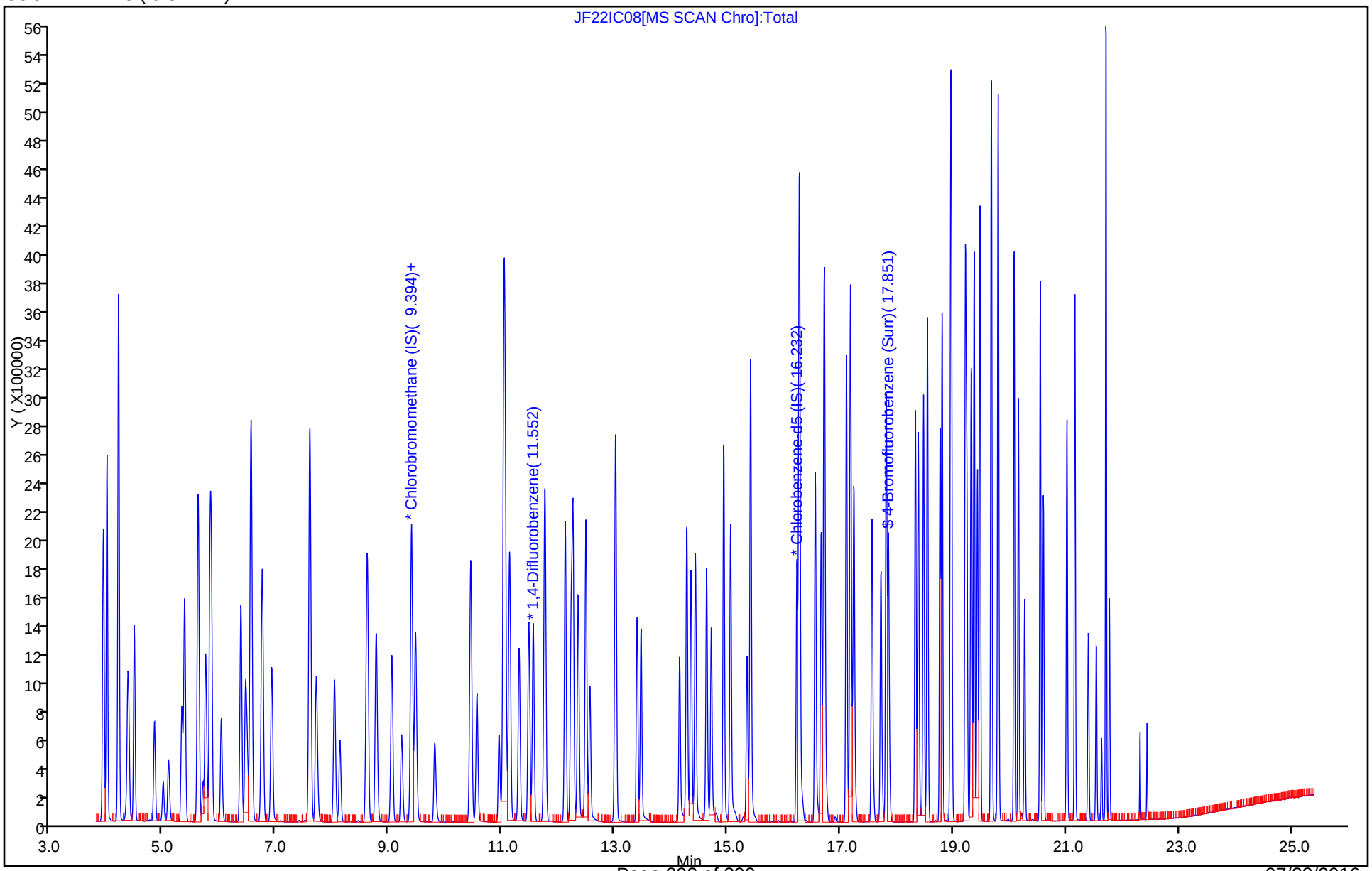
Report Date: 27-Jun-2016 15:12:35 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D

Injection Date:	22-Jun-2016 22:07:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

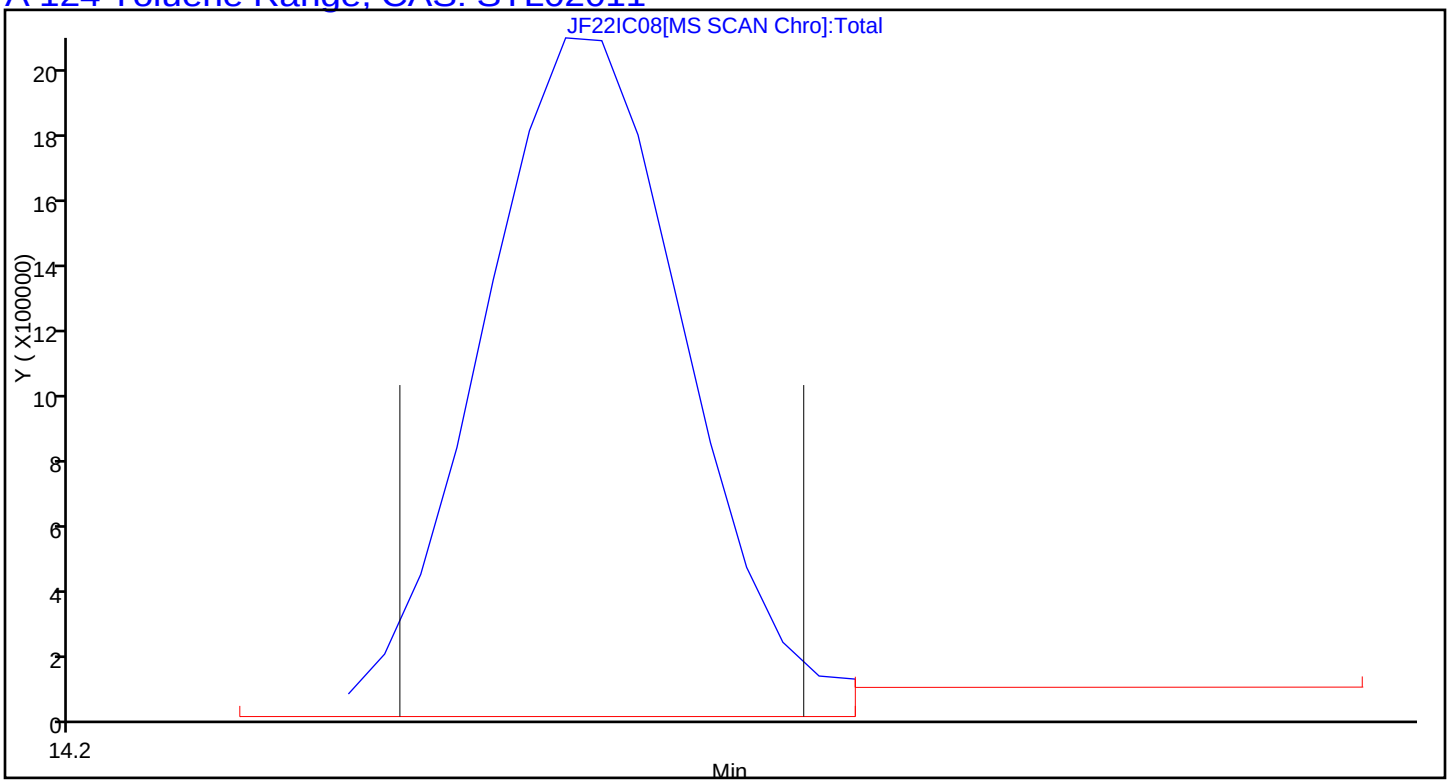


Report Date: 27-Jun-2016 15:12:35 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D				
Injection Date:	22-Jun-2016 22:07:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

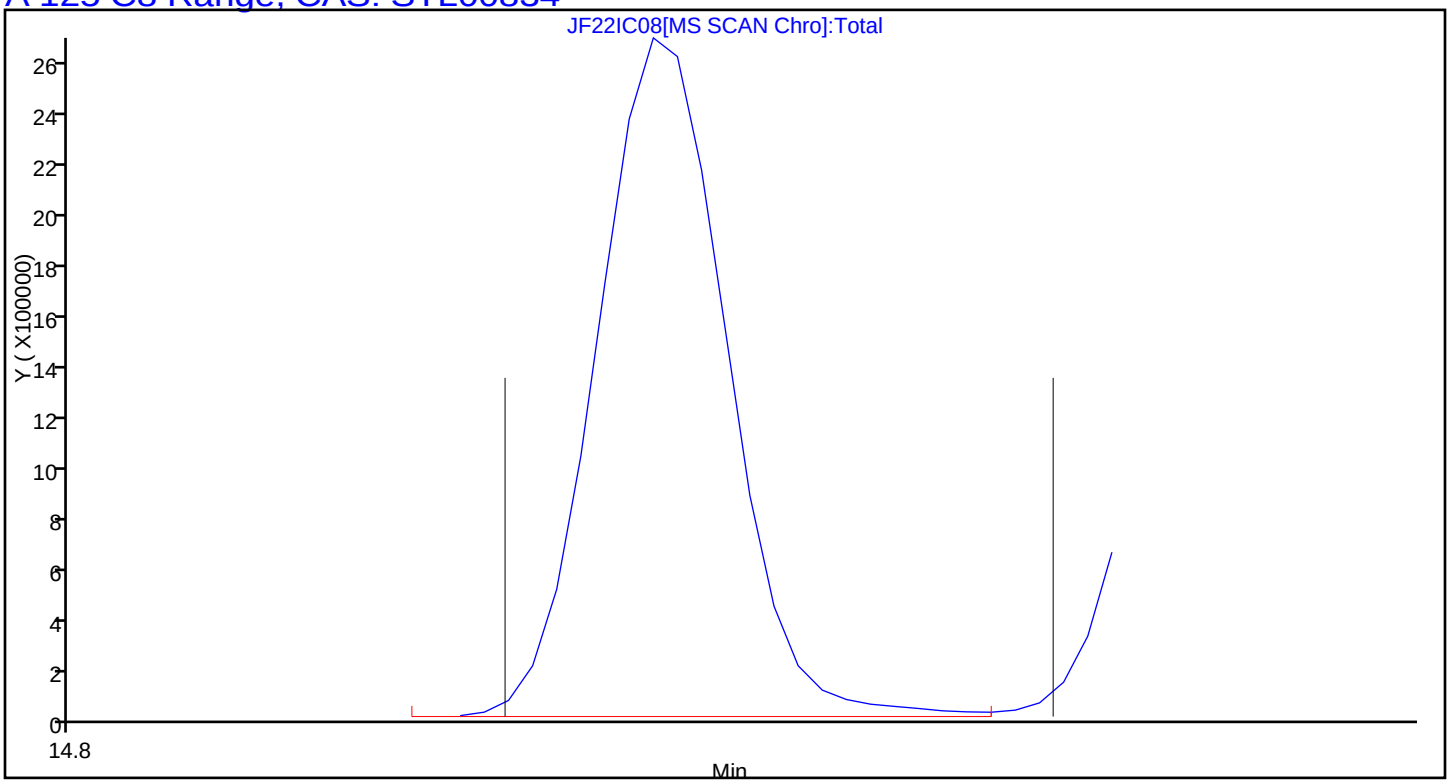


Report Date: 27-Jun-2016 15:12:35 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D				
Injection Date:	22-Jun-2016 22:07:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 22-Jun-2016 23:00:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044589
Misc. Info.: J062216,T15,,140-0003070-010
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:39 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 08:43:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.393	9.389	0.004	90	324648	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.555	11.552	0.003	95	1456404	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.230	16.231	-0.001	87	1438583	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	93	919690	4.00	4.33	
6 Chlorodifluoromethane	67	3.927	3.925	0.002	95	568696	16.0	14.1	
7 Propene	41	3.938	3.939	-0.001	99	1164099	16.0	12.4	
8 Dichlorodifluoromethane	85	3.997	3.995	0.002	98	4418618	16.0	12.4	
9 Chloromethane	52	4.196	4.196	0.000	99	302773	16.0	12.0	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	86	2421902	16.0	12.2	
11 Acetaldehyde	44	4.363	4.364	-0.001	90	1336036	80.0	61.1	
12 Vinyl chloride	62	4.385	4.384	0.001	98	1077395	16.0	12.6	
14 Butadiene	54	4.481	4.479	0.002	78	746524	16.0	13.3	
13 Butane	43	4.481	4.480	0.001	80	1159255	16.0	12.4	
15 Bromomethane	94	4.836	4.837	-0.001	98	1110251	16.0	13.8	
16 Chloroethane	64	4.992	4.991	0.001	96	437796	16.0	14.3	
17 Ethanol	31	5.089	5.081	0.008	90	840205	80.0	67.0	
18 Vinyl bromide	106	5.326	5.323	0.003	98	1405653	16.0	14.8	
19 2-Methylbutane	43	5.374	5.372	0.002	87	1423234	16.0	12.7	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	98	4442645	16.0	13.5	
21 Acrolein	56	5.627	5.623	0.004	92	389500	16.0	14.3	
22 Acetonitrile	40	5.703	5.698	0.005	98	485627	16.0	16.2	
23 Acetone	58	5.746	5.747	-0.001	96	1492629	48.0	40.1	
24 Isopropyl alcohol	45	5.826	5.819	0.007	96	4376471	48.0	35.3	
25 Pentane	72	5.848	5.845	0.003	99	187143	16.0	13.4	
26 Ethyl ether	31	6.020	6.027	-0.007	85	994775	16.0	15.7	
27 1,1-Dichloroethene	96	6.370	6.368	0.002	96	1428851	16.0	14.9	
28 2-Methyl-2-propanol	59	6.456	6.457	-0.001	92	2382939	16.0	14.1	
29 Acrylonitrile	53	6.483	6.479	0.004	93	912254	16.0	16.0	
30 1,1,2-Trichloro-1,2,2-trif	101	6.553	6.548	0.005	95	3036710	16.0	13.5	
31 Methylene Chloride	84	6.741	6.739	0.002	94	1180787	16.0	13.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.757	6.753	0.004	99	1045840	16.0	12.2	
33 Carbon disulfide	76	6.918	6.916	0.002	99	3799723	16.0	13.9	
34 trans-1,2-Dichloroethene	96	7.591	7.587	0.004	96	1345260	16.0	14.0	
35 2-Methylpentane	43	7.602	7.597	0.005	91	2327114	16.0	11.8	
36 Methyl tert-butyl ether	73	7.704	7.715	-0.011	96	3205110	16.0	16.2	
37 1,1-Dichloroethane	63	8.032	8.025	0.007	100	2777161	16.0	14.2	
38 Vinyl acetate	43	8.129	8.125	0.004	100	2762820	16.0	17.0	
39 2-Butanone (MEK)	72	8.591	8.597	-0.006	97	450257	16.0	14.4	
40 Hexane	56	8.613	8.613	0.000	91	1143308	16.0	13.5	
41 Isopropyl ether	45	8.769	8.773	-0.004	94	3515890	16.0	14.3	
42 cis-1,2-Dichloroethene	96	9.049	9.044	0.005	97	1430321	16.0	14.9	
43 Ethyl acetate	43	9.221	9.224	-0.003	99	2028801	16.0	15.6	
44 Chloroform	83	9.398	9.395	0.003	97	3097387	16.0	14.3	
45 Tert-butyl ethyl ether	59	9.468	9.471	-0.003	94	3703920	16.0	15.3	
46 Tetrahydrofuran	42	9.802	9.821	-0.019	91	1159161	16.0	16.7	
47 1,1,1-Trichloroethane	97	10.447	10.443	0.004	97	3616674	16.0	14.4	
48 1,2-Dichloroethane	62	10.555	10.556	-0.001	98	2263123	16.0	14.2	
49 n-Butanol	31	10.953	10.957	-0.004	79	360182	16.0	16.2	
50 Cyclohexane	69	11.034	11.031	0.003	93	556586	16.0	13.1	
51 Benzene	78	11.034	11.031	0.003	99	3094582	16.0	12.2	
52 Carbon tetrachloride	117	11.055	11.055	0.000	99	3797031	16.0	14.0	
53 2,3-Dimethylpentane	71	11.136	11.134	0.002	89	812542	16.0	13.9	
54 Thiophene	84	11.308	11.302	0.006	99	2143783	16.0	14.8	
55 Tert-amyl methyl ether	73	11.475	11.480	-0.005	97	3028475	16.0	13.7	
56 Isooctane	57	11.760	11.759	0.001	97	5750307	16.0	12.0	
57 n-Heptane	71	12.126	12.122	0.004	85	1201125	16.0	14.3	
58 1,2-Dichloropropane	63	12.228	12.227	0.001	90	1418404	16.0	13.8	
59 Trichloroethene	130	12.260	12.257	0.003	96	1873495	16.0	14.6	
60 Dibromomethane	93	12.352	12.348	0.004	94	1694078	16.0	14.9	
62 Dichlorobromomethane	83	12.491	12.487	0.004	99	3132699	16.0	15.1	
61 1,4-Dioxane	88	12.491	12.501	-0.010	81	445938	16.0	14.7	
63 Methyl methacrylate	41	12.561	12.558	0.003	88	1215024	16.0	15.5	
64 Methylcyclohexane	83	13.013	13.014	-0.001	94	2607782	16.0	13.4	
65 4-Methyl-2-pentanone (MIBK	43	13.395	13.399	-0.004	93	2205881	16.0	12.8	
66 cis-1,3-Dichloropropene	75	13.471	13.466	0.004	93	2221824	16.0	16.6	
67 trans-1,3-Dichloropropene	75	14.154	14.149	0.005	97	2103301	16.0	17.9	
68 Toluene	91	14.277	14.277	0.000	94	4182412	16.0	13.7	
69 1,1,2-Trichloroethane	83	14.353	14.349	0.004	98	1272593	16.0	14.3	
70 2-Methylthiophene	97	14.433	14.429	0.004	96	3610870	16.0	14.1	
71 3-Methylthiophene	97	14.632	14.628	0.004	98	3544888	16.0	14.5	
72 2-Hexanone	58	14.713	14.717	-0.004	99	1327800	16.0	14.9	
73 n-Octane	85	14.934	14.931	0.003	93	1338237	16.0	13.3	
74 Chlorodibromomethane	129	15.057	15.053	0.004	96	3355987	16.0	15.8	
75 Ethylene Dibromide	107	15.348	15.344	0.004	99	2590955	16.0	16.0	
76 Tetrachloroethene	129	15.413	15.408	0.004	97	1858547	16.0	12.9	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	84	2577374	16.0	9.02	
78 Chlorobenzene	112	16.279	16.279	0.000	93	3159295	16.0	13.7	
79 Ethylbenzene	91	16.558	16.557	0.001	97	5134454	16.0	14.7	
80 2-Ethylthiophene	97	16.661	16.661	0.000	97	4122460	16.0	15.6	
81 m-Xylene & p-Xylene	91	16.720	16.715	0.005	96	7113518	32.0	26.2	
82 n-Nonane	57	17.112	17.109	0.003	82	2638502	16.0	13.1	
83 Bromoform	173	17.182	17.179	0.003	95	3162893	16.0	19.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.182	17.181	0.001	97	2966957	16.0	17.8	
85 o-Xylene	91	17.242	17.242	0.000	99	4222274	16.0	14.5	
86 1,1,2,2-Tetrachloroethane	83	17.564	17.563	0.001	97	2836714	16.0	15.3	
87 1,2,3-Trichloropropane	110	17.720	17.720	0.000	96	921976	16.0	17.5	
88 Isopropylbenzene	105	17.817	17.815	0.002	97	5373006	16.0	14.7	
89 N-Propylbenzene	120	18.334	18.333	0.001	96	1679331	16.0	18.3	
90 2-Chlorotoluene	126	18.387	18.384	0.003	93	1651961	16.0	17.0	
91 4-Ethyltoluene	105	18.479	18.477	0.002	95	4995270	16.0	16.0	
92 1,3,5-Trimethylbenzene	120	18.549	18.545	0.004	94	2624406	16.0	15.9	
93 Alpha Methyl Styrene	118	18.769	18.771	-0.002	86	2385158	16.0	20.9	
94 n-Decane	57	18.807	18.805	0.002	93	2738103	16.0	13.3	
95 tert-Butylbenzene	119	18.958	18.958	0.000	91	4729064	16.0	14.4	
96 1,2,4-Trimethylbenzene	105	18.974	18.971	0.003	94	4084905	16.0	14.6	
97 sec-Butylbenzene	105	19.221	19.218	0.003	96	5708680	16.0	14.0	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	98	2901271	16.0	20.3	
99 Benzyl chloride	91	19.313	19.315	-0.002	98	3118761	16.0	22.3	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	93	2699517	16.0	22.1	
101 4-Isopropyltoluene	119	19.377	19.373	0.004	93	4893500	16.0	14.6	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	97	3373450	16.0	15.2	
103 Butylcyclohexane	83	19.479	19.476	0.003	90	3197669	16.0	13.2	
104 2,3-Dihydroindene	117	19.678	19.676	0.002	94	3754466	16.0	16.1	
105 1,2-Dichlorobenzene	146	19.684	19.680	0.004	95	2746451	16.0	18.9	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	3999716	16.0	15.5	
107 Indene	116	19.808	19.805	0.003	90	2643801	16.0	19.8	
108 Undecane	57	20.082	20.083	-0.001	90	2716283	16.0	13.9	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.157	20.158	-0.001	96	3582044	16.0	16.5	
110 1,2-Dibromo-3-Chloropropan	157	20.270	20.271	-0.001	97	1146153	16.0	24.0	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	97	4194777	16.0	15.8	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	96	2749344	16.0	16.0	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	98	3458409	16.0	16.4	
114 Dodecane	57	21.158	21.159	-0.001	99	2423987	16.0	13.9	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	95	1298586	16.0	33.7	
116 Naphthalene	128	21.540	21.540	0.000	99	2401988	16.0	23.5	
117 Benzo(b)thiophene	134	21.631	21.633	-0.002	99	1108826	16.0	30.9	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	2406632	16.0	15.7	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	96	1083656	16.0	25.6	
120 2-Methylnaphthalene	142	22.314	22.314	0.000	98	511700	50.0	76.8	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	99	489210	50.0	69.9	
A 124 Toluene Range	1	14.277	(14.247-14.307)		0	10035359	16.0	14.8	
A 125 C8 Range	1	14.944	(14.890-15.044)		0	11231032	16.0	12.6	
S 126 Xylenes, Total	100				0		48.0	40.7	
S 127 1,2-Dichloroethene, Total	1				0		32.0	28.9	

Reagents:

40L9DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

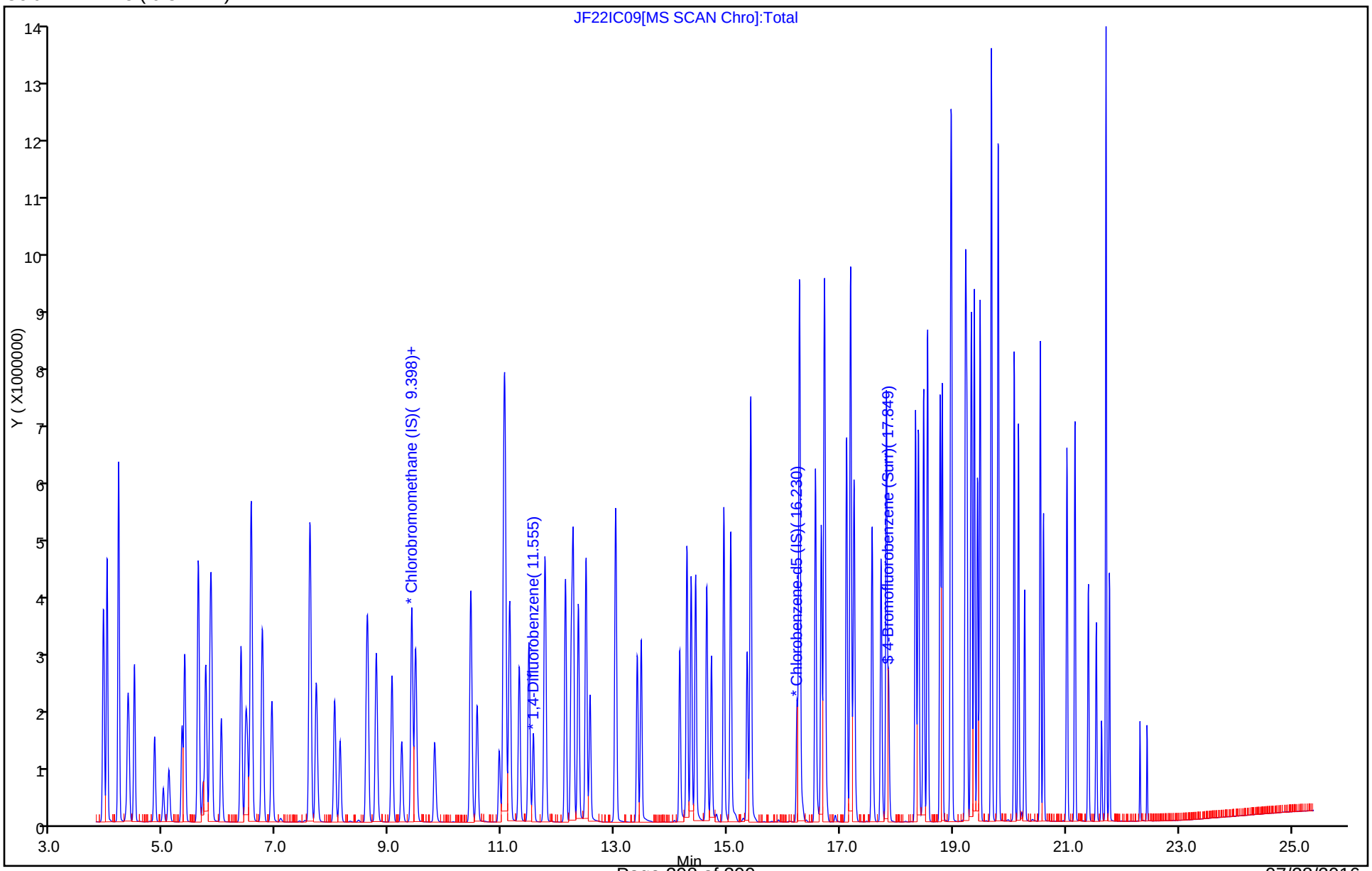
Report Date: 27-Jun-2016 15:12:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Injection Date:	22-Jun-2016 23:00:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

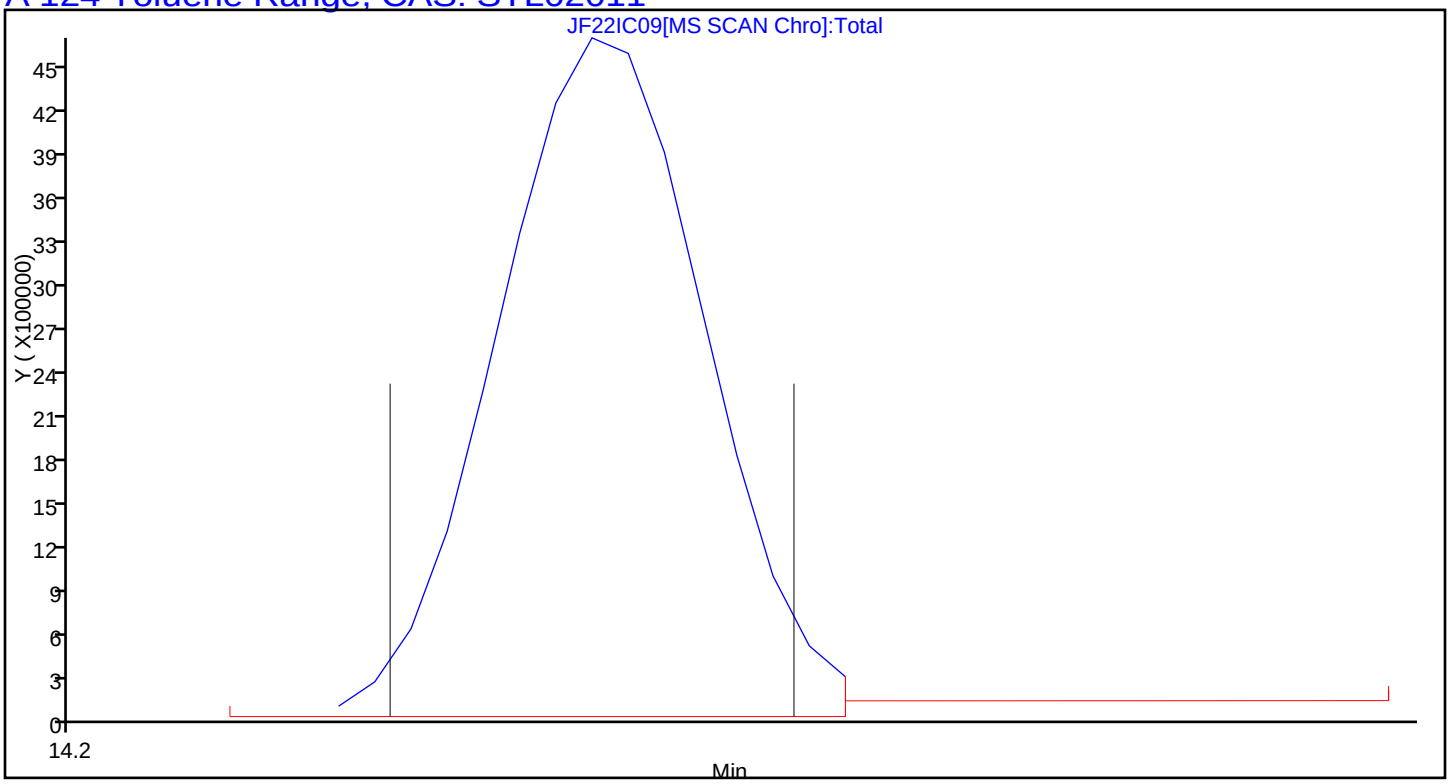


Report Date: 27-Jun-2016 15:12:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Injection Date:	22-Jun-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

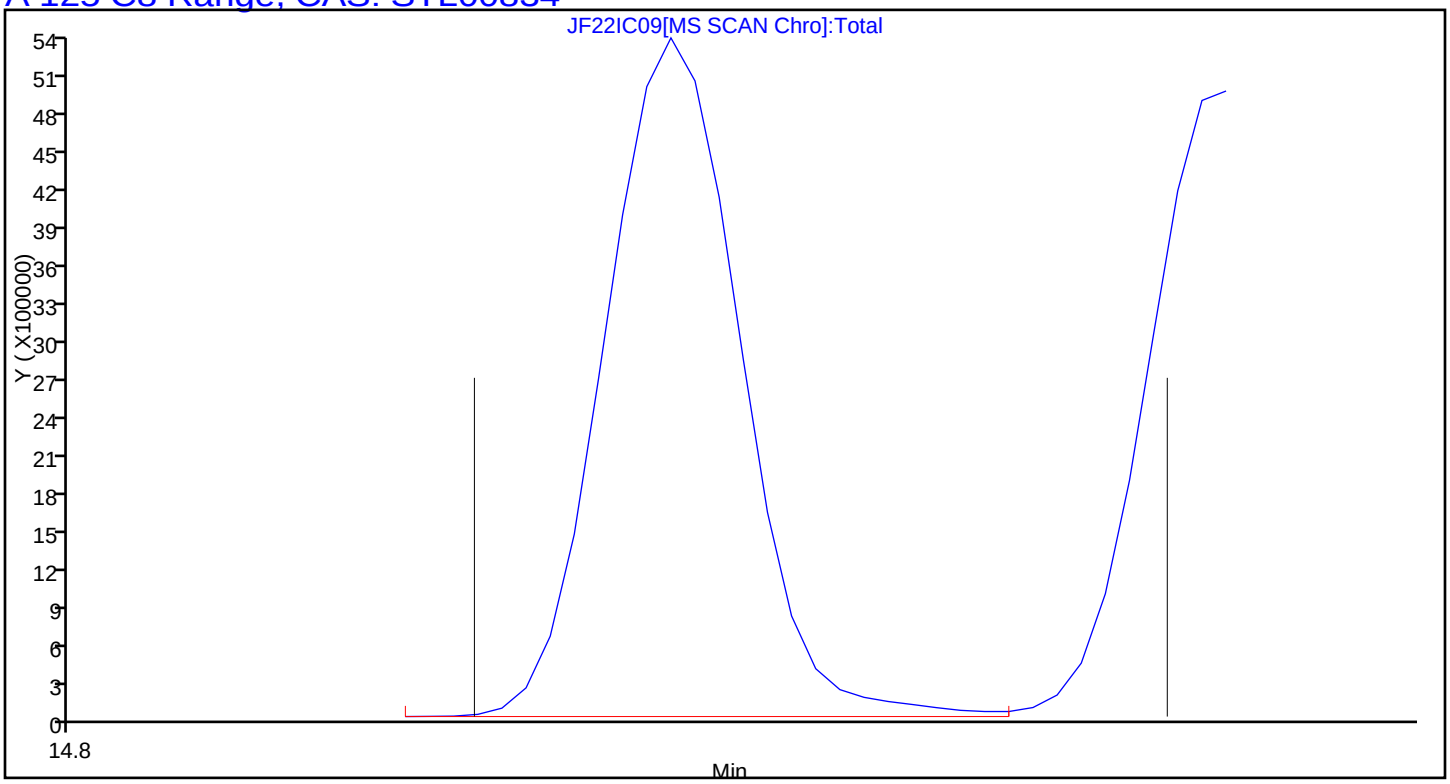


Report Date: 27-Jun-2016 15:12:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Injection Date:	22-Jun-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: ICV 140-5589/12 Calibration Date: 06/28/2016 22:26

Instrument ID: ME Calib Start Date: 06/28/2016 14:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2016 20:55

Lab File ID: EF28ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5544	0.5715		2.06	2.00	3.1	35.0
Propene	Ave	1.111	1.028		1.85	2.00	-7.5	35.0
Dichlorodifluoromethane	Ave	4.646	4.830		2.08	2.00	4.0	35.0
Chloromethane	Ave	0.3517	0.3206		1.82	2.00	-8.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.828	2.980		2.11	2.00	5.4	35.0
Acetaldehyde	Ave	0.4377	0.3301		7.54	10.0	-24.6	35.0
Vinyl chloride	Ave	1.228	1.185		1.93	2.00	-3.5	35.0
1,3-Butadiene	Ave	0.8846	0.8386		1.90	2.00	-5.2	35.0
Butane	Ave	1.730	1.659		1.92	2.00	-4.1	35.0
Bromomethane	Ave	1.203	1.188		1.97	2.00	-1.3	35.0
Chloroethane	Ave	0.5661	0.5465		1.93	2.00	-3.5	35.0
Ethanol	Ave	0.4315	0.3589		8.32	10.0	-16.8	35.0
Vinyl bromide	Ave	1.190	1.282		2.15	2.00	7.7	35.0
2-Methylbutane	Ave	1.184	1.130		1.91	2.00	-4.5	35.0
Trichlorofluoromethane	Ave	4.786	4.845		2.02	2.00	1.2	35.0
Acrolein	Ave	0.3268	0.2293		1.40	2.00	-29.8	35.0
Acetonitrile	Ave	0.3679	0.3045		1.66	2.00	-17.2	35.0
Acetone	Ave	0.4540	0.3609		4.77	6.00	-20.5	35.0
Isopropyl alcohol	Ave	1.480	1.254		5.08	6.00	-15.3	35.0
Pentane	Ave	0.2014	0.2075		2.06	2.00	3.0	35.0
Ethyl ether	Ave	0.9413	0.8476		1.80	2.00	-9.9	35.0
1,1-Dichloroethene	Ave	1.112	1.134		2.04	2.00	2.0	35.0
Acrylonitrile	Ave	0.5889	0.5595		1.90	2.00	-5.0	35.0
tert-Butyl alcohol	Ave	1.742	1.673		1.92	2.00	-4.0	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.712	2.562		1.89	2.00	-5.5	35.0
Methylene Chloride	Ave	1.081	0.9516		1.76	2.00	-11.9	35.0
3-Chloropropene	Ave	1.524	1.458		1.91	2.00	-4.3	35.0
Carbon disulfide	Ave	3.355	3.229		1.92	2.00	-3.8	35.0
trans-1,2-Dichloroethene	Ave	1.246	1.151		1.85	2.00	-7.6	35.0
2-Methylpentane	Ave	2.354	2.353		2.00	2.00	-0.0	35.0
Methyl tert-butyl ether	Ave	3.517	3.065		1.74	2.00	-12.8	35.0
1,1-Dichloroethane	Ave	2.343	2.206		1.88	2.00	-5.9	35.0
Vinyl acetate	Ave	2.955	2.647		1.79	2.00	-10.4	35.0
2-Butanone (MEK)	Ave	0.5522	0.4084		1.48	2.00	-26.0	35.0
Hexane	Ave	0.8953	0.8301		1.85	2.00	-7.3	35.0
Isopropyl ether	Ave	3.424	2.954		1.73	2.00	-13.7	35.0
cis-1,2-Dichloroethene	Ave	1.276	1.218		1.91	2.00	-4.5	35.0
Ethyl acetate	Ave	2.279	1.823		1.60	2.00	-20.0	35.0
Chloroform	Ave	3.197	3.064		1.92	2.00	-4.2	35.0
Tert-butyl ethyl ether	Ave	3.324	3.164		1.90	2.00	-4.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: ICV 140-5589/12 Calibration Date: 06/28/2016 22:26

Instrument ID: ME Calib Start Date: 06/28/2016 14:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2016 20:55

Lab File ID: EF28ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.077	0.9523		1.77	2.00	-11.6	35.0
1,1,1-Trichloroethane	Ave	3.944	3.850		1.95	2.00	-2.4	35.0
1,2-Dichloroethane	Ave	0.5729	0.5289		1.85	2.00	-7.7	35.0
Cyclohexane	Ave	0.1299	0.1215		1.87	2.00	-6.5	35.0
1-Butanol	Ave	0.0803	0.0767		1.91	2.00	-4.5	35.0
Benzene	Ave	0.7550	0.7110		1.88	2.00	-5.8	35.0
Carbon tetrachloride	Ave	0.9538	0.9757		2.05	2.00	2.3	35.0
2,3-Dimethylpentane	Ave	0.1831	0.1523		1.66	2.00	-16.8	35.0
Thiophene	Ave	0.4464	0.4261		1.91	2.00	-4.5	35.0
Tert-amyl methyl ether	Ave	0.7766	0.7298		1.88	2.00	-6.0	35.0
2,2,4-Trimethylpentane	Ave	1.150	1.066		1.85	2.00	-7.3	35.0
Heptane	Ave	0.2794	0.2545		1.82	2.00	-8.9	35.0
1,2-Dichloropropane	Ave	0.2736	0.2522		1.84	2.00	-7.8	35.0
Trichloroethene	Ave	0.4217	0.3887		1.84	2.00	-7.8	35.0
Dibromomethane	Ave	0.3980	0.3798		1.91	2.00	-4.6	35.0
Bromodichloromethane	Ave	0.7464	0.7282		1.95	2.00	-2.4	35.0
1,4-Dioxane	Ave	0.1071	0.0880		1.64	2.00	-17.8	35.0
Methyl methacrylate	Ave	0.3355	0.2712		1.62	2.00	-19.2	35.0
Methylcyclohexane	Ave	0.5888	0.4384		1.49	2.00	-25.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5602	0.4089		1.46	2.00	-27.0	35.0
cis-1,3-Dichloropropene	Ave	0.4996	0.4688		1.88	2.00	-6.2	35.0
trans-1,3-Dichloropropene	Ave	0.5190	0.4753		1.83	2.00	-8.4	35.0
Toluene	Ave	0.9507	0.8983		1.89	2.00	-5.5	35.0
1,1,2-Trichloroethane	Ave	0.2814	0.2575		1.83	2.00	-8.5	35.0
2-Methylthiophene	Ave	0.7839	0.7619		1.94	2.00	-2.8	35.0
3-Methylthiophene	Ave	0.7745	0.7703		1.99	2.00	-0.5	35.0
2-Hexanone	Ave	0.2183	0.1807		1.66	2.00	-17.2	35.0
Octane	Ave	0.3286	0.3081		1.88	2.00	-6.2	35.0
Dibromochloromethane	Ave	0.7286	0.7150		1.96	2.00	-1.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5706	0.5325		1.87	2.00	-6.7	35.0
Tetrachloroethene	Ave	0.4390	0.4086		1.86	2.00	-6.9	35.0
Chlorobenzene	Ave	0.7921	0.7351		1.86	2.00	-7.2	35.0
2,3-Dimethylheptane	Ave	0.7723	0.7183		1.86	2.00	-7.0	35.0
Ethylbenzene	Ave	1.297	1.185		1.83	2.00	-8.6	35.0
2-Ethylthiophene	Ave	1.031	0.9360		1.82	2.00	-9.2	35.0
m-Xylene & p-Xylene	Ave	1.029	0.9506		3.70	4.00	-7.6	35.0
Bromoform	Ave	1.025	0.9116		1.78	2.00	-11.1	35.0
Nonane	Ave	0.5315	0.4869		1.83	2.00	-8.4	35.0
Styrene	Ave	0.7060	0.6661		1.89	2.00	-5.6	35.0
o-Xylene	Ave	1.086	0.9720		1.79	2.00	-10.5	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6685	0.5792		1.73	2.00	-13.4	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: ICV 140-5589/12 Calibration Date: 06/28/2016 22:26

Instrument ID: ME Calib Start Date: 06/28/2016 14:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2016 20:55

Lab File ID: EF28ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2623	0.2283		1.74	2.00	-12.9	35.0
Isopropylbenzene	Ave	1.453	1.329		1.83	2.00	-8.5	35.0
Propylbenzene	Ave	0.4065	0.3672		1.81	2.00	-9.6	35.0
2-Chlorotoluene	Ave	0.3885	0.3572		1.84	2.00	-8.1	35.0
4-Ethyltoluene	Ave	1.370	1.206		1.76	2.00	-12.0	35.0
1,3,5-Trimethylbenzene	Ave	0.6779	0.6047		1.78	2.00	-10.8	35.0
Alpha Methyl Styrene	Ave	0.5736	0.5098		1.78	2.00	-11.1	35.0
Decane	Ave	0.6176	0.5718		1.85	2.00	-7.4	35.0
tert-Butylbenzene	Ave	1.313	1.194		1.82	2.00	-9.1	35.0
1,2,4-Trimethylbenzene	Ave	1.211	1.093		1.80	2.00	-9.8	35.0
sec-Butylbenzene	Ave	1.659	1.522		1.84	2.00	-8.2	35.0
1,3-Dichlorobenzene	Ave	0.9640	0.8691		1.80	2.00	-9.8	35.0
Benzyl chloride	Ave	1.040	0.8774		1.69	2.00	-15.7	35.0
1,4-Dichlorobenzene	Ave	0.9320	0.8460		1.82	2.00	-9.2	35.0
4-Isopropyltoluene	Ave	1.420	1.280		1.80	2.00	-9.8	35.0
1,2,3-Trimethylbenzene	Ave	0.9188	0.8816		1.92	2.00	-4.1	35.0
Butylcyclohexane	Ave	0.8181	0.7245		1.77	2.00	-11.4	35.0
1,2-Dichlorobenzene	Ave	0.9336	0.8424		1.80	2.00	-9.8	35.0
Indane	Ave	1.092	0.9225		1.69	2.00	-15.6	35.0
Indene	Ave	0.8301	0.8923		2.15	2.00	7.5	35.0
Butylbenzene	Ave	1.257	1.148		1.83	2.00	-8.7	35.0
Undecane	Ave	0.6056	0.5084		1.68	2.00	-16.1	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.999	1.088		2.18	2.00	8.9	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.4161	0.2780		1.34	2.00	-33.2	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.159	1.120		1.93	2.00	-3.3	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6976	0.6973		2.00	2.00	-0.0	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.9056	0.8739		1.93	2.00	-3.5	35.0
Dodecane	Ave	0.4507	0.3735		1.66	2.00	-17.1	35.0
1,2,4-Trichlorobenzene	Ave	0.8814	0.8012		1.82	2.00	-9.1	35.0
Naphthalene	Ave	1.144	1.083		1.89	2.00	-5.4	35.0
Benzo(b)thiophene	Ave	0.7419	0.6451		1.74	2.00	-13.1	35.0
Hexachlorobutadiene	Ave	1.241	1.216		1.96	2.00	-2.0	35.0
1,2,3-Trichlorobenzene	Ave	0.8526	0.7416		1.74	2.00	-13.0	35.0
2-Methylnaphthalene	Ave	0.1631	0.1849		7.09	6.25	13.4	50.0
1-Methylnaphthalene	Ave	0.1272	0.1570		7.71	6.25	23.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7646	0.7657		4.01	4.00	0.1	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 28-Jun-2016 22:26:30 ALS Bottle#: 15 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044581,,3,,ICV/LCS
Misc. Info.: E062816I,T15,,140-0003101-012
Operator ID: 403648 Instrument ID: ME
Sublist:

Method: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 01-Jul-2016 17:19:49 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK034

First Level Reviewer: barlozhetskayaa Date: 01-Jul-2016 17:19:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.616	7.622	-0.006	86	296423	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.854	9.859	-0.005	96	1367541	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.837	14.843	-0.006	89	1328894	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.508	16.508	-0.006	92	1017545	4.00	4.01	
6 Chlorodifluoromethane	67	2.930	2.938	-0.010	97	84708	2.00	2.06	
7 Propene	41	2.941	2.944	-0.005	95	152356	2.00	1.85	
8 Dichlorodifluoromethane	85	2.984	2.988	-0.007	100	715899	2.00	2.08	
9 Chloromethane	52	3.135	3.140	-0.007	98	47523	2.00	1.82	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.141	3.148	-0.010	90	441659	2.00	2.11	
11 Acetaldehyde	44	3.265	3.271	-0.009	88	244602	10.0	7.54	
12 Vinyl chloride	62	3.275	3.282	-0.010	100	175608	2.00	1.93	
13 Butane	43	3.351	3.357	-0.008	82	245847	2.00	1.92	
14 Butadiene	54	3.351	3.357	-0.008	73	124285	2.00	1.90	
15 Bromomethane	94	3.615	3.623	-0.011	97	176059	2.00	1.97	
16 Chloroethane	64	3.734	3.741	-0.010	85	80994	2.00	1.93	
17 Ethanol	31	3.820	3.828	-0.011	98	265935	10.0	8.32	
18 Vinyl bromide	106	3.987	3.992	-0.008	97	189999	2.00	2.15	
19 2-Methylbutane	43	4.025	4.031	-0.009	88	167493	2.00	1.91	
20 Trichlorofluoromethane	101	4.214	4.217	-0.006	99	718118	2.00	2.02	
21 Acrolein	56	4.219	4.227	-0.011	95	33983	2.00	1.40	
22 Acetonitrile	40	4.284	4.286	-0.005	97	45132	2.00	1.66	
23 Acetone	58	4.322	4.326	-0.008	99	160492	6.00	4.77	
25 Pentane	72	4.402	4.406	-0.007	75	30751	2.00	2.06	
24 Isopropyl alcohol	45	4.397	4.407	-0.013	79	557778	6.00	5.08	
26 Ethyl ether	31	4.543	4.553	-0.013	92	125626	2.00	1.80	
27 1,1-Dichloroethene	96	4.828	4.833	-0.009	98	168101	2.00	2.04	
29 Acrylonitrile	53	4.931	4.936	-0.009	96	82928	2.00	1.90	
28 2-Methyl-2-propanol	59	4.931	4.941	-0.014	97	247883	2.00	1.92	
30 1,1,2-Trichloro-1,2,2-trif	101	4.990	4.996	-0.010	90	379738	2.00	1.89	
31 Methylene Chloride	84	5.157	5.159	-0.006	97	141040	2.00	1.76	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.168	5.171	-0.007	90	216105	2.00	1.91	
33 Carbon disulfide	76	5.298	5.301	-0.007	98	478585	2.00	1.92	
34 trans-1,2-Dichloroethene	96	5.923	5.923	-0.005	96	170570	2.00	1.85	
35 2-Methylpentane	43	5.934	5.938	-0.008	90	348750	2.00	2.00	
36 Methyl tert-butyl ether	73	6.047	6.055	-0.013	95	454302	2.00	1.74	
37 1,1-Dichloroethane	63	6.328	6.331	-0.008	99	326926	2.00	1.88	
38 Vinyl acetate	43	6.441	6.442	-0.006	99	392274	2.00	1.79	
39 2-Butanone (MEK)	72	6.883	6.883	-0.005	97	60534	2.00	1.48	
40 Hexane	56	6.894	6.892	-0.003	83	123036	2.00	1.85	
41 Isopropyl ether	45	7.061	7.062	-0.007	93	437891	2.00	1.73	
42 cis-1,2-Dichloroethene	96	7.293	7.291	-0.003	97	180573	2.00	1.91	
43 Ethyl acetate	43	7.492	7.497	-0.010	98	270259	2.00	1.60	
44 Chloroform	83	7.632	7.633	-0.007	98	454143	2.00	1.92	
45 Tert-butyl ethyl ether	59	7.730	7.734	-0.010	95	469047	2.00	1.90	
46 Tetrahydrofuran	42	8.032	8.038	-0.014	86	141138	2.00	1.77	
47 1,1,1-Trichloroethane	97	8.641	8.639	-0.005	95	570550	2.00	1.95	
48 1,2-Dichloroethane	62	8.759	8.760	-0.006	99	361610	2.00	1.85	
50 Cyclohexane	69	9.234	9.239	-0.010	89	83074	2.00	1.87	
51 Benzene	78	9.245	9.249	-0.009	97	486188	2.00	1.88	
49 n-Butanol	31	9.245	9.258	-0.018	62	52415	2.00	1.91	
52 Carbon tetrachloride	117	9.266	9.270	-0.009	97	667160	2.00	2.05	
53 2,3-Dimethylpentane	71	9.385	9.384	-0.004	87	104166	2.00	1.66	
54 Thiophene	84	9.536	9.533	-0.002	96	291379	2.00	1.91	
55 Tert-amyl methyl ether	73	9.779	9.790	-0.015	96	484976	2.00	1.88	
56 Isooctane	57	10.081	10.082	-0.007	95	729209	2.00	1.85	
57 n-Heptane	71	10.512	10.513	-0.007	90	174030	2.00	1.82	
58 1,2-Dichloropropane	63	10.582	10.585	-0.008	82	172429	2.00	1.84	
59 Trichloroethene	130	10.620	10.621	-0.007	95	265751	2.00	1.84	
60 Dibromomethane	93	10.712	10.710	-0.004	85	259677	2.00	1.91	
61 Dichlorobromomethane	83	10.873	10.873	-0.006	99	497921	2.00	1.95	
62 1,4-Dioxane	88	10.906	10.910	-0.010	94	60186	2.00	1.64	
63 Methyl methacrylate	41	11.013	11.013	-0.006	89	185420	2.00	1.62	
64 Methylcyclohexane	83	11.439	11.441	-0.008	93	299772	2.00	1.49	
65 4-Methyl-2-pentanone (MIBK	43	11.914	11.916	-0.009	98	279584	2.00	1.46	
66 cis-1,3-Dichloropropene	75	11.963	11.959	-0.002	98	320528	2.00	1.88	
67 trans-1,3-Dichloropropene	75	12.701	12.700	-0.004	96	315816	2.00	1.83	
68 Toluene	91	12.809	12.808	-0.004	93	596846	2.00	1.89	
69 1,1,2-Trichloroethane	83	12.901	12.894	-0.003	95	171117	2.00	1.83	
70 2-Methylthiophene	97	12.966	12.965	-0.004	98	506250	2.00	1.94	
71 3-Methylthiophene	97	13.176	13.174	-0.003	99	511841	2.00	1.99	
72 2-Hexanone	58	13.321	13.321	-0.006	93	120090	2.00	1.66	
73 n-Octane	85	13.553	13.554	-0.006	86	204742	2.00	1.88	
74 Chlorodibromomethane	129	13.613	13.612	-0.004	97	475050	2.00	1.96	
75 Ethylene Dibromide	107	13.909	13.910	-0.006	97	353831	2.00	1.87	
76 Tetrachloroethene	129	13.990	13.988	-0.004	92	271478	2.00	1.86	
77 Chlorobenzene	112	14.885	14.885	-0.005	91	488429	2.00	1.86	
78 2,3-Dimethylheptane	43	14.934	14.932	-0.004	90	477239	2.00	1.86	
79 Ethylbenzene	91	15.193	15.187	0.000	99	787364	2.00	1.83	
80 2-Ethylthiophene	97	15.290	15.290	-0.006	98	621905	2.00	1.82	
81 m-Xylene & p-Xylene	91	15.354	15.354	-0.006	100	1263306	4.00	3.70	
83 Bromoform	173	15.797	15.791	-0.001	98	605710	2.00	1.78	
82 n-Nonane	57	15.807	15.805	-0.004	86	323492	2.00	1.83	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.829	15.824	-0.001	98	442594	2.00	1.89	
85 o-Xylene	91	15.888	15.882	0.000	98	645867	2.00	1.79	
86 1,1,2,2-Tetrachloroethane	83	16.223	16.218	-0.002	95	384836	2.00	1.73	
87 1,2,3-Trichloropropane	110	16.384	16.379	-0.002	94	151710	2.00	1.74	
88 Isopropylbenzene	105	16.487	16.481	0.000	98	883213	2.00	1.83	
89 N-Propylbenzene	120	17.037	17.035	-0.004	99	244012	2.00	1.81	
90 2-Chlorotoluene	126	17.075	17.069	-0.001	96	237313	2.00	1.84	
91 4-Ethyltoluene	105	17.199	17.197	-0.005	97	801004	2.00	1.76	
92 1,3,5-Trimethylbenzene	120	17.279	17.278	-0.006	92	401763	2.00	1.78	
93 Alpha Methyl Styrene	118	17.533	17.527	-0.001	88	338722	2.00	1.78	
94 n-Decane	57	17.614	17.612	-0.005	94	379915	2.00	1.85	
95 tert-Butylbenzene	119	17.738	17.733	-0.002	90	793435	2.00	1.82	
96 1,2,4-Trimethylbenzene	105	17.754	17.749	-0.002	96	726213	2.00	1.80	
97 sec-Butylbenzene	105	18.029	18.025	-0.003	97	1011176	2.00	1.84	
98 1,3-Dichlorobenzene	146	18.034	18.030	-0.003	97	577450	2.00	1.80	
99 Benzyl chloride	91	18.121	18.117	-0.003	97	582980	2.00	1.69	
100 1,4-Dichlorobenzene	146	18.131	18.125	-0.002	95	562089	2.00	1.82	
101 4-Isopropyltoluene	119	18.207	18.205	-0.005	95	850649	2.00	1.80	
102 1,2,3-Trimethylbenzene	105	18.255	18.253	-0.006	98	585759	2.00	1.92	
103 Butylcyclohexane	83	18.320	18.315	-0.002	90	481415	2.00	1.77	
104 1,2-Dichlorobenzene	146	18.509	18.506	-0.005	94	559715	2.00	1.80	
105 2,3-Dihydroindene	117	18.514	18.507	-0.001	93	612957	2.00	1.69	
106 Indene	116	18.649	18.643	-0.001	93	592884	2.00	2.15	
107 n-Butylbenzene	91	18.671	18.664	0.000	98	762885	2.00	1.83	
108 Undecane	57	19.016	19.009	0.000	90	337816	2.00	1.68	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.059	19.053	-0.002	97	723013	2.00	2.18	
110 1,2-Dibromo-3-Chloropropan	157	19.145	19.143	-0.005	97	184703	2.00	1.34	
111 1,2,4,5-Tetramethylbenzene	119	19.458	19.451	0.000	96	744433	2.00	1.93	
112 1,2,3,5-Tetramethylbenzene	119	19.512	19.508	-0.004	95	463336	2.00	2.00	
113 1,2,3,4-Tetramethylbenzene	119	19.911	19.903	0.000	97	580634	2.00	1.93	
114 Dodecane	57	20.089	20.084	-0.003	89	248157	2.00	1.66	
115 1,2,4-Trichlorobenzene	180	20.245	20.239	-0.002	93	532369	2.00	1.82	
116 Naphthalene	128	20.375	20.366	0.000	98	719537	2.00	1.89	
117 Benzo(b)thiophene	134	20.472	20.466	-0.002	99	428613	2.00	1.74	
118 Hexachlorobutadiene	225	20.590	20.582	0.000	93	807931	2.00	1.96	
119 1,2,3-Trichlorobenzene	180	20.650	20.641	0.000	94	492769	2.00	1.74	
120 2-Methylnaphthalene	142	21.480	21.471	0.000	100	383940	6.25	7.09	
121 1-Methylnaphthalene	142	21.680	21.676	-0.005	100	326063	6.25	7.71	
A 124 Toluene Range	1	12.820	(12.790-12.850)		0	1557989	2.00	1.89	
A 125 C8 Range	1	13.555	(13.534-13.576)		0	1856444	2.00	1.86	
S 126 Xylenes, Total	100				0		6.00	5.49	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.76	

Reagents:

40CV101S_00013	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

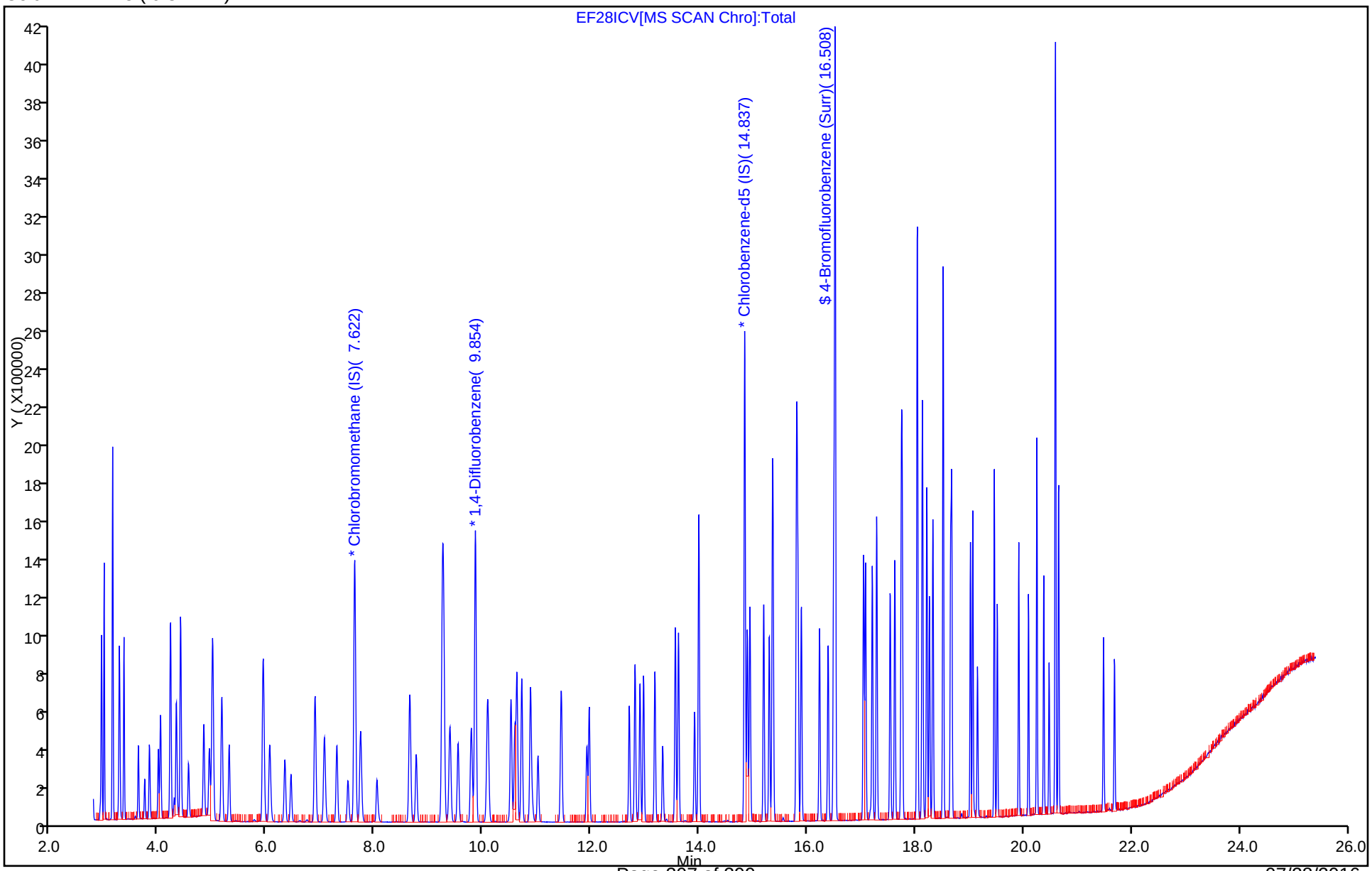
Report Date: 01-Jul-2016 17:19:51 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28ICV.D

Injection Date:	28-Jun-2016 22:26:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	12
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: CCVIS 140-5859/2 Calibration Date: 07/19/2016 10:10

Instrument ID: ME Calib Start Date: 06/28/2016 14:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2016 20:55

Lab File ID: ECCVG19A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.5544	0.5477		1.98	2.00	-1.2	30.0
Propene	Ave	1.111	1.077		1.94	2.00	-3.1	30.0
Dichlorodifluoromethane	Ave	4.646	4.694		2.02	2.00	1.0	30.0
Chloromethane	Ave	0.3517	0.3799		2.16	2.00	8.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.828	3.002		2.12	2.00	6.2	30.0
Acetaldehyde	Ave	0.4377	0.3356		7.67	10.0	-23.3	30.0
Vinyl chloride	Ave	1.228	1.417		2.31	2.00	15.5	30.0
1,3-Butadiene	Ave	0.8846	0.9922		2.24	2.00	12.2	30.0
Butane	Ave	1.730	1.837		2.12	2.00	6.2	30.0
Bromomethane	Ave	1.203	1.553		2.58	2.00	29.1	30.0
Chloroethane	Ave	0.5661	0.7012		2.48	2.00	23.9	30.0
Ethanol	Ave	0.4315	0.3420		7.93	10.0	-20.7	30.0
Vinyl bromide	Ave	1.190	1.513		2.54	2.00	27.1	30.0
2-Methylbutane	Ave	1.184	1.249		2.11	2.00	5.5	30.0
Trichlorofluoromethane	Ave	4.786	5.313		2.22	2.00	11.0	30.0
Acrolein	Ave	0.3268	0.3110		1.90	2.00	-4.9	30.0
Acetonitrile	Ave	0.3679	0.3248		1.77	2.00	-11.7	30.0
Acetone	Ave	0.4540	0.3616		4.78	6.00	-20.4	30.0
Isopropyl alcohol	Ave	1.480	1.382		5.60	6.00	-6.7	30.0
Pentane	Ave	0.2014	0.2529		2.51	2.00	25.6	30.0
Ethyl ether	Ave	0.9413	0.6855		1.46	2.00	-27.2	30.0
1,1-Dichloroethene	Ave	1.112	1.395		2.51	2.00	25.4	30.0
tert-Butyl alcohol	Ave	1.742	1.872		2.15	2.00	7.5	30.0
Acrylonitrile	Ave	0.5889	0.5373		1.83	2.00	-8.8	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.712	2.839		2.09	2.00	4.7	30.0
Methylene Chloride	Ave	1.081	1.118		2.07	2.00	3.4	30.0
3-Chloropropene	Ave	1.524	1.117		1.47	2.00	-26.7	30.0
Carbon disulfide	Ave	3.355	3.706		2.21	2.00	10.5	30.0
trans-1,2-Dichloroethene	Ave	1.246	1.365		2.19	2.00	9.5	30.0
2-Methylpentane	Ave	2.354	2.096		1.78	2.00	-11.0	30.0
Methyl tert-butyl ether	Ave	3.517	2.947		1.68	2.00	-16.2	30.0
1,1-Dichloroethane	Ave	2.343	2.215		1.89	2.00	-5.5	30.0
Vinyl acetate	Ave	2.955	2.154		1.46	2.00	-27.1	30.0
2-Butanone (MEK)	Ave	0.5522	0.4077		1.48	2.00	-26.2	30.0
Hexane	Ave	0.8953	0.8763		1.96	2.00	-2.1	30.0
Isopropyl ether	Ave	3.424	2.572		1.50	2.00	-24.9	30.0
cis-1,2-Dichloroethene	Ave	1.276	1.321		2.07	2.00	3.6	30.0
Ethyl acetate	Ave	2.279	1.562		1.37	2.00	-31.5*	30.0
Chloroform	Ave	3.197	3.140		1.97	2.00	-1.8	30.0
Tert-butyl ethyl ether	Ave	3.324	2.780		1.67	2.00	-16.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: CCVIS 140-5859/2 Calibration Date: 07/19/2016 10:10

Instrument ID: ME Calib Start Date: 06/28/2016 14:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2016 20:55

Lab File ID: ECCVG19A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.077	0.7890		1.47	2.00	-26.8	30.0
1,1,1-Trichloroethane	Ave	3.944	3.784		1.92	2.00	-4.1	30.0
1,2-Dichloroethane	Ave	0.5729	0.5029		1.76	2.00	-12.2	30.0
Cyclohexane	Ave	0.1299	0.1445		2.23	2.00	11.2	30.0
1-Butanol	Ave	0.0803	0.0572		1.43	2.00	-28.8	30.0
Benzene	Ave	0.7550	0.7693		2.04	2.00	1.9	30.0
Carbon tetrachloride	Ave	0.9538	1.010		2.12	2.00	5.9	30.0
2,3-Dimethylpentane	Ave	0.1831	0.1935		2.11	2.00	5.7	30.0
Thiophene	Ave	0.4464	0.4766		2.14	2.00	6.8	30.0
Tert-amyl methyl ether	Ave	0.7766	0.6697		1.73	2.00	-13.8	30.0
2,2,4-Trimethylpentane	Ave	1.150	1.159		2.02	2.00	0.7	30.0
Heptane	Ave	0.2794	0.2968		2.12	2.00	6.2	30.0
1,2-Dichloropropane	Ave	0.2736	0.2607		1.91	2.00	-4.7	30.0
Trichloroethene	Ave	0.4217	0.4637		2.20	2.00	9.9	30.0
Dibromomethane	Ave	0.3980	0.3963		1.99	2.00	-0.4	30.0
Bromodichloromethane	Ave	0.7464	0.7568		2.03	2.00	1.4	30.0
1,4-Dioxane	Ave	0.1071	0.1108		2.07	2.00	3.5	30.0
Methyl methacrylate	Ave	0.3355	0.2193		1.31	2.00	-34.6*	30.0
Methylcyclohexane	Ave	0.5888	0.6736		2.29	2.00	14.4	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.5602	0.3413		1.22	2.00	-39.1*	30.0
cis-1,3-Dichloropropene	Ave	0.4996	0.4979		1.99	2.00	-0.3	30.0
trans-1,3-Dichloropropene	Ave	0.5190	0.4820		1.86	2.00	-7.1	30.0
Toluene	Ave	0.9507	0.9319		1.96	2.00	-2.0	30.0
1,1,2-Trichloroethane	Ave	0.2814	0.2811		2.00	2.00	-0.1	30.0
2-Methylthiophene	Ave	0.7839	0.8264		2.11	2.00	5.4	30.0
3-Methylthiophene	Ave	0.7745	0.7978		2.06	2.00	3.0	30.0
2-Hexanone	Ave	0.2183	0.1848		1.69	2.00	-15.3	30.0
Octane	Ave	0.3286	0.3386		2.06	2.00	3.0	30.0
Dibromochloromethane	Ave	0.7286	0.7511		2.06	2.00	3.1	30.0
1,2-Dibromoethane (EDB)	Ave	0.5706	0.5657		1.98	2.00	-0.9	30.0
Tetrachloroethene	Ave	0.4390	0.4718		2.15	2.00	7.5	30.0
Chlorobenzene	Ave	0.7921	0.8179		2.07	2.00	3.3	30.0
2,3-Dimethylheptane	Ave	0.7723	0.6258		1.62	2.00	-19.0	30.0
Ethylbenzene	Ave	1.297	1.256		1.94	2.00	-3.1	30.0
2-Ethylthiophene	Ave	1.031	1.040		2.02	2.00	0.9	30.0
m-Xylene & p-Xylene	Ave	1.029	0.9700		3.77	4.00	-5.7	30.0
Bromoform	Ave	1.025	0.7384		1.44	2.00	-28.0	30.0
Nonane	Ave	0.5315	0.4908		1.85	2.00	-7.7	30.0
Styrene	Ave	0.7060	0.6999		1.98	2.00	-0.9	30.0
o-Xylene	Ave	1.086	1.014		1.87	2.00	-6.7	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6685	0.6383		1.91	2.00	-4.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: CCVIS 140-5859/2 Calibration Date: 07/19/2016 10:10

Instrument ID: ME Calib Start Date: 06/28/2016 14:43

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/28/2016 20:55

Lab File ID: ECCVG19A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2623	0.2428		1.85	2.00	-7.4	30.0
Isopropylbenzene	Ave	1.453	1.377		1.90	2.00	-5.2	30.0
Propylbenzene	Ave	0.4065	0.3858		1.90	2.00	-5.1	30.0
2-Chlorotoluene	Ave	0.3885	0.3839		1.98	2.00	-1.2	30.0
4-Ethyltoluene	Ave	1.370	1.296		1.89	2.00	-5.4	30.0
1,3,5-Trimethylbenzene	Ave	0.6779	0.6345		1.87	2.00	-6.4	30.0
Alpha Methyl Styrene	Ave	0.5736	0.5272		1.84	2.00	-8.1	30.0
Decane	Ave	0.6176	0.5841		1.89	2.00	-5.4	30.0
tert-Butylbenzene	Ave	1.313	1.224		1.87	2.00	-6.8	30.0
1,2,4-Trimethylbenzene	Ave	1.211	1.112		1.84	2.00	-8.2	30.0
sec-Butylbenzene	Ave	1.659	1.525		1.84	2.00	-8.1	30.0
1,3-Dichlorobenzene	Ave	0.9640	0.7939		1.65	2.00	-17.6	30.0
Benzyl chloride	Ave	1.040	0.9430		1.81	2.00	-9.3	30.0
1,4-Dichlorobenzene	Ave	0.9320	0.7704		1.65	2.00	-17.3	30.0
4-Isopropyltoluene	Ave	1.420	1.330		1.87	2.00	-6.3	30.0
1,2,3-Trimethylbenzene	Ave	0.9188	0.8519		1.86	2.00	-7.3	30.0
Butylcyclohexane	Ave	0.8181	0.8081		1.98	2.00	-1.2	30.0
1,2-Dichlorobenzene	Ave	0.9336	0.7596		1.63	2.00	-18.6	30.0
Indane	Ave	1.092	1.019		1.87	2.00	-6.7	30.0
Indene	Ave	0.8301	0.7479		1.80	2.00	-9.9	30.0
Butylbenzene	Ave	1.257	1.138		1.81	2.00	-9.5	30.0
Undecane	Ave	0.6056	0.5322		1.76	2.00	-12.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.999	0.9111		1.83	2.00	-8.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.4161	0.3030		1.46	2.00	-27.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.159	1.079		1.86	2.00	-6.9	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6976	0.6547		1.88	2.00	-6.1	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9056	0.8654		1.91	2.00	-4.4	30.0
Dodecane	Ave	0.4507	0.4032		1.79	2.00	-10.5	30.0
1,2,4-Trichlorobenzene	Ave	0.8814	0.5462		1.24	2.00	-38.0*	30.0
Naphthalene	Ave	1.144	1.017		1.78	2.00	-11.1	30.0
Benzo(b)thiophene	Ave	0.7419	0.6163		1.66	2.00	-16.9	30.0
Hexachlorobutadiene	Ave	1.241	0.7405		1.19	2.00	-40.3*	30.0
1,2,3-Trichlorobenzene	Ave	0.8526	0.5019		1.18	2.00	-41.1*	30.0
2-Methylnaphthalene	Ave	0.1631	0.1329		5.10	6.25	-18.5	50.0
1-Methylnaphthalene	Ave	0.1272	0.1122		5.51	6.25	-11.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.7646	0.7850		4.11	4.00	2.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ECCVG19A.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 19-Jul-2016 10:10:30 ALS Bottle#: 5 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003184-002
Misc. Info.: P20
Operator ID: 7126 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Jul-2016 12:47:49 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK029

First Level Reviewer: tajh Date: 20-Jul-2016 12:47:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.605	7.605	0.000	84	575261	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	9.849	9.849	0.000	94	2439040	4.00	4.00	s
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	87	2438129	4.00	4.00	s
$ 4 4-Bromofluorobenzene (Surr	95	16.503	16.503	0.000	95	1913837	4.00	4.11	
6 Chlorodifluoromethane	67	2.925	2.925	0.000	95	157622	2.00	1.98	
7 Propene	41	2.930	2.930	0.000	97	309924	2.00	1.94	
8 Dichlorodifluoromethane	85	2.973	2.973	0.000	99	1350824	2.00	2.02	
9 Chloromethane	52	3.124	3.124	0.000	98	109323	2.00	2.16	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.135	3.135	0.000	91	864005	2.00	2.12	
11 Acetaldehyde	44	3.254	3.254	0.000	98	482859	10.0	7.67	
12 Vinyl chloride	62	3.270	3.270	0.000	99	407891	2.00	2.31	
13 Butane	43	3.340	3.340	0.000	82	528671	2.00	2.12	
14 Butadiene	54	3.340	3.340	0.000	73	285527	2.00	2.24	
15 Bromomethane	94	3.610	3.610	0.000	98	447028	2.00	2.58	
16 Chloroethane	64	3.723	3.723	0.000	100	201785	2.00	2.48	
17 Ethanol	31	3.815	3.815	0.000	96	492071	10.0	7.93	
18 Vinyl bromide	106	3.976	3.976	0.000	98	435517	2.00	2.54	
19 2-Methylbutane	43	4.019	4.019	0.000	86	359353	2.00	2.11	
20 Trichlorofluoromethane	101	4.203	4.203	0.000	99	1529123	2.00	2.22	
21 Acrolein	56	4.214	4.214	0.000	95	89489	2.00	1.90	
22 Acetonitrile	40	4.273	4.273	0.000	99	93464	2.00	1.77	
23 Acetone	58	4.311	4.311	0.000	98	312203	6.00	4.78	
24 Isopropyl alcohol	45	4.386	4.386	0.000	94	1192808	6.00	5.60	
25 Pentane	72	4.392	4.392	0.000	96	72775	2.00	2.51	
26 Ethyl ether	31	4.537	4.537	0.000	84	197271	2.00	1.46	
27 1,1-Dichloroethene	96	4.818	4.818	0.000	99	401459	2.00	2.51	
28 2-Methyl-2-propanol	59	4.915	4.915	0.000	93	538854	2.00	2.15	
29 Acrylonitrile	53	4.920	4.920	0.000	50	154623	2.00	1.83	
30 1,1,2-Trichloro-1,2,2-trif	101	4.979	4.979	0.000	96	817028	2.00	2.09	
31 Methylene Chloride	84	5.141	5.141	0.000	91	321638	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.157	5.157	0.000	96	321487	2.00	1.47	
33 Carbon disulfide	76	5.287	5.287	0.000	99	1066662	2.00	2.21	
34 trans-1,2-Dichloroethene	96	5.912	5.912	0.000	98	392785	2.00	2.19	
35 2-Methylpentane	43	5.928	5.928	0.000	90	603133	2.00	1.78	
36 Methyl tert-butyl ether	73	6.042	6.042	0.000	94	848159	2.00	1.68	
37 1,1-Dichloroethane	63	6.317	6.317	0.000	99	637472	2.00	1.89	
38 Vinyl acetate	43	6.430	6.430	0.000	99	619969	2.00	1.46	
39 2-Butanone (MEK)	72	6.867	6.867	0.000	96	117319	2.00	1.48	
40 Hexane	56	6.877	6.877	0.000	84	252196	2.00	1.96	
41 Isopropyl ether	45	7.050	7.050	0.000	92	740084	2.00	1.50	
42 cis-1,2-Dichloroethene	96	7.282	7.282	0.000	95	380280	2.00	2.07	
43 Ethyl acetate	43	7.487	7.487	0.000	99	449634	2.00	1.37	
44 Chloroform	83	7.622	7.622	0.000	97	903525	2.00	1.97	
45 Tert-butyl ethyl ether	59	7.719	7.719	0.000	93	800175	2.00	1.67	
46 Tetrahydrofuran	42	8.026	8.026	0.000	85	227048	2.00	1.47	
47 1,1,1-Trichloroethane	97	8.635	8.635	0.000	95	1088971	2.00	1.92	
48 1,2-Dichloroethane	62	8.749	8.749	0.000	99	613590	2.00	1.76	
50 Cyclohexane	69	9.228	9.228	0.000	95	176328	2.00	2.23	
49 n-Butanol	31	9.239	9.239	0.000	58	69736	2.00	1.43	
51 Benzene	78	9.239	9.239	0.000	96	938720	2.00	2.04	
52 Carbon tetrachloride	117	9.261	9.261	0.000	98	1232807	2.00	2.12	
53 2,3-Dimethylpentane	71	9.374	9.374	0.000	87	236076	2.00	2.11	
54 Thiophene	84	9.525	9.525	0.000	93	581508	2.00	2.14	
55 Tert-amyl methyl ether	73	9.773	9.773	0.000	98	816779	2.00	1.73	
56 Isooctane	57	10.075	10.075	0.000	98	1413618	2.00	2.02	
57 n-Heptane	71	10.506	10.506	0.000	84	362081	2.00	2.12	
58 1,2-Dichloropropane	63	10.577	10.577	0.000	83	318127	2.00	1.91	
59 Trichloroethene	130	10.614	10.614	0.000	98	565752	2.00	2.20	
60 Dibromomethane	93	10.701	10.701	0.000	93	483602	2.00	1.99	
61 Dichlorobromomethane	83	10.868	10.868	0.000	99	923399	2.00	2.03	
62 1,4-Dioxane	88	10.900	10.900	0.000	82	135185	2.00	2.07	
63 Methyl methacrylate	41	11.008	11.008	0.000	83	267620	2.00	1.31	
64 Methylcyclohexane	83	11.439	11.439	0.000	93	821907	2.00	2.29	
65 4-Methyl-2-pentanone (MIBK	43	11.914	11.914	0.000	94	416408	2.00	1.22	
66 cis-1,3-Dichloropropene	75	11.957	11.957	0.000	92	607560	2.00	1.99	
67 trans-1,3-Dichloropropene	75	12.696	12.696	0.000	96	587952	2.00	1.86	
68 Toluene	91	12.804	12.804	0.000	94	1136698	2.00	1.96	
69 1,1,2-Trichloroethane	83	12.895	12.895	0.000	99	342811	2.00	2.00	
70 2-Methylthiophene	97	12.960	12.960	0.000	97	1008017	2.00	2.11	
71 3-Methylthiophene	97	13.170	13.170	0.000	98	973097	2.00	2.06	
72 2-Hexanone	58	13.316	13.316	0.000	96	225433	2.00	1.69	
73 n-Octane	85	13.548	13.548	0.000	84	412936	2.00	2.06	
74 Chlorodibromomethane	129	13.607	13.607	0.000	97	916071	2.00	2.06	
75 Ethylene Dibromide	107	13.904	13.904	0.000	100	690025	2.00	1.98	
76 Tetrachloroethene	129	13.985	13.985	0.000	96	575428	2.00	2.15	
77 Chlorobenzene	112	14.880	14.880	0.000	94	997582	2.00	2.07	
78 2,3-Dimethylheptane	43	14.928	14.928	0.000	85	763252	2.00	1.62	
79 Ethylbenzene	91	15.187	15.187	0.000	98	1532129	2.00	1.94	
80 2-Ethylthiophene	97	15.290	15.290	0.000	97	1268287	2.00	2.02	
81 m-Xylene & p-Xylene	91	15.354	15.354	0.000	98	2366152	4.00	3.77	
83 Bromoform	173	15.791	15.791	0.000	97	900649	2.00	1.44	
82 n-Nonane	57	15.802	15.802	0.000	82	598643	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.823	15.823	0.000	98	853668	2.00	1.98	
85 o-Xylene	91	15.883	15.883	0.000	99	1236282	2.00	1.87	
86 1,1,2,2-Tetrachloroethane	83	16.217	16.217	0.000	98	778507	2.00	1.91	
87 1,2,3-Trichloropropane	110	16.379	16.379	0.000	96	296162	2.00	1.85	
88 Isopropylbenzene	105	16.481	16.481	0.000	97	1679959	2.00	1.90	
89 N-Propylbenzene	120	17.037	17.037	0.000	99	470603	2.00	1.90	
90 2-Chlorotoluene	126	17.069	17.069	0.000	96	468252	2.00	1.98	
91 4-Ethyltoluene	105	17.193	17.193	0.000	98	1580698	2.00	1.89	
92 1,3,5-Trimethylbenzene	120	17.279	17.279	0.000	93	773955	2.00	1.87	
93 Alpha Methyl Styrene	118	17.527	17.527	0.000	88	643082	2.00	1.84	
94 n-Decane	57	17.614	17.614	0.000	94	712402	2.00	1.89	
95 tert-Butylbenzene	119	17.732	17.732	0.000	91	1493427	2.00	1.87	
96 1,2,4-Trimethylbenzene	105	17.748	17.748	0.000	95	1356336	2.00	1.84	
97 sec-Butylbenzene	105	18.023	18.023	0.000	97	1859821	2.00	1.84	
98 1,3-Dichlorobenzene	146	18.029	18.029	0.000	98	968340	2.00	1.65	
99 Benzyl chloride	91	18.115	18.115	0.000	98	1150190	2.00	1.81	
100 1,4-Dichlorobenzene	146	18.126	18.126	0.000	94	939684	2.00	1.65	
101 4-Isopropyltoluene	119	18.207	18.207	0.000	96	1622683	2.00	1.87	
102 1,2,3-Trimethylbenzene	105	18.250	18.250	0.000	98	1039008	2.00	1.86	
103 Butylcyclohexane	83	18.315	18.315	0.000	96	985614	2.00	1.98	
104 1,2-Dichlorobenzene	146	18.503	18.503	0.000	91	926447	2.00	1.63	
105 2,3-Dihydroindene	117	18.509	18.509	0.000	94	1243108	2.00	1.87	
106 Indene	116	18.644	18.644	0.000	92	912198	2.00	1.80	
107 n-Butylbenzene	91	18.665	18.665	0.000	98	1387447	2.00	1.81	
108 Undecane	57	19.010	19.010	0.000	91	649092	2.00	1.76	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.053	19.053	0.000	97	1111316	2.00	1.83	
110 1,2-Dibromo-3-Chloropropan	157	19.145	19.145	0.000	99	369562	2.00	1.46	
111 1,2,4,5-Tetramethylbenzene	119	19.452	19.452	0.000	96	1316457	2.00	1.86	
112 1,2,3,5-Tetramethylbenzene	119	19.506	19.506	0.000	95	798555	2.00	1.88	
113 1,2,3,4-Tetramethylbenzene	119	19.905	19.905	0.000	97	1055565	2.00	1.91	
114 Dodecane	57	20.083	20.083	0.000	95	491800	2.00	1.79	
115 1,2,4-Trichlorobenzene	180	20.240	20.240	0.000	94	666255	2.00	1.24	
116 Naphthalene	128	20.369	20.369	0.000	98	1240174	2.00	1.78	
117 Benzo(b)thiophene	134	20.466	20.466	0.000	99	751653	2.00	1.66	
118 Hexachlorobutadiene	225	20.585	20.585	0.000	96	903235	2.00	1.19	
119 1,2,3-Trichlorobenzene	180	20.644	20.644	0.000	95	612118	2.00	1.18	
120 2-Methylnaphthalene	142	21.469	21.469	0.000	99	506597	6.25	5.10	
121 1-Methylnaphthalene	142	21.674	21.674	0.000	99	427618	6.25	5.51	
A 124 Toluene Range	1	12.804	(12.774-12.834)		0	2737905	2.00	1.86	
A 125 C8 Range	1	13.548	(13.518-13.578)		0	3127273	2.00	1.76	
S 126 Xylenes, Total	100				0		6.00	5.64	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.26	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00020	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

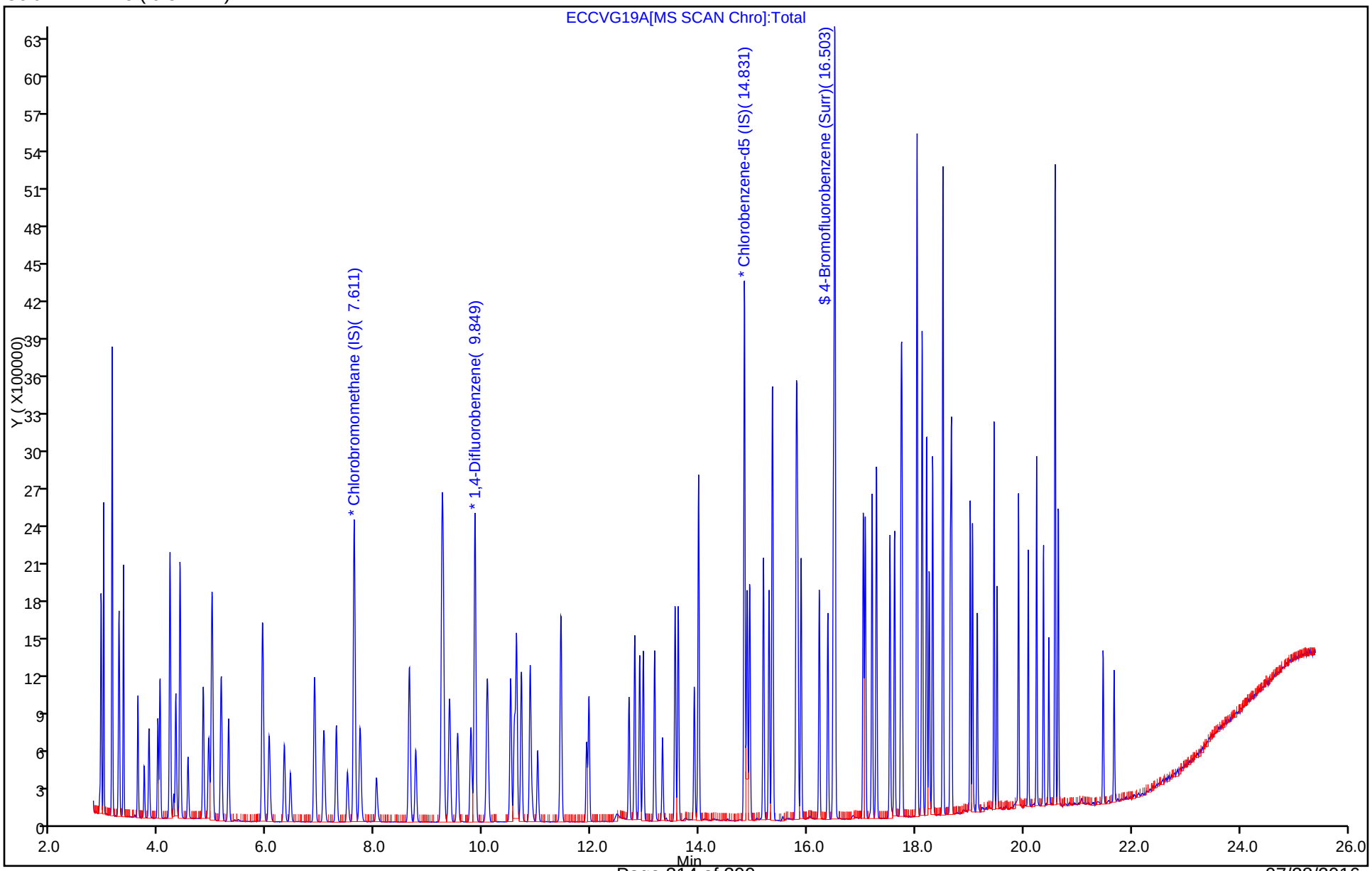
Report Date: 20-Jul-2016 12:47:51 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ECCVG19A.D

Injection Date:	19-Jul-2016 10:10:30	Instrument ID:	ME	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.4577		1.84	2.00	-7.8	35.0
Propene	Ave	1.154	1.043		1.81	2.00	-9.7	35.0
Dichlorodifluoromethane	Ave	4.396	4.203		1.91	2.00	-4.4	35.0
Chloromethane	Ave	0.3106	0.2987		1.92	2.00	-3.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.325		1.91	2.00	-4.7	35.0
Acetaldehyde	Ave	0.2696	0.2166		8.04	10.0	-19.6	35.0
Vinyl chloride	Ave	1.053	1.005		1.91	2.00	-4.5	35.0
Butane	Ave	1.150	1.143		1.99	2.00	-0.6	35.0
1,3-Butadiene	Ave	0.6912	0.6786		1.96	2.00	-1.8	35.0
Bromomethane	Ave	0.9910	0.8891		1.79	2.00	-10.3	35.0
Chloroethane	Ave	0.3777	0.3535		1.87	2.00	-6.4	35.0
Ethanol	Ave	0.1546	0.1422		9.20	10.0	-8.0	35.0
Vinyl bromide	Ave	1.172	1.174		2.00	2.00	0.2	35.0
2-Methylbutane	Ave	1.379	1.330		1.93	2.00	-3.6	35.0
Trichlorofluoromethane	Ave	4.068	3.824		1.88	2.00	-6.0	35.0
Acrolein	Ave	0.3360	0.2403		1.43	2.00	-28.5	35.0
Acetonitrile	Ave	0.3683	0.3377		1.83	2.00	-8.3	35.0
Acetone	Ave	0.4583	0.4025		5.27	6.00	-12.2	35.0
Isopropyl alcohol	Ave	1.527	1.389		5.46	6.00	-9.0	35.0
Pentane	Ave	0.1722	0.1657		1.92	2.00	-3.8	35.0
Ethyl ether	Ave	0.7823	0.7112		1.82	2.00	-9.1	35.0
1,1-Dichloroethene	Ave	1.183	1.132		1.91	2.00	-4.3	35.0
tert-Butyl alcohol	Ave	2.084	1.947		1.87	2.00	-6.6	35.0
Acrylonitrile	Ave	0.7011	0.6319		1.80	2.00	-9.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.650		1.92	2.00	-4.1	35.0
Methylene Chloride	Ave	1.099	1.018		1.85	2.00	-7.4	35.0
3-Chloropropene	Ave	1.055	1.039		1.97	2.00	-1.5	35.0
Carbon disulfide	Ave	3.359	3.239		1.93	2.00	-3.6	35.0
trans-1,2-Dichloroethene	Ave	1.188	1.152		1.94	2.00	-3.0	35.0
2-Methylpentane	Ave	2.424	2.494		2.06	2.00	2.9	35.0
Methyl tert-butyl ether	Ave	2.440	2.242		1.84	2.00	-8.1	35.0
1,1-Dichloroethane	Ave	2.417	2.338		1.94	2.00	-3.2	35.0
Vinyl acetate	Ave	2.001	1.878		1.88	2.00	-6.1	35.0
2-Butanone (MEK)	Ave	0.3839	0.3342		1.74	2.00	-13.0	35.0
Hexane	Ave	1.043	1.001		1.92	2.00	-3.9	35.0
Isopropyl ether	Ave	3.021	2.743		1.82	2.00	-9.2	35.0
cis-1,2-Dichloroethene	Ave	1.183	1.157		1.96	2.00	-2.2	35.0
Ethyl acetate	Ave	1.599	1.446		1.81	2.00	-9.6	35.0
Chloroform	Ave	2.678	2.528		1.89	2.00	-5.6	35.0
Tert-butyl ethyl ether	Ave	2.990	2.910		1.95	2.00	-2.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.8157		1.91	2.00	-4.3	35.0
1,1,1-Trichloroethane	Ave	3.097	2.981		1.92	2.00	-3.8	35.0
1,2-Dichloroethane	Ave	0.4369	0.4085		1.87	2.00	-6.5	35.0
1-Butanol	Ave	0.0610	0.0607		1.99	2.00	-0.4	35.0
Benzene	Ave	0.6983	0.6894		1.97	2.00	-1.3	35.0
Cyclohexane	Ave	0.1171	0.1196		2.04	2.00	2.2	35.0
Carbon tetrachloride	Ave	0.7435	0.7491		2.02	2.00	0.8	35.0
2,3-Dimethylpentane	Ave	0.1606	0.1409		1.75	2.00	-12.3	35.0
Thiophene	Ave	0.3988	0.4038		2.02	2.00	1.2	35.0
Tert-amyl methyl ether	Ave	0.6151	0.6035		1.96	2.00	-1.9	35.0
2,2,4-Trimethylpentane	Ave	1.315	1.234		1.88	2.00	-6.1	35.0
Heptane	Ave	0.2306	0.2187		1.90	2.00	-5.2	35.0
1,2-Dichloropropane	Ave	0.2817	0.2693		1.91	2.00	-4.4	35.0
Trichloroethene	Ave	0.3524	0.3368		1.91	2.00	-4.4	35.0
Dibromomethane	Ave	0.3120	0.3077		1.97	2.00	-1.4	35.0
Bromodichloromethane	Ave	0.5687	0.5455		1.92	2.00	-4.1	35.0
1,4-Dioxane	Ave	0.0832	0.0813		1.95	2.00	-2.3	35.0
Methyl methacrylate	Ave	0.2152	0.1781		1.66	2.00	-17.2	35.0
Methylcyclohexane	Ave	0.5358	0.4142		1.55	2.00	-22.7	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.3918		1.66	2.00	-17.1	35.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3528		1.92	2.00	-4.1	35.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3191		1.95	2.00	-2.5	35.0
Toluene	Ave	0.8518	0.7994		1.88	2.00	-6.2	35.0
1,1,2-Trichloroethane	Ave	0.2468	0.2300		1.86	2.00	-6.8	35.0
2-Methylthiophene	Ave	0.7101	0.7046		1.98	2.00	-0.8	35.0
3-Methylthiophene	Ave	0.6812	0.6917		2.03	2.00	1.5	35.0
2-Hexanone	Ave	0.2481	0.2334		1.88	2.00	-5.9	35.0
Octane	Ave	0.2789	0.2635		1.89	2.00	-5.5	35.0
Dibromochloromethane	Ave	0.5906	0.5581		1.89	2.00	-5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.4158		1.84	2.00	-7.8	35.0
Tetrachloroethene	Ave	0.3991	0.3509		1.76	2.00	-12.1	35.0
2,3-Dimethylheptane	Ave	0.7942	0.7444		1.87	2.00	-6.3	35.0
Chlorobenzene	Ave	0.6404	0.5994		1.87	2.00	-6.4	35.0
Ethylbenzene	Ave	0.9714	0.8773		1.81	2.00	-9.7	35.0
2-Ethylthiophene	Ave	0.7342	0.6586		1.79	2.00	-10.3	35.0
m-Xylene & p-Xylene	Ave	0.7539	0.6763		3.59	4.00	-10.3	35.0
Nonane	Ave	0.5580	0.5505		1.97	2.00	-1.4	35.0
Bromoform	Ave	0.4442	0.4033		1.82	2.00	-9.2	35.0
Styrene	Ave	0.4637	0.4468		1.93	2.00	-3.6	35.0
o-Xylene	Ave	0.8099	0.7115		1.76	2.00	-12.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4659		1.81	2.00	-9.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1320		1.80	2.00	-9.8	35.0
Isopropylbenzene	Ave	1.019	0.9649		1.89	2.00	-5.3	35.0
Propylbenzene	Ave	0.2557	0.2389		1.87	2.00	-6.6	35.0
2-Chlorotoluene	Ave	0.2699	0.2543		1.88	2.00	-5.8	35.0
4-Ethyltoluene	Ave	0.8665	0.7943		1.83	2.00	-8.3	35.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4105		1.79	2.00	-10.5	35.0
Alpha Methyl Styrene	Ave	0.3179	0.2957		1.86	2.00	-7.0	35.0
Decane	Ave	0.5704	0.5426		1.90	2.00	-4.9	35.0
tert-Butylbenzene	Ave	0.9118	0.8387		1.84	2.00	-8.0	35.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7161		1.85	2.00	-7.7	35.0
sec-Butylbenzene	Ave	1.131	1.069		1.89	2.00	-5.5	35.0
1,3-Dichlorobenzene	Ave	0.3965	0.3740		1.89	2.00	-5.7	35.0
Benzyl chloride	Ave	0.3894	0.3692		1.90	2.00	-5.2	35.0
1,4-Dichlorobenzene	Ave	0.3393	0.3250		1.92	2.00	-4.2	35.0
4-Isopropyltoluene	Ave	0.9296	0.8648		1.86	2.00	-7.0	35.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5929		1.92	2.00	-3.9	35.0
Butylcyclohexane	Ave	0.6728	0.6178		1.84	2.00	-8.2	35.0
1,2-Dichlorobenzene	Ave	0.4035	0.3783		1.88	2.00	-6.2	35.0
Indane	Ave	0.6488	0.5699		1.76	2.00	-12.2	35.0
Butylbenzene	Ave	0.7177	0.6878		1.92	2.00	-4.2	35.0
Indene	Ave	0.3721	0.4470		2.40	2.00	20.1	35.0
Undecane	Ave	0.5442	0.4861		1.79	2.00	-10.7	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.6781		2.24	2.00	12.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0899		1.36	2.00	-32.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.7152		1.94	2.00	-3.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.4575		1.92	2.00	-4.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.5337		1.81	2.00	-9.3	35.0
Dodecane	Ave	0.4840	0.4518		1.87	2.00	-6.7	35.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.1201		2.24	2.00	12.2	35.0
Naphthalene	Ave	0.2839	0.2802		1.97	2.00	-1.3	35.0
Benzo(b)thiophene	Ave	0.0997	0.1163		2.33	2.00	16.7	35.0
Hexachlorobutadiene	Ave	0.4264	0.3419		1.60	2.00	-19.8	35.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.1161		1.98	2.00	-1.2	35.0
2-Methylnaphthalene	Ave	0.0185	0.0246		8.30	6.25	32.8	50.0
1-Methylnaphthalene	Ave	0.0195	0.0272		8.75	6.25	40.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6438		4.36	4.00	9.0	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22ICVR.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Jun-2016 09:52:30 ALS Bottle#: 15 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044581
Misc. Info.: J062216,T15,,140-0003070-017
Operator ID: 7126 Instrument ID: MJ
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:31:06 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 27-Jun-2016 15:11:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	94	332894	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	95	1464991	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	87	1301938	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.850	17.854	-0.004	91	838201	4.00	4.36	
6 Chlorodifluoromethane	67	3.928	3.925	0.003	95	76174	2.00	1.84	
7 Propene	41	3.939	3.939	0.000	99	173552	2.00	1.81	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	99	699548	2.00	1.91	
9 Chloromethane	52	4.197	4.196	0.001	52	49725	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	88	386969	2.00	1.91	
11 Acetaldehyde	44	4.364	4.364	0.000	94	180264	10.0	8.04	
12 Vinyl chloride	62	4.385	4.384	0.001	99	167327	2.00	1.91	
14 Butadiene	54	4.482	4.479	0.003	75	112957	2.00	1.96	
13 Butane	43	4.477	4.480	-0.003	82	190228	2.00	1.99	
15 Bromomethane	94	4.832	4.837	-0.005	98	147988	2.00	1.79	
16 Chloroethane	64	4.988	4.991	-0.003	97	58841	2.00	1.87	
17 Ethanol	31	5.079	5.081	-0.002	91	118344	10.0	9.20	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	195483	2.00	2.00	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	221391	2.00	1.93	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	636434	2.00	1.88	
21 Acrolein	56	5.623	5.623	0.000	90	39993	2.00	1.43	
22 Acetonitrile	40	5.693	5.698	-0.005	98	56209	2.00	1.83	
23 Acetone	58	5.741	5.747	-0.006	97	200973	6.00	5.27	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	93	693686	6.00	5.46	
25 Pentane	72	5.843	5.845	-0.002	98	27576	2.00	1.92	
26 Ethyl ether	31	6.021	6.027	-0.006	88	118368	2.00	1.82	
27 1,1-Dichloroethene	96	6.365	6.368	-0.003	93	188420	2.00	1.91	
28 2-Methyl-2-propanol	59	6.446	6.457	-0.011	92	324120	2.00	1.87	
29 Acrylonitrile	53	6.478	6.479	-0.001	93	105174	2.00	1.80	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	97	441155	2.00	1.92	
31 Methylene Chloride	84	6.736	6.739	-0.003	98	169372	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	97	172874	2.00	1.97	
33 Carbon disulfide	76	6.914	6.916	-0.002	98	539125	2.00	1.93	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	95	191768	2.00	1.94	
35 2-Methylpentane	43	7.597	7.597	0.000	93	415074	2.00	2.06	
36 Methyl tert-butyl ether	73	7.710	7.715	-0.005	96	373103	2.00	1.84	
37 1,1-Dichloroethane	63	8.022	8.025	-0.003	99	389224	2.00	1.94	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	312665	2.00	1.88	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	55619	2.00	1.74	
40 Hexane	56	8.608	8.613	-0.005	89	166685	2.00	1.92	
41 Isopropyl ether	45	8.770	8.773	-0.003	97	456690	2.00	1.82	
42 cis-1,2-Dichloroethene	96	9.039	9.044	-0.005	98	192561	2.00	1.96	
43 Ethyl acetate	43	9.216	9.224	-0.008	99	240614	2.00	1.81	
44 Chloroform	83	9.394	9.395	-0.001	97	420797	2.00	1.89	
45 Tert-butyl ethyl ether	59	9.469	9.471	-0.002	95	484417	2.00	1.95	
46 Tetrahydrofuran	42	9.813	9.821	-0.008	92	135764	2.00	1.91	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	496131	2.00	1.92	
48 1,2-Dichloroethane	62	10.550	10.556	-0.006	98	299185	2.00	1.87	
49 n-Butanol	31	10.948	10.957	-0.009	79	44469	2.00	1.99	
50 Cyclohexane	69	11.029	11.031	-0.002	72	87635	2.00	2.04	
51 Benzene	78	11.029	11.031	-0.002	98	504958	2.00	1.97	
52 Carbon tetrachloride	117	11.051	11.055	-0.004	97	548707	2.00	2.02	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	89	103196	2.00	1.75	
54 Thiophene	84	11.298	11.302	-0.004	99	295746	2.00	2.02	
55 Tert-amyl methyl ether	73	11.476	11.480	-0.004	97	392868	2.00	1.96	
56 Isooctane	57	11.755	11.759	-0.004	99	904255	2.00	1.88	
57 n-Heptane	71	12.121	12.122	-0.001	89	160192	2.00	1.90	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	91	197245	2.00	1.91	
59 Trichloroethene	130	12.256	12.257	-0.001	96	246672	2.00	1.91	
60 Dibromomethane	93	12.347	12.348	-0.001	96	225387	2.00	1.97	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	399538	2.00	1.92	
61 1,4-Dioxane	88	12.492	12.501	-0.009	85	59580	2.00	1.95	
63 Methyl methacrylate	41	12.557	12.558	-0.001	91	130452	2.00	1.66	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	303405	2.00	1.55	
65 4-Methyl-2-pentanone (MIBK	43	13.396	13.399	-0.003	95	286957	2.00	1.66	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	258405	2.00	1.92	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	207749	2.00	1.95	
68 Toluene	91	14.273	14.277	-0.004	93	520385	2.00	1.88	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	99	149716	2.00	1.86	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	458647	2.00	1.98	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	450272	2.00	2.03	
72 2-Hexanone	58	14.714	14.717	-0.003	96	151934	2.00	1.88	
73 n-Octane	85	14.935	14.931	0.004	91	171506	2.00	1.89	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	363297	2.00	1.89	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	98	270662	2.00	1.84	
76 Tetrachloroethene	129	15.408	15.408	0.000	95	228453	2.00	1.76	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	95	484582	2.00	1.87	
78 Chlorobenzene	112	16.279	16.279	0.000	94	390212	2.00	1.87	
79 Ethylbenzene	91	16.559	16.557	0.002	99	571102	2.00	1.81	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	428757	2.00	1.79	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	100	880557	4.00	3.59	
82 n-Nonane	57	17.108	17.109	-0.001	88	358339	2.00	1.97	
83 Bromoform	173	17.183	17.179	0.004	88	262509	2.00	1.82	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.183	17.181	0.002	99	290874	2.00	1.93	
85 o-Xylene	91	17.242	17.242	0.000	98	463178	2.00	1.76	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	303273	2.00	1.81	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	98	85923	2.00	1.80	
88 Isopropylbenzene	105	17.818	17.815	0.003	95	628135	2.00	1.89	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	155529	2.00	1.87	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	97	165551	2.00	1.88	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	517090	2.00	1.83	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	267208	2.00	1.79	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	87	192479	2.00	1.86	
94 n-Decane	57	18.808	18.805	0.003	89	353180	2.00	1.90	
95 tert-Butylbenzene	119	18.958	18.958	0.000	93	545944	2.00	1.84	
96 1,2,4-Trimethylbenzene	105	18.975	18.971	0.004	96	466148	2.00	1.85	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	98	695824	2.00	1.89	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	98	243429	2.00	1.89	
99 Benzyl chloride	91	19.313	19.315	-0.002	98	240331	2.00	1.90	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	96	211530	2.00	1.92	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	97	562940	2.00	1.86	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	99	385932	2.00	1.92	
103 Butylcyclohexane	83	19.475	19.476	-0.001	90	402172	2.00	1.84	
104 2,3-Dihydroindene	117	19.679	19.676	0.003	93	370986	2.00	1.76	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	96	246252	2.00	1.88	
106 n-Butylbenzene	91	19.798	19.797	0.001	98	447753	2.00	1.92	
107 Indene	116	19.803	19.805	-0.002	90	290969	2.00	2.40	
108 Undecane	57	20.083	20.083	0.000	93	316455	2.00	1.79	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	98	441448	2.00	2.24	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	96	58509	2.00	1.36	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	97	465572	2.00	1.94	
112 1,2,3,5-Tetramethylbenzene	119	20.605	20.603	0.002	95	297818	2.00	1.92	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	347396	2.00	1.81	
114 Dodecane	57	21.159	21.159	0.000	97	294080	2.00	1.87	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	94	78150	2.00	2.24	
116 Naphthalene	128	21.541	21.540	0.001	99	182388	2.00	1.97	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	99	75685	2.00	2.33	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	95	222583	2.00	1.60	
119 1,2,3-Trichlorobenzene	180	21.777	21.772	0.005	95	75553	2.00	1.98	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	99	50076	6.25	8.30	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	98	55410	6.25	8.75	
A 124 Toluene Range	1	14.277	(14.247-14.307)		0	1214068	2.00	1.97	
A 125 C8 Range	1	14.942	(14.890-14.995)		0	1561171	2.00	1.93	
S 126 Xylenes, Total	100				0		6.00	5.35	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40CV101S_00013	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

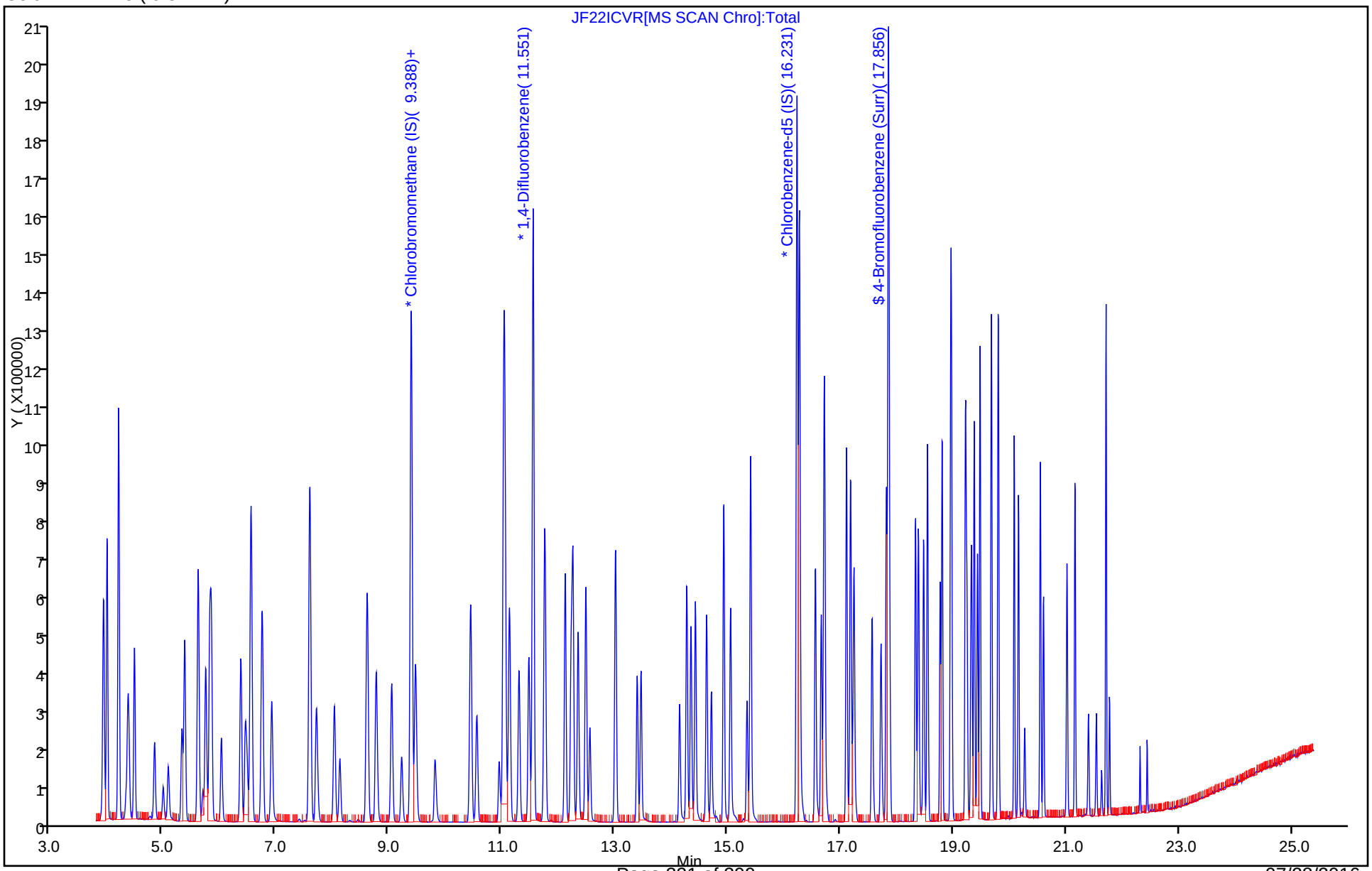
Report Date: 27-Jun-2016 15:36:11 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22ICVR.D

Injection Date:	23-Jun-2016 09:52:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: CCVIS 140-5891/2 Calibration Date: 07/20/2016 11:23

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.5730		2.31	2.00	15.4	30.0
Propene	Ave	1.154	1.346		2.33	2.00	16.6	30.0
Dichlorodifluoromethane	Ave	4.396	5.278		2.40	2.00	20.0	30.0
Chloromethane	Ave	0.3106	0.3687		2.38	2.00	18.7	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.870		2.35	2.00	17.6	30.0
Acetaldehyde	Ave	0.2696	0.2472		9.18	10.0	-8.3	30.0
Vinyl chloride	Ave	1.053	1.188		2.26	2.00	12.8	30.0
1,3-Butadiene	Ave	0.6912	0.8662		2.51	2.00	25.3	30.0
Butane	Ave	1.150	1.502		2.61	2.00	30.7*	30.0
Bromomethane	Ave	0.9910	1.099		2.22	2.00	10.9	30.0
Chloroethane	Ave	0.3777	0.4286		2.27	2.00	13.5	30.0
Ethanol	Ave	0.1546	0.1978		12.8	10.0	28.0	30.0
Vinyl bromide	Ave	1.172	1.194		2.04	2.00	1.9	30.0
2-Methylbutane	Ave	1.379	1.692		2.45	2.00	22.7	30.0
Trichlorofluoromethane	Ave	4.068	4.801		2.36	2.00	18.0	30.0
Acrolein	Ave	0.3360	0.2981		1.78	2.00	-11.3	30.0
Acetonitrile	Ave	0.3683	0.3887		2.11	2.00	5.6	30.0
Acetone	Ave	0.4583	0.3944		5.17	6.00	-13.9	30.0
Isopropyl alcohol	Ave	1.527	1.858		7.30	6.00	21.6	30.0
Pentane	Ave	0.1722	0.1777		2.06	2.00	3.2	30.0
Ethyl ether	Ave	0.7823	0.8326		2.13	2.00	6.4	30.0
1,1-Dichloroethene	Ave	1.183	1.196		2.02	2.00	1.1	30.0
tert-Butyl alcohol	Ave	2.084	2.277		2.19	2.00	9.2	30.0
Acrylonitrile	Ave	0.7011	0.6423		1.83	2.00	-8.4	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.951		2.14	2.00	6.7	30.0
Methylene Chloride	Ave	1.099	1.107		2.02	2.00	0.7	30.0
3-Chloropropene	Ave	1.055	1.220		2.31	2.00	15.6	30.0
Carbon disulfide	Ave	3.359	3.512		2.09	2.00	4.6	30.0
trans-1,2-Dichloroethene	Ave	1.188	1.220		2.06	2.00	2.7	30.0
2-Methylpentane	Ave	2.424	2.932		2.42	2.00	20.9	30.0
Methyl tert-butyl ether	Ave	2.440	2.352		1.93	2.00	-3.6	30.0
1,1-Dichloroethane	Ave	2.417	2.479		2.05	2.00	2.6	30.0
Vinyl acetate	Ave	2.001	2.036		2.04	2.00	1.8	30.0
2-Butanone (MEK)	Ave	0.3839	0.3201		1.67	2.00	-16.6	30.0
Hexane	Ave	1.043	1.134		2.18	2.00	8.8	30.0
Isopropyl ether	Ave	3.021	3.119		2.07	2.00	3.2	30.0
cis-1,2-Dichloroethene	Ave	1.183	1.112		1.88	2.00	-6.0	30.0
Ethyl acetate	Ave	1.599	1.776		2.22	2.00	11.1	30.0
Chloroform	Ave	2.678	2.697		2.01	2.00	0.7	30.0
Tert-butyl ethyl ether	Ave	2.990	2.956		1.98	2.00	-1.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: CCVIS 140-5891/2 Calibration Date: 07/20/2016 11:23

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.9009		2.11	2.00	5.7	30.0
1,1,1-Trichloroethane	Ave	3.097	3.332		2.15	2.00	7.6	30.0
1,2-Dichloroethane	Ave	0.4369	0.4545		2.08	2.00	4.0	30.0
1-Butanol	Ave	0.0610	0.0722		2.37	2.00	18.3	30.0
Benzene	Ave	0.6983	0.6250		1.79	2.00	-10.5	30.0
Cyclohexane	Ave	0.1171	0.1258		2.15	2.00	7.4	30.0
Carbon tetrachloride	Ave	0.7435	0.8788		2.37	2.00	18.2	30.0
2,3-Dimethylpentane	Ave	0.1606	0.1524		1.90	2.00	-5.1	30.0
Thiophene	Ave	0.3988	0.3600		1.81	2.00	-9.7	30.0
Tert-amyl methyl ether	Ave	0.6151	0.5675		1.85	2.00	-7.7	30.0
2,2,4-Trimethylpentane	Ave	1.315	1.309		1.99	2.00	-0.5	30.0
Heptane	Ave	0.2306	0.2084		1.81	2.00	-9.6	30.0
1,2-Dichloropropane	Ave	0.2817	0.2594		1.84	2.00	-7.9	30.0
Trichloroethene	Ave	0.3524	0.3048		1.73	2.00	-13.5	30.0
Dibromomethane	Ave	0.3120	0.3100		1.99	2.00	-0.6	30.0
Bromodichloromethane	Ave	0.5687	0.5746		2.02	2.00	1.0	30.0
1,4-Dioxane	Ave	0.0832	0.0815		1.96	2.00	-2.1	30.0
Methyl methacrylate	Ave	0.2152	0.2232		2.08	2.00	3.7	30.0
Methylcyclohexane	Ave	0.5358	0.4985		1.86	2.00	-7.0	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.4510		1.91	2.00	-4.5	30.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3364		1.83	2.00	-8.5	30.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3031		1.85	2.00	-7.4	30.0
Toluene	Ave	0.8518	0.7025		1.65	2.00	-17.5	30.0
1,1,2-Trichloroethane	Ave	0.2468	0.2156		1.75	2.00	-12.6	30.0
2-Methylthiophene	Ave	0.7101	0.6105		1.72	2.00	-14.0	30.0
3-Methylthiophene	Ave	0.6812	0.5775		1.70	2.00	-15.2	30.0
2-Hexanone	Ave	0.2481	0.2413		1.95	2.00	-2.7	30.0
Octane	Ave	0.2789	0.2441		1.75	2.00	-12.5	30.0
Dibromochloromethane	Ave	0.5906	0.5581		1.89	2.00	-5.5	30.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.3894		1.73	2.00	-13.6	30.0
Tetrachloroethene	Ave	0.3991	0.3409		1.71	2.00	-14.6	30.0
2,3-Dimethylheptane	Ave	0.7942	0.8235		2.07	2.00	3.7	30.0
Chlorobenzene	Ave	0.6404	0.5448		1.70	2.00	-14.9	30.0
Ethylbenzene	Ave	0.9714	0.8474		1.75	2.00	-12.8	30.0
2-Ethylthiophene	Ave	0.7342	0.6546		1.78	2.00	-10.9	30.0
m-Xylene & p-Xylene	Ave	0.7539	0.6714		3.56	4.00	-11.0	30.0
Nonane	Ave	0.5580	0.5498		1.97	2.00	-1.5	30.0
Bromoform	Ave	0.4442	0.4013		1.81	2.00	-9.6	30.0
Styrene	Ave	0.4637	0.4251		1.83	2.00	-8.3	30.0
o-Xylene	Ave	0.8099	0.7273		1.80	2.00	-10.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4673		1.81	2.00	-9.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Lab Sample ID: CCVIS 140-5891/2 Calibration Date: 07/20/2016 11:23

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVG20.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1356		1.86	2.00	-7.3	30.0
Isopropylbenzene	Ave	1.019	0.9293		1.83	2.00	-8.8	30.0
Propylbenzene	Ave	0.2557	0.2261		1.77	2.00	-11.6	30.0
2-Chlorotoluene	Ave	0.2699	0.2281		1.69	2.00	-15.5	30.0
4-Ethyltoluene	Ave	0.8665	0.8291		1.91	2.00	-4.3	30.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4088		1.78	2.00	-10.9	30.0
Alpha Methyl Styrene	Ave	0.3179	0.2944		1.85	2.00	-7.4	30.0
Decane	Ave	0.5704	0.5730		2.01	2.00	0.4	30.0
tert-Butylbenzene	Ave	0.9118	0.8631		1.89	2.00	-5.3	30.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7618		1.96	2.00	-1.9	30.0
sec-Butylbenzene	Ave	1.131	1.113		1.97	2.00	-1.6	30.0
1,3-Dichlorobenzene	Ave	0.3965	0.3455		1.74	2.00	-12.9	30.0
Benzyl chloride	Ave	0.3894	0.3765		1.93	2.00	-3.3	30.0
1,4-Dichlorobenzene	Ave	0.3393	0.3010		1.77	2.00	-11.3	30.0
4-Isopropyltoluene	Ave	0.9296	0.9017		1.94	2.00	-3.0	30.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5934		1.93	2.00	-3.8	30.0
Butylcyclohexane	Ave	0.6728	0.6161		1.83	2.00	-8.4	30.0
1,2-Dichlorobenzene	Ave	0.4035	0.3557		1.76	2.00	-11.8	30.0
Indane	Ave	0.6488	0.6157		1.90	2.00	-5.1	30.0
Butylbenzene	Ave	0.7177	0.7254		2.02	2.00	1.1	30.0
Indene	Ave	0.3721	0.3624		1.95	2.00	-2.6	30.0
Undecane	Ave	0.5442	0.5772		2.12	2.00	6.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.5906		1.96	2.00	-2.2	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.1105		1.67	2.00	-16.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.7108		1.92	2.00	-3.8	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.4494		1.89	2.00	-5.8	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.5650		1.92	2.00	-3.9	30.0
Dodecane	Ave	0.4840	0.5644		2.33	2.00	16.6	30.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.1025		1.92	2.00	-4.3	30.0
Naphthalene	Ave	0.2839	0.2453		1.73	2.00	-13.6	30.0
Benzo(b)thiophene	Ave	0.0997	0.1016		2.04	2.00	2.0	30.0
Hexachlorobutadiene	Ave	0.4264	0.3870		1.82	2.00	-9.2	30.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.1125		1.92	2.00	-4.3	30.0
2-Methylnaphthalene	Ave	0.0185	0.0188		6.36	6.25	1.6	50.0
1-Methylnaphthalene	Ave	0.0195	0.0206		6.61	6.25	5.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6598		4.47	4.00	11.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JCCVG20.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 20-Jul-2016 11:23:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003196-002
Misc. Info.: P20
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Jul-2016 09:34:15 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: tajh Date: 21-Jul-2016 09:34:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.373	9.373	0.000	96	211762	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.535	11.535	0.000	97	932413	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.216	16.216	0.000	89	833058	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.835	17.835	0.000	93	549606	4.00	4.47	
6 Chlorodifluoromethane	67	3.924	3.924	0.000	95	60700	2.00	2.31	
7 Propene	41	3.940	3.940	0.000	99	142618	2.00	2.33	
8 Dichlorodifluoromethane	85	3.993	3.993	0.000	100	559133	2.00	2.40	
9 Chloromethane	52	4.192	4.192	0.000	54	39056	2.00	2.38	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.198	4.198	0.000	89	303994	2.00	2.35	
11 Acetaldehyde	44	4.359	4.359	0.000	95	130956	10.0	9.18	
12 Vinyl chloride	62	4.381	4.381	0.000	99	125886	2.00	2.26	
14 Butadiene	54	4.478	4.478	0.000	74	91761	2.00	2.51	
13 Butane	43	4.478	4.478	0.000	81	159145	2.00	2.61	
15 Bromomethane	94	4.833	4.833	0.000	97	116395	2.00	2.22	
16 Chloroethane	64	4.983	4.983	0.000	97	45409	2.00	2.27	
17 Ethanol	31	5.075	5.075	0.000	93	104787	10.0	12.8	
18 Vinyl bromide	106	5.311	5.311	0.000	98	126511	2.00	2.04	
19 2-Methylbutane	43	5.360	5.360	0.000	90	179237	2.00	2.45	
20 Trichlorofluoromethane	101	5.602	5.602	0.000	99	508651	2.00	2.36	
21 Acrolein	56	5.613	5.613	0.000	92	31577	2.00	1.78	
22 Acetonitrile	40	5.688	5.688	0.000	97	41178	2.00	2.11	
23 Acetone	58	5.736	5.736	0.000	99	125365	6.00	5.17	
24 Isopropyl alcohol	45	5.806	5.806	0.000	92	590428	6.00	7.30	
25 Pentane	72	5.833	5.833	0.000	99	18822	2.00	2.06	
26 Ethyl ether	31	6.011	6.011	0.000	92	88202	2.00	2.13	
27 1,1-Dichloroethene	96	6.355	6.355	0.000	91	126739	2.00	2.02	
28 2-Methyl-2-propanol	59	6.441	6.441	0.000	94	241193	2.00	2.19	
29 Acrylonitrile	53	6.468	6.468	0.000	94	68038	2.00	1.83	
30 1,1,2-Trichloro-1,2,2-trif	101	6.538	6.538	0.000	94	312606	2.00	2.14	
31 Methylene Chloride	84	6.726	6.726	0.000	95	117322	2.00	2.02	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.737	6.737	0.000	96	129229	2.00	2.31	
33 Carbon disulfide	76	6.904	6.904	0.000	99	372009	2.00	2.09	
34 trans-1,2-Dichloroethene	96	7.571	7.571	0.000	91	129239	2.00	2.06	
35 2-Methylpentane	43	7.582	7.582	0.000	94	310583	2.00	2.42	
36 Methyl tert-butyl ether	73	7.700	7.700	0.000	95	249161	2.00	1.93	
37 1,1-Dichloroethane	63	8.007	8.007	0.000	100	262656	2.00	2.05	
38 Vinyl acetate	43	8.109	8.109	0.000	100	215665	2.00	2.04	
39 2-Butanone (MEK)	72	8.577	8.577	0.000	95	33909	2.00	1.67	
40 Hexane	56	8.593	8.593	0.000	88	120161	2.00	2.18	
41 Isopropyl ether	45	8.749	8.749	0.000	97	330411	2.00	2.07	
42 cis-1,2-Dichloroethene	96	9.023	9.023	0.000	97	117846	2.00	1.88	
43 Ethyl acetate	43	9.201	9.201	0.000	99	188184	2.00	2.22	
44 Chloroform	83	9.378	9.378	0.000	98	285663	2.00	2.01	
45 Tert-butyl ethyl ether	59	9.448	9.448	0.000	95	313159	2.00	1.98	
46 Tetrahydrofuran	42	9.793	9.793	0.000	93	95439	2.00	2.11	
47 1,1,1-Trichloroethane	97	10.427	10.427	0.000	96	353005	2.00	2.15	
48 1,2-Dichloroethane	62	10.535	10.535	0.000	98	212021	2.00	2.08	
49 n-Butanol	31	10.933	10.933	0.000	82	33655	2.00	2.37	
51 Benzene	78	11.008	11.008	0.000	96	291526	2.00	1.79	
50 Cyclohexane	69	11.014	11.014	0.000	80	58655	2.00	2.15	
52 Carbon tetrachloride	117	11.035	11.035	0.000	98	409925	2.00	2.37	
53 2,3-Dimethylpentane	71	11.110	11.110	0.000	88	71087	2.00	1.90	
54 Thiophene	84	11.283	11.283	0.000	98	167915	2.00	1.81	
55 Tert-amyl methyl ether	73	11.460	11.460	0.000	95	236498	2.00	1.85	
56 Isooctane	57	11.740	11.740	0.000	98	610652	2.00	1.99	
57 n-Heptane	71	12.106	12.106	0.000	92	97189	2.00	1.81	
58 1,2-Dichloropropane	63	12.208	12.208	0.000	87	120991	2.00	1.84	
59 Trichloroethene	130	12.235	12.235	0.000	92	142162	2.00	1.73	
60 Dibromomethane	93	12.326	12.326	0.000	91	144603	2.00	1.99	
62 Dichlorobromomethane	83	12.466	12.466	0.000	99	268023	2.00	2.02	
61 1,4-Dioxane	88	12.477	12.477	0.000	91	38015	2.00	1.96	
63 Methyl methacrylate	41	12.541	12.541	0.000	93	104090	2.00	2.08	
64 Methylcyclohexane	83	12.993	12.993	0.000	89	232510	2.00	1.86	
65 4-Methyl-2-pentanone (MIBK	43	13.381	13.381	0.000	97	210352	2.00	1.91	
66 cis-1,3-Dichloropropene	75	13.445	13.445	0.000	97	156927	2.00	1.83	
67 trans-1,3-Dichloropropene	75	14.134	14.134	0.000	99	126313	2.00	1.85	
68 Toluene	91	14.257	14.257	0.000	92	292759	2.00	1.65	
69 1,1,2-Trichloroethane	83	14.333	14.333	0.000	96	89866	2.00	1.75	
70 2-Methylthiophene	97	14.413	14.413	0.000	98	254431	2.00	1.72	
71 3-Methylthiophene	97	14.607	14.607	0.000	99	240660	2.00	1.70	
72 2-Hexanone	58	14.693	14.693	0.000	94	100569	2.00	1.95	
73 n-Octane	85	14.914	14.914	0.000	93	101707	2.00	1.75	
74 Chlorodibromomethane	129	15.038	15.038	0.000	98	232572	2.00	1.89	
75 Ethylene Dibromide	107	15.328	15.328	0.000	98	162283	2.00	1.73	
76 Tetrachloroethene	129	15.387	15.387	0.000	91	142081	2.00	1.71	
77 2,3-Dimethylheptane	43	16.253	16.253	0.000	94	343188	2.00	2.07	
78 Chlorobenzene	112	16.259	16.259	0.000	91	227044	2.00	1.70	
79 Ethylbenzene	91	16.538	16.538	0.000	99	353167	2.00	1.75	
80 2-Ethylthiophene	97	16.641	16.641	0.000	98	272792	2.00	1.78	
81 m-Xylene & p-Xylene	91	16.700	16.700	0.000	99	559577	4.00	3.56	
82 n-Nonane	57	17.092	17.092	0.000	91	229109	2.00	1.97	
83 Bromoform	173	17.162	17.162	0.000	93	167260	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.162	17.162	0.000	98	177146	2.00	1.83	
85 o-Xylene	91	17.227	17.227	0.000	97	303086	2.00	1.80	
86 1,1,2,2-Tetrachloroethane	83	17.544	17.544	0.000	97	194737	2.00	1.81	
87 1,2,3-Trichloropropane	110	17.706	17.706	0.000	97	56523	2.00	1.86	
88 Isopropylbenzene	105	17.797	17.797	0.000	98	387298	2.00	1.83	
89 N-Propylbenzene	120	18.319	18.319	0.000	99	94218	2.00	1.77	
90 2-Chlorotoluene	126	18.367	18.367	0.000	97	95055	2.00	1.69	
91 4-Ethyltoluene	105	18.459	18.459	0.000	99	345522	2.00	1.91	
92 1,3,5-Trimethylbenzene	120	18.529	18.529	0.000	91	170346	2.00	1.78	
93 Alpha Methyl Styrene	118	18.755	18.755	0.000	85	122685	2.00	1.85	
94 n-Decane	57	18.792	18.792	0.000	89	238796	2.00	2.01	
95 tert-Butylbenzene	119	18.943	18.943	0.000	96	359686	2.00	1.89	
96 1,2,4-Trimethylbenzene	105	18.959	18.959	0.000	96	317486	2.00	1.96	
97 sec-Butylbenzene	105	19.207	19.207	0.000	98	463658	2.00	1.97	
98 1,3-Dichlorobenzene	146	19.228	19.228	0.000	98	143999	2.00	1.74	
99 Benzyl chloride	91	19.298	19.298	0.000	97	156888	2.00	1.93	
100 1,4-Dichlorobenzene	146	19.314	19.314	0.000	94	125421	2.00	1.77	
101 4-Isopropyltoluene	119	19.363	19.363	0.000	96	375790	2.00	1.94	
102 1,2,3-Trimethylbenzene	105	19.416	19.416	0.000	99	247281	2.00	1.93	
103 Butylcyclohexane	83	19.465	19.465	0.000	87	256762	2.00	1.83	
104 2,3-Dihydroindene	117	19.664	19.664	0.000	93	256605	2.00	1.90	
105 1,2-Dichlorobenzene	146	19.664	19.664	0.000	95	148257	2.00	1.76	
106 n-Butylbenzene	91	19.782	19.782	0.000	98	302302	2.00	2.02	
107 Indene	116	19.793	19.793	0.000	90	151013	2.00	1.95	
108 Undecane	57	20.073	20.073	0.000	93	240547	2.00	2.12	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.148	20.148	0.000	97	246122	2.00	1.96	
110 1,2-Dibromo-3-Chloropropan	157	20.256	20.256	0.000	91	46043	2.00	1.67	
111 1,2,4,5-Tetramethylbenzene	119	20.535	20.535	0.000	96	296221	2.00	1.92	
112 1,2,3,5-Tetramethylbenzene	119	20.589	20.589	0.000	94	187275	2.00	1.89	
113 1,2,3,4-Tetramethylbenzene	119	21.003	21.003	0.000	96	235446	2.00	1.92	
114 Dodecane	57	21.149	21.149	0.000	95	235200	2.00	2.33	
115 1,2,4-Trichlorobenzene	180	21.385	21.385	0.000	94	42712	2.00	1.92	
116 Naphthalene	128	21.525	21.525	0.000	98	102243	2.00	1.73	
117 Benzo(b)thiophene	134	21.622	21.622	0.000	99	42359	2.00	2.04	
118 Hexachlorobutadiene	225	21.703	21.703	0.000	96	161283	2.00	1.82	
119 1,2,3-Trichlorobenzene	180	21.762	21.762	0.000	96	46874	2.00	1.92	
120 2-Methylnaphthalene	142	22.305	22.305	0.000	98	24522	6.25	6.36	
121 1-Methylnaphthalene	142	22.429	22.429	0.000	98	26796	6.25	6.61	
A 124 Toluene Range	1	14.257	(14.227-14.287)		0	694636	2.00	1.76	
A 125 C8 Range	1	14.915	(14.881-14.949)		0	1060876	2.00	2.05	
S 126 Xylenes, Total	100				0		6.00	5.36	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.94	

Reagents:

40CV101P_00020	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

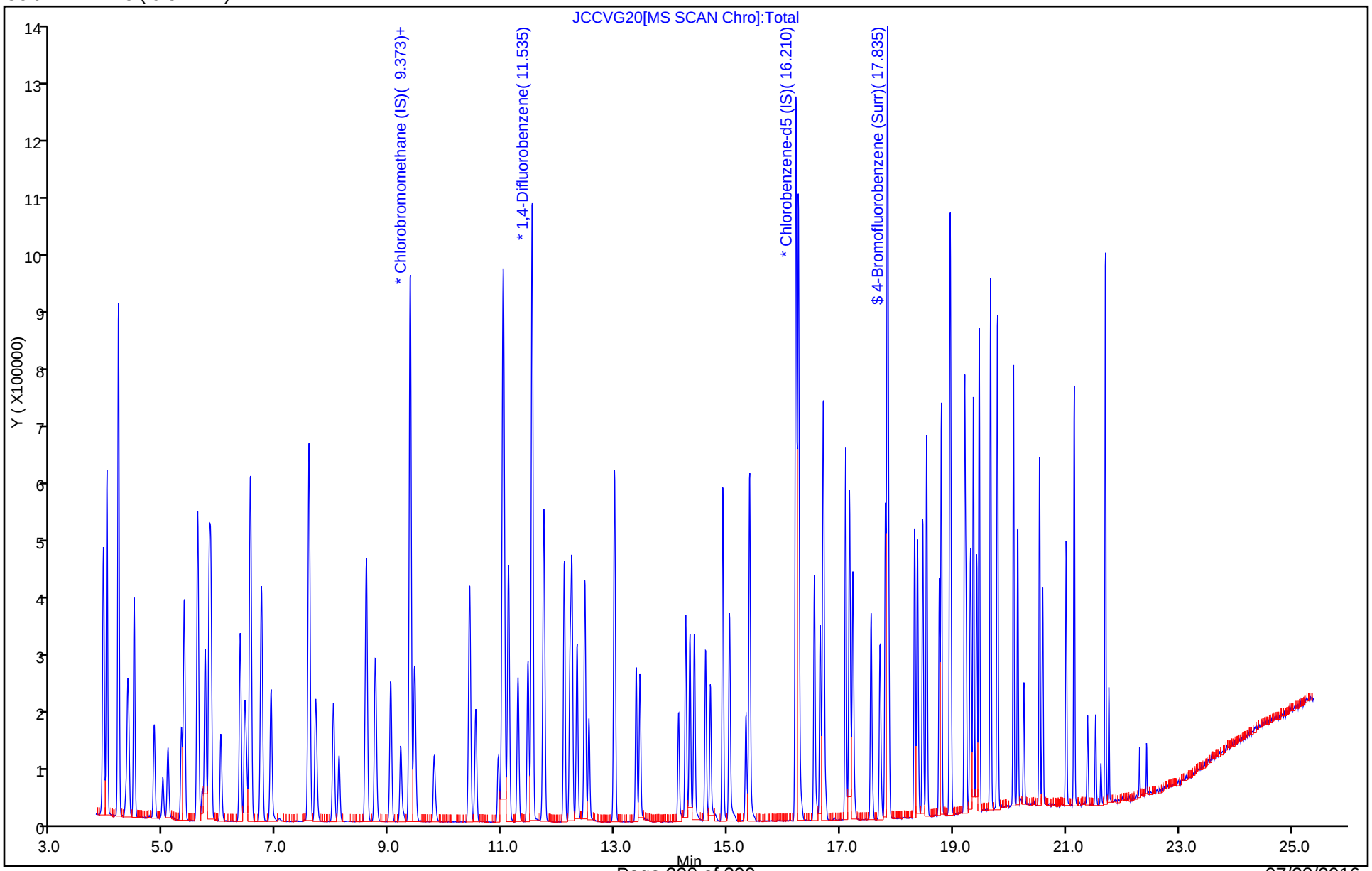
Report Date: 21-Jul-2016 09:34:17 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JCCVG20.D

Injection Date:	20-Jul-2016 11:23:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EBFBF28.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	28-Jun-2016 14:10:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	BFB,,3,,,BFB				
Misc. Info.:	E062816I,BFB,,140-0003101-001				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	01-Jul-2016 17:07:15	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK034				
First Level Reviewer: barlozhetskayaa		Date:	28-Jun-2016 16:25:01		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.996	5.007	-0.011	0	2100168	NR	NR	

QC Flag Legend

Processing Flags

NR - Missing Quant Standard

Reagents:

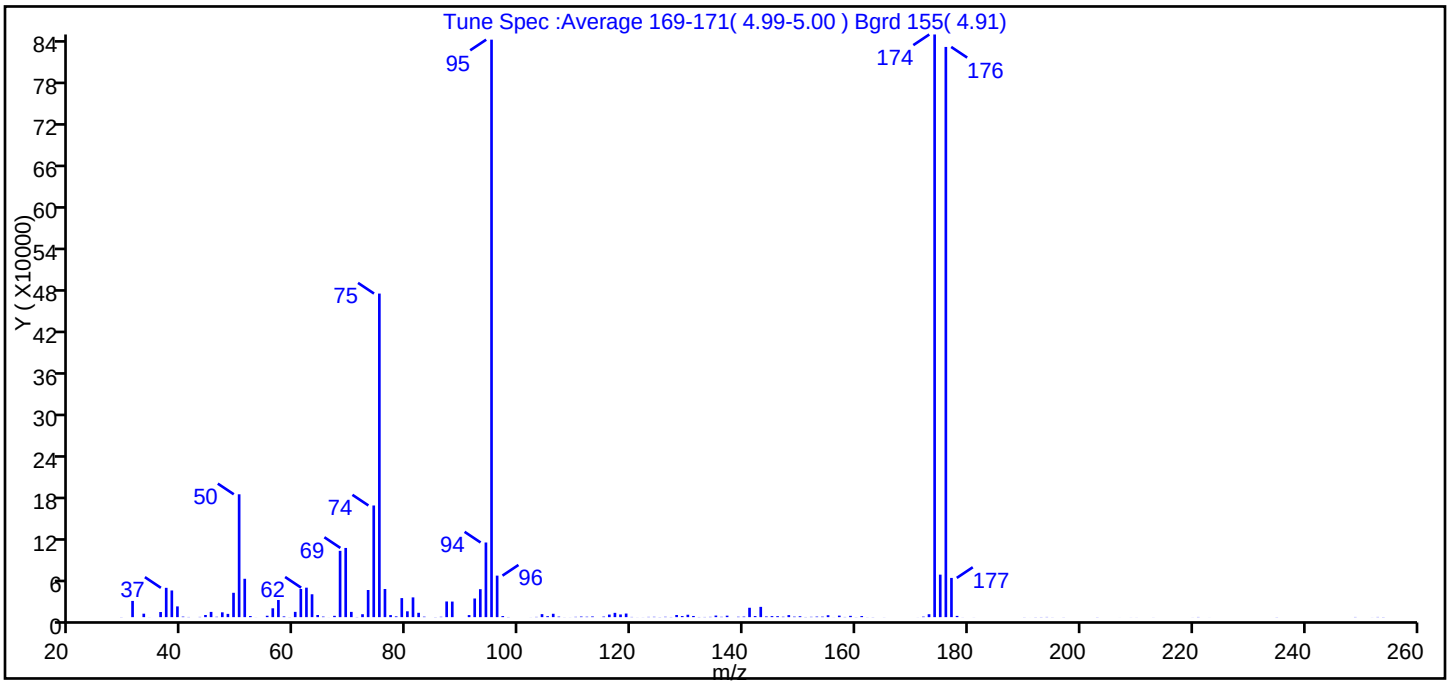
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EBFBF28.D
Injection Date: 28-Jun-2016 14:10:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.3
75	30 to 60% of m/z 95	56.0
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.5 (0.5)
174	50 to 120% of m/z 95	100.9
175	5 to 9% of m/z 174	7.4 (7.3)
176	Greater than 95% but less than 101% of m/z 174	98.7 (97.9)
177	5 to 9% of m/z 176	6.8 (6.9)

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EBFBF28.D\ME_TO15.rslt\spectra.d
Injection Date: 28-Jun-2016 14:10:30
Spectrum: Tune Spec :Average 169-171(4.99-5.00) Bgrd 155(4.91)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	168	72.00	4267	118.00	3900	158.00	274
31.00	23656	73.00	39584	119.00	5267	159.00	1898
33.00	5059	74.00	162880	120.00	314	160.00	155
34.00	75	75.00	472000	121.00	84	161.00	1584
36.00	7481	76.00	41056	122.00	101	162.00	101
37.00	42776	77.00	3002	123.00	372	163.00	173
38.00	38928	78.00	1120	124.00	484	165.00	95
39.00	15677	79.00	27776	125.00	195	171.00	67
40.00	769	80.00	8531	126.00	515	172.00	751
41.00	272	81.00	28816	127.00	235	173.00	4261
43.00	343	82.00	6336	128.00	3136	174.00	849920
44.00	3123	83.00	710	129.00	1577	175.00	61992
45.00	7653	85.00	192	130.00	3514	176.00	831744
46.00	540	86.00	545	131.00	1697	177.00	57224
47.00	7033	87.00	22872	132.00	239	178.00	1810
48.00	4769	88.00	22712	133.00	274	179.00	86
49.00	35528	91.00	2991	134.00	403	181.00	74
50.00	179200	92.00	27200	135.00	2318	190.00	137
51.00	55960	93.00	40776	136.00	482	191.00	25
52.00	1607	94.00	108888	137.00	2159	192.00	168
53.00	64	95.00	842368	139.00	566	193.00	218
54.00	4	96.00	60560	140.00	848	194.00	296
55.00	2044	97.00	1586	141.00	13686	195.00	111
56.00	12907	98.00	232	142.00	1609	197.00	123
57.00	24984	102.00	80	143.00	14985	203.00	166
58.00	1052	103.00	362	144.00	1012	207.00	32
59.00	138	104.00	4401	145.00	1514	209.00	67
60.00	7704	105.00	1402	146.00	1422	210.00	73
61.00	41072	106.00	4925	147.00	618	213.00	77
62.00	43000	107.00	787	148.00	2974	220.00	70
63.00	33376	108.00	109	149.00	762	221.00	267
64.00	3117	109.00	81	150.00	1338	223.00	45
65.00	805	110.00	436	151.00	235	235.00	159

Report Date: 01-Jul-2016 17:07:21 Chrom Revision: 2.2 21-Jun-2016 11:23:50
Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EBFBF28.D\ME_TO15.rslt\spectra.d
Injection Date: 28-Jun-2016 14:10:30
Spectrum: Tune Spec :Average 169-171(4.99-5.00) Bgrd 155(4.91)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 154

m/z	Y	m/z	Y	m/z	Y	m/z	Y
66.00	66	111.00	888	152.00	471	249.00	266
67.00	1918	112.00	632	153.00	820	252.00	70
68.00	96720	113.00	1002	154.00	739	253.00	287
69.00	100944	115.00	802	155.00	2780	254.00	215
70.00	7685	116.00	3745	156.00	61		
71.00	237	117.00	6273	157.00	2211		

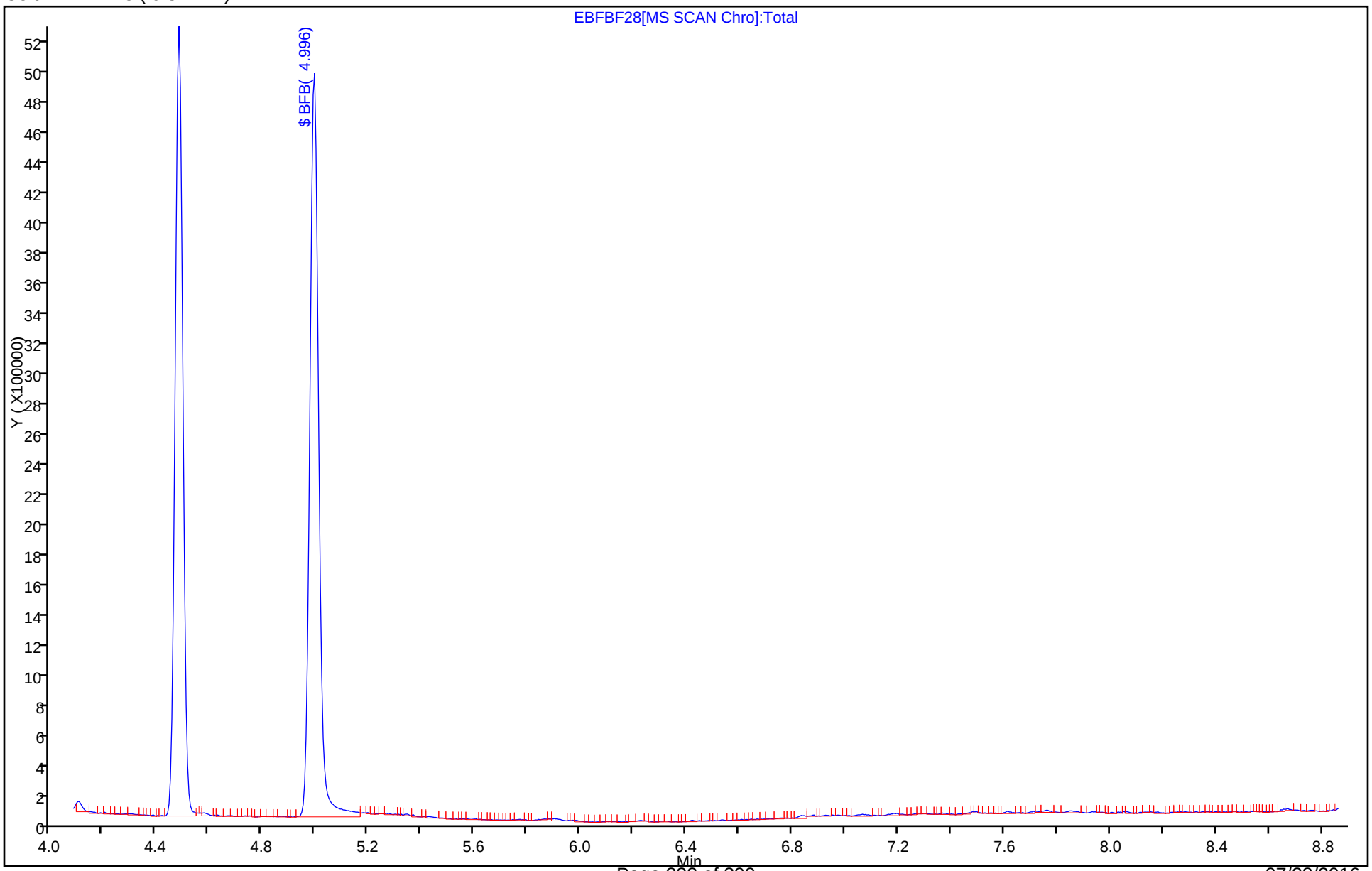
Report Date: 01-Jul-2016 17:07:21 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EBFBF28.D

Injection Date:	28-Jun-2016 14:10:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EBFBG19A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	19-Jul-2016 09:38:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-001				
Misc. Info.:	BFB				
Operator ID:	7126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:45:32	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				
First Level Reviewer: tajh		Date:	20-Jul-2016 12:45:32		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.991	4.991	0.000	0	4030194	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

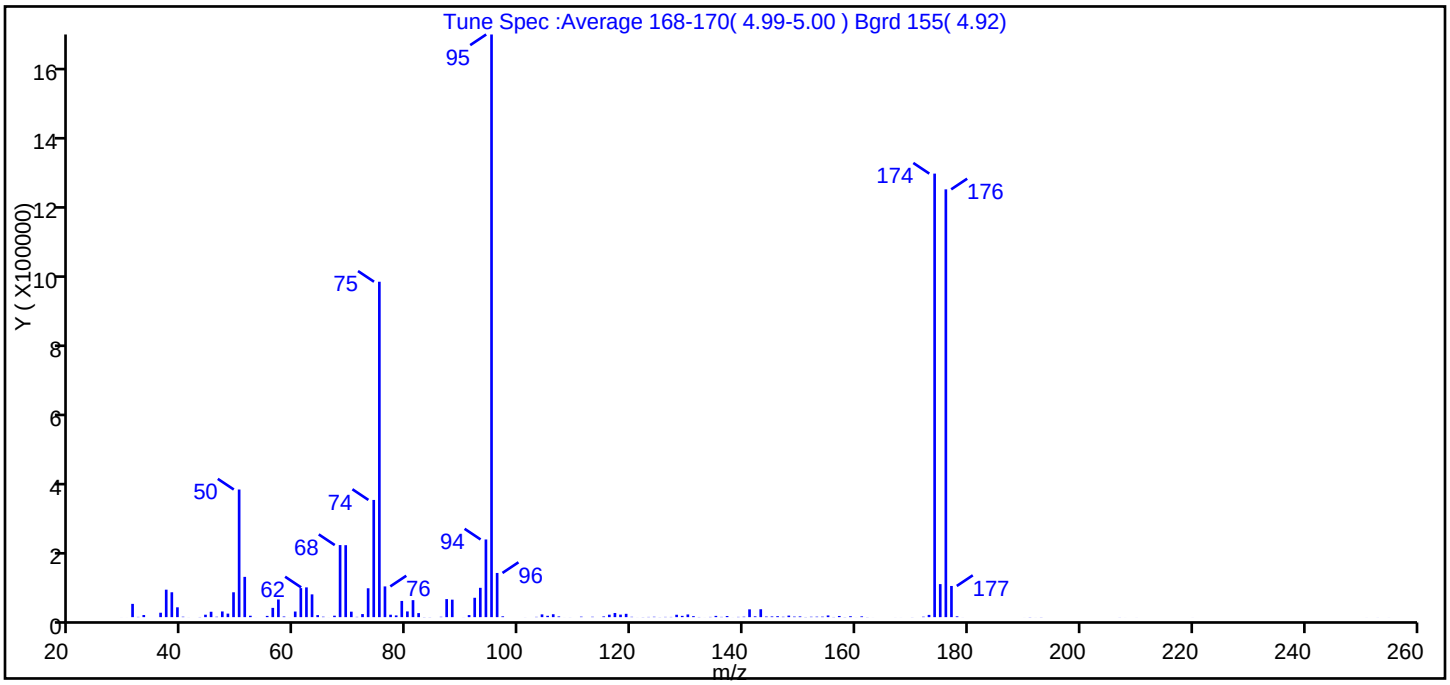
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EBFBG19A.D
Injection Date: 19-Jul-2016 09:38:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	21.9
75	30 to 60% of m/z 95	57.6
96	5 to 9% of m/z 95	7.6
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	76.1
175	5 to 9% of m/z 174	5.7 (7.4)
176	Greater than 95% but less than 101% of m/z 174	73.4 (96.5)
177	5 to 9% of m/z 176	5.4 (7.3)

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EBFBG19A.D\ME_TO15.rslt\spectra.d
Injection Date: 19-Jul-2016 09:38:30
Spectrum: Tune Spec :Average 168-170(4.99-5.00) Bgrd 155(4.92)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	74	69.00	206016	113.00	1056	150.00	2132
30.00	37	70.00	15701	115.00	2018	151.00	439
31.00	38000	71.00	785	116.00	7003	152.00	1143
32.00	709	72.00	8804	117.00	11903	153.00	1376
33.00	6043	73.00	82704	118.00	7222	154.00	1396
36.00	12639	74.00	335552	119.00	9526	155.00	4845
37.00	78640	75.00	960256	120.00	942	156.00	471
38.00	71232	76.00	87976	121.00	92	157.00	3340
39.00	28144	77.00	6905	122.00	344	158.00	379
40.00	1205	78.00	4926	123.00	624	159.00	2617
41.00	116	79.00	46384	124.00	1070	160.00	89
43.00	452	80.00	16384	125.00	274	161.00	2233
44.00	6969	81.00	48656	126.00	705	162.00	288
45.00	15450	82.00	11566	127.00	597	163.00	72
46.00	1128	83.00	376	128.00	6850	167.00	94
47.00	16286	84.00	301	129.00	3649	168.00	77
48.00	10142	86.00	1026	130.00	7686	170.00	214
49.00	71176	87.00	51672	131.00	2813	172.00	1248
50.00	365376	88.00	50064	132.00	466	173.00	6411
51.00	115304	90.00	129	133.00	87	174.00	1269760
52.00	4032	91.00	5853	134.00	641	175.00	94576
53.00	52	92.00	55424	135.00	3620	176.00	1224704
55.00	3571	93.00	83968	136.00	714	177.00	89248
56.00	26528	94.00	222400	137.00	3201	178.00	2275
57.00	50560	95.00	1668096	138.00	68	179.00	101
58.00	1792	96.00	126504	139.00	708	190.00	69
59.00	67	97.00	2353	140.00	1316	191.00	413
60.00	16075	101.00	134	141.00	22320	192.00	96
61.00	83112	103.00	803	142.00	2387	193.00	332
62.00	85192	104.00	7925	143.00	22624	207.00	203
63.00	65208	105.00	3849	144.00	1720	208.00	49
64.00	5787	106.00	8340	145.00	2052	210.00	87
65.00	1264	107.00	2021	146.00	2744	220.00	89

Report Date: 20-Jul-2016 12:45:33 Chrom Revision: 2.2 18-Jul-2016 15:30:42
Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EBFBG19A.D\ME_TO15.rslt\spectra.d
Injection Date: 19-Jul-2016 09:38:30
Spectrum: Tune Spec :Average 168-170(4.99-5.00) Bgrd 155(4.92)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 144

m/z	Y	m/z	Y	m/z	Y	m/z	Y
66.00	83	108.00	72	147.00	1079	251.00	73
67.00	4137	109.00	144	148.00	4421	253.00	106
68.00	206336	111.00	1369	149.00	1611	255.00	77

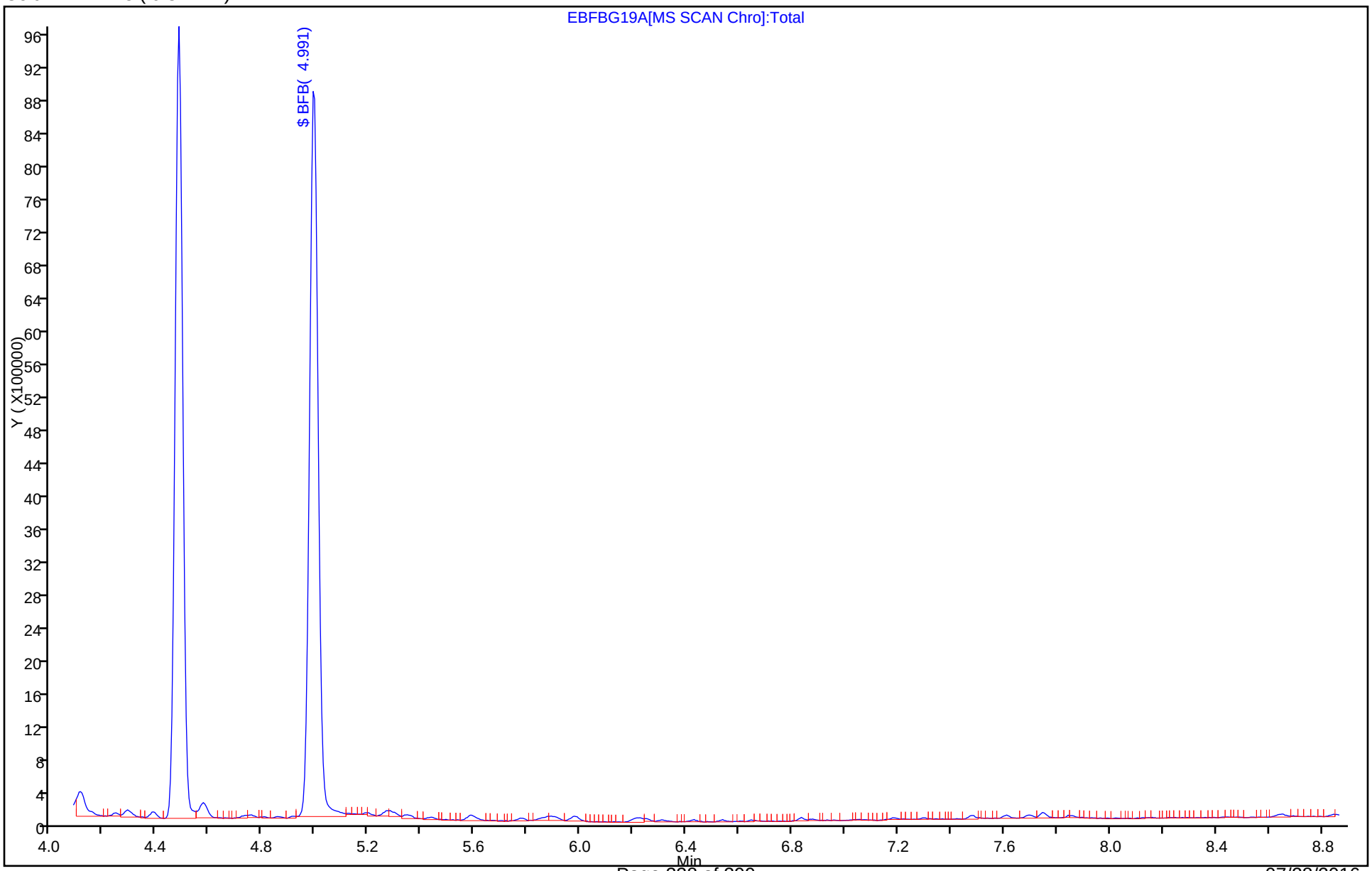
Report Date: 20-Jul-2016 12:45:33 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EBFBG19A.D

Injection Date:	19-Jul-2016 09:38:30	Instrument ID:	ME	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Jun-2016 15:21:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003070-001				
Misc. Info.:	J062216,BFB,,				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	27-Jun-2016 15:11:57	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK048				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.055	4.055	0.000	0	236566	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

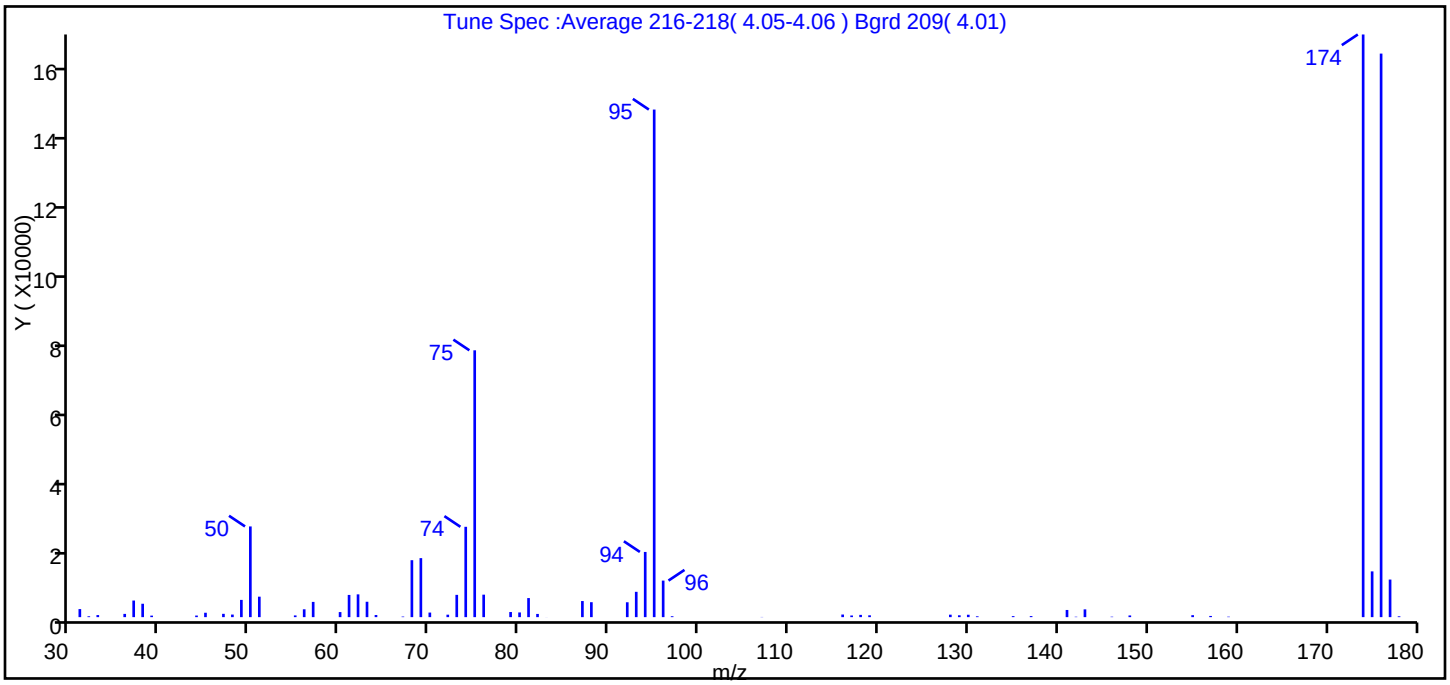
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D
Injection Date: 22-Jun-2016 15:21:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.9
75	30 to 60% of m/z 95	52.6
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	114.8
175	5 to 9% of m/z 174	9.0 (7.9)
176	Greater than 95% but less than 101% of m/z 174	111.0 (96.7)
177	5 to 9% of m/z 176	7.4 (6.7)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D\MJ_TO15.rslt\spectra.d
Injection Date: 22-Jun-2016 15:21:30
Spectrum: Tune Spec :Average 216-218(4.05-4.06) Bgrd 209(4.01)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2239	60.00	1409	82.00	893	130.00	667
32.00	238	61.00	6173	83.00	14	131.00	234
33.00	574	62.00	6331	87.00	4472	135.00	281
36.00	904	63.00	4276	88.00	4153	137.00	294
37.00	4614	64.00	590	92.00	4134	141.00	1992
38.00	3722	67.00	160	93.00	7037	142.00	116
39.00	425	68.00	15827	94.00	18120	143.00	2165
44.00	445	69.00	16400	95.00	141056	146.00	125
45.00	1222	70.00	1273	96.00	10159	148.00	470
47.00	922	72.00	684	97.00	248	155.00	548
48.00	718	73.00	6192	107.00	52	157.00	333
49.00	4792	74.00	25104	116.00	729	159.00	129
50.00	25208	75.00	74152	117.00	460	174.00	161920
51.00	5688	76.00	6247	118.00	630	175.00	12717
55.00	477	79.00	1421	119.00	512	176.00	156608
56.00	2184	80.00	1307	128.00	684	177.00	10446
57.00	4237	81.00	5299	129.00	516	178.00	229

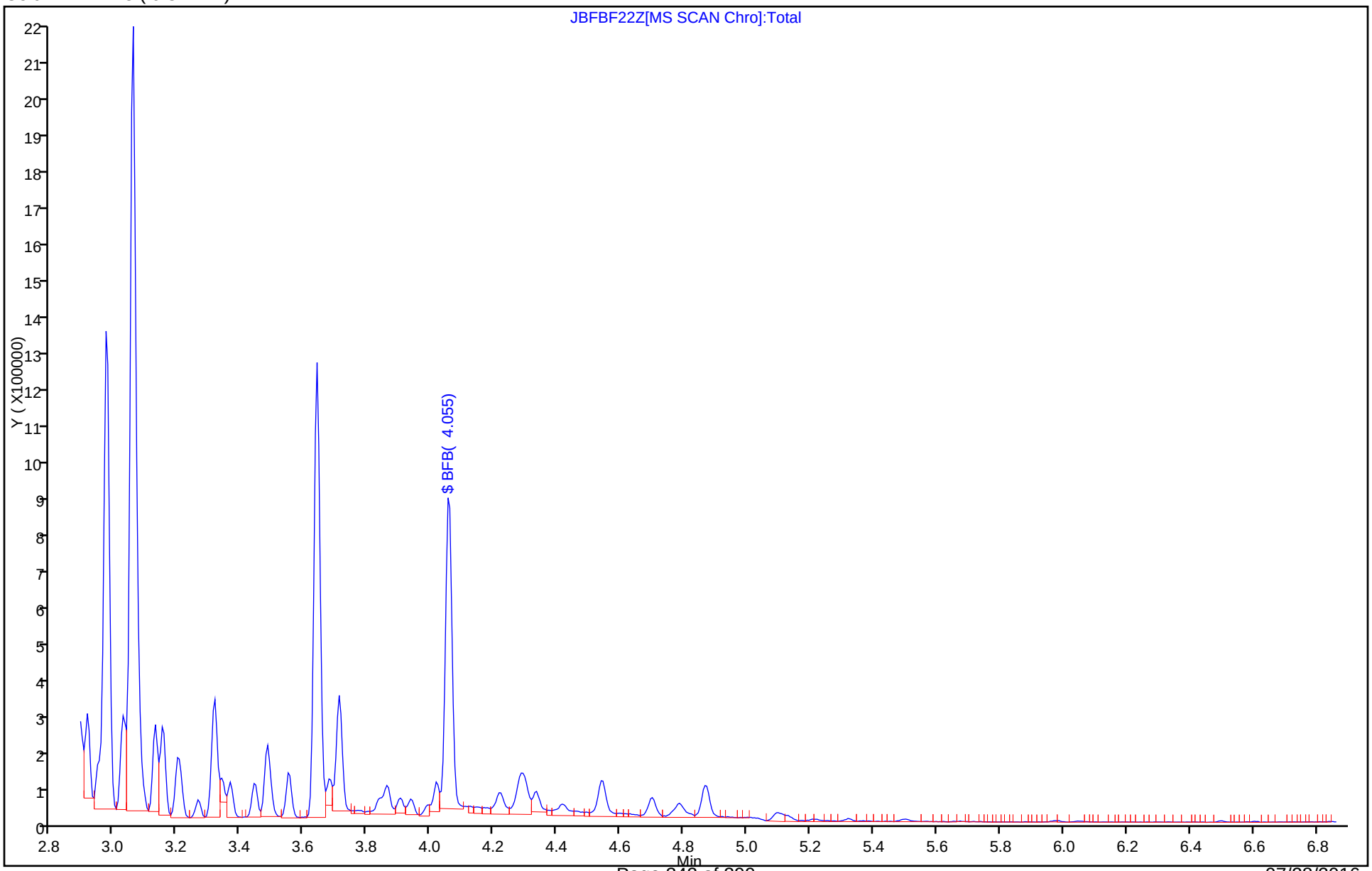
Report Date: 27-Jun-2016 15:11:58 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D

Injection Date:	22-Jun-2016 15:21:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JBFBG20.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	20-Jul-2016 10:56:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-001				
Misc. Info.:	BFB				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:32:45	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				
First Level Reviewer: tajh		Date:	21-Jul-2016 09:32:45		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.047	4.047	0.000	0	186511	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

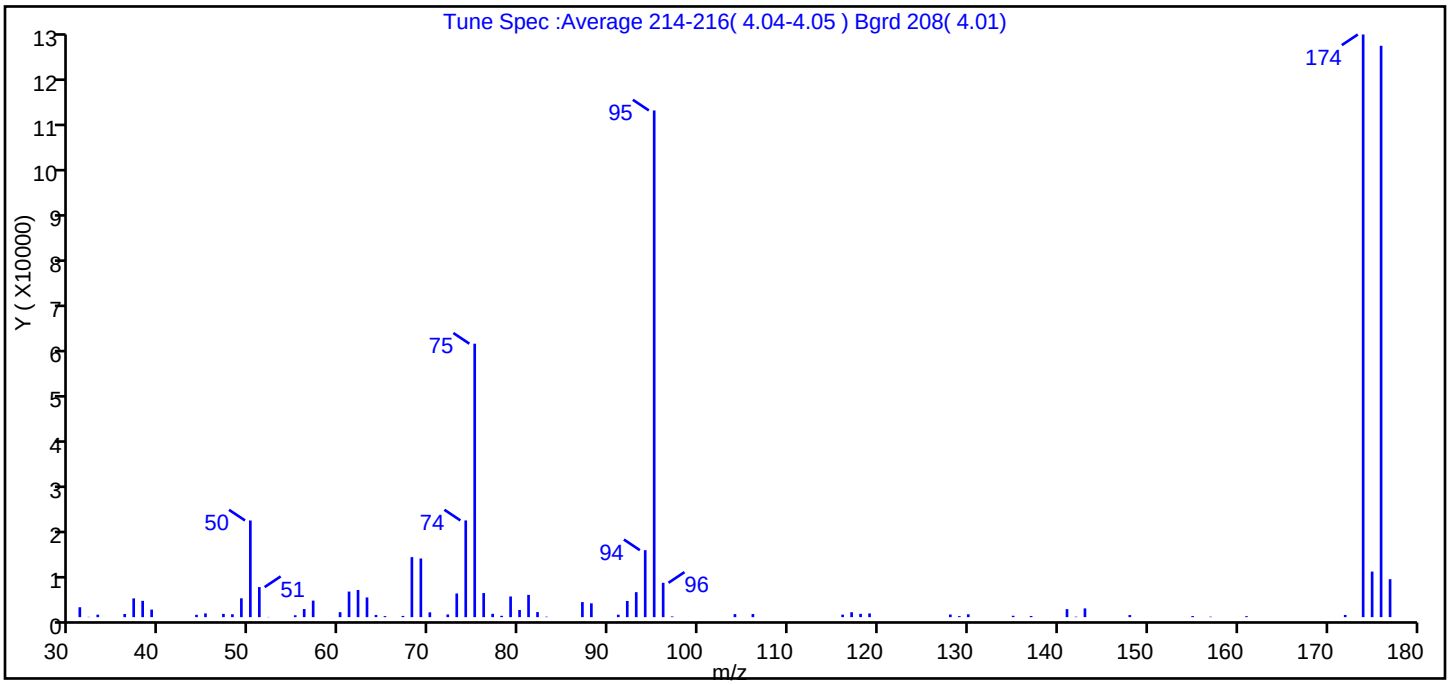
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JBFBG20.D
Injection Date: 20-Jul-2016 10:56:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.1
75	30 to 60% of m/z 95	54.0
96	5 to 9% of m/z 95	6.8
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	115.0
175	5 to 9% of m/z 174	9.0 (7.8)
176	Greater than 95% but less than 101% of m/z 174	112.8 (98.1)
177	5 to 9% of m/z 176	7.5 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JBFBG20.D\MJ_TO15.rslt\spectra.d
Injection Date: 20-Jul-2016 10:56:30
Spectrum: Tune Spec :Average 214-216(4.04-4.05) Bgrd 208(4.01)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2152	60.00	1084	80.00	1556	119.00	805
32.00	60	61.00	5559	81.00	4839	128.00	574
33.00	537	62.00	5899	82.00	1099	129.00	222
36.00	688	63.00	4286	83.00	100	130.00	621
37.00	4076	64.00	473	87.00	3275	135.00	299
38.00	3546	65.00	228	88.00	3002	137.00	255
39.00	1641	67.00	267	91.00	527	141.00	1744
44.00	509	68.00	13041	92.00	3514	142.00	104
45.00	812	69.00	12749	93.00	5429	143.00	1900
47.00	714	70.00	1045	94.00	14556	148.00	453
48.00	629	72.00	580	95.00	110144	155.00	238
49.00	4098	73.00	5145	96.00	7466	157.00	101
50.00	21016	74.00	21024	97.00	149	161.00	212
51.00	6535	75.00	59440	104.00	661	172.00	477
52.00	43	76.00	5238	106.00	685	174.00	126656
55.00	411	77.00	728	116.00	545	175.00	9901
56.00	1766	78.00	293	117.00	1074	176.00	124200
57.00	3596	79.00	4493	118.00	718	177.00	8250

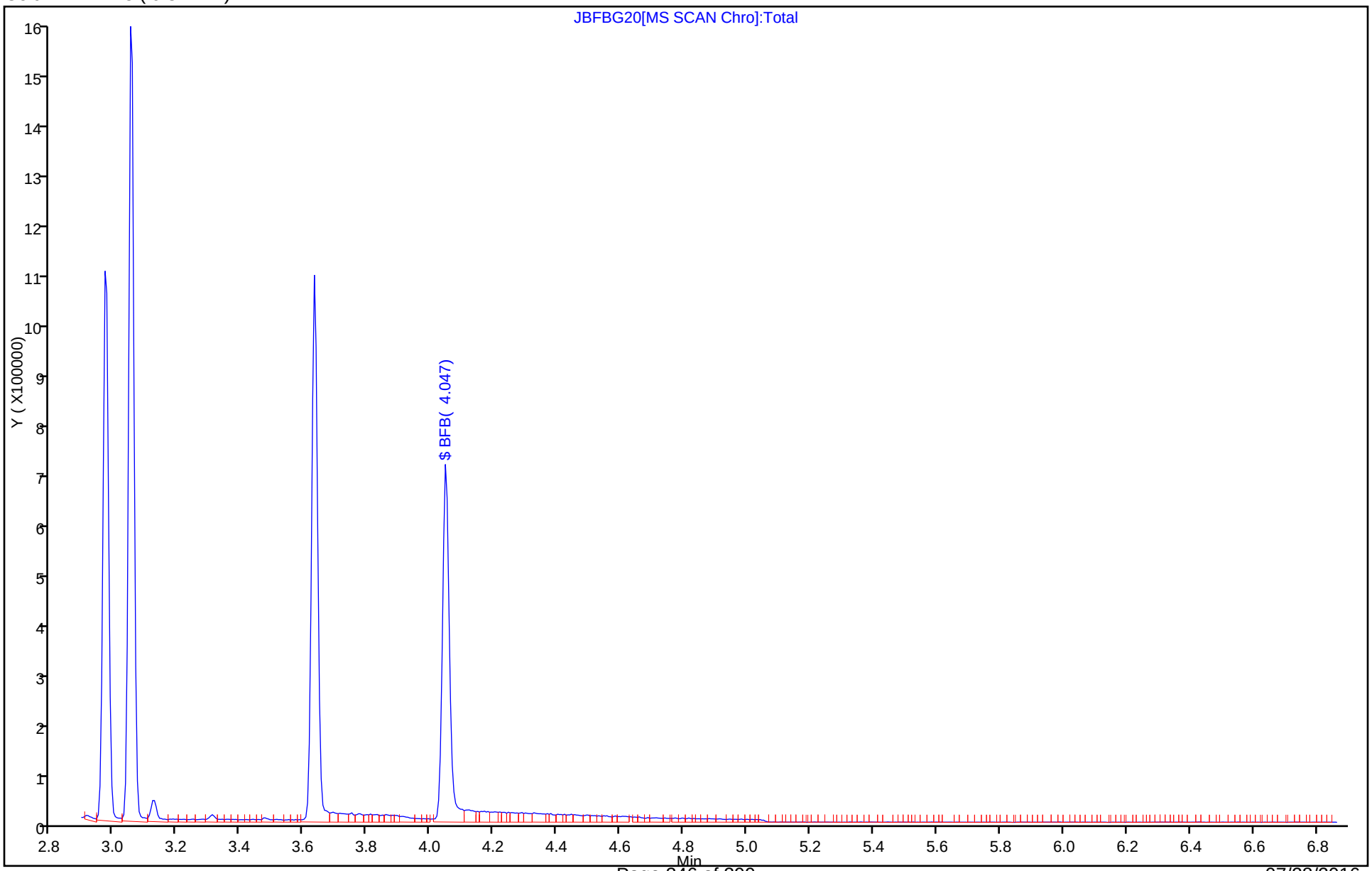
Report Date: 21-Jul-2016 09:32:45 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JBFBG20.D

Injection Date:	20-Jul-2016 10:56:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-5859/4

Matrix: Air Lab File ID: EMB500G19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 07/19/2016 12:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5859 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	0.0233	J	0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-5859/4

Matrix: Air Lab File ID: EMB500G19.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 07/19/2016 12:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5859 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	0.127	J	0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EMB500G19.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	19-Jul-2016 12:58:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-004				
Misc. Info.:	500ML BLK				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				
First Level Reviewer: barlozhetskayaa		Date:	19-Jul-2016 15:03:34		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.600	7.605	-0.005	76	576157	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.838	9.849	-0.011	95	2663275	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	88	2502624	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.503	16.503	0.000	93	1912842	4.00	4.00	
31 Methylene Chloride	84	5.141	5.141	0.000	89	8436		0.0542	
47 1,1,1-Trichloroethane	97	8.624	8.635	-0.011	95	13231		0.0233	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

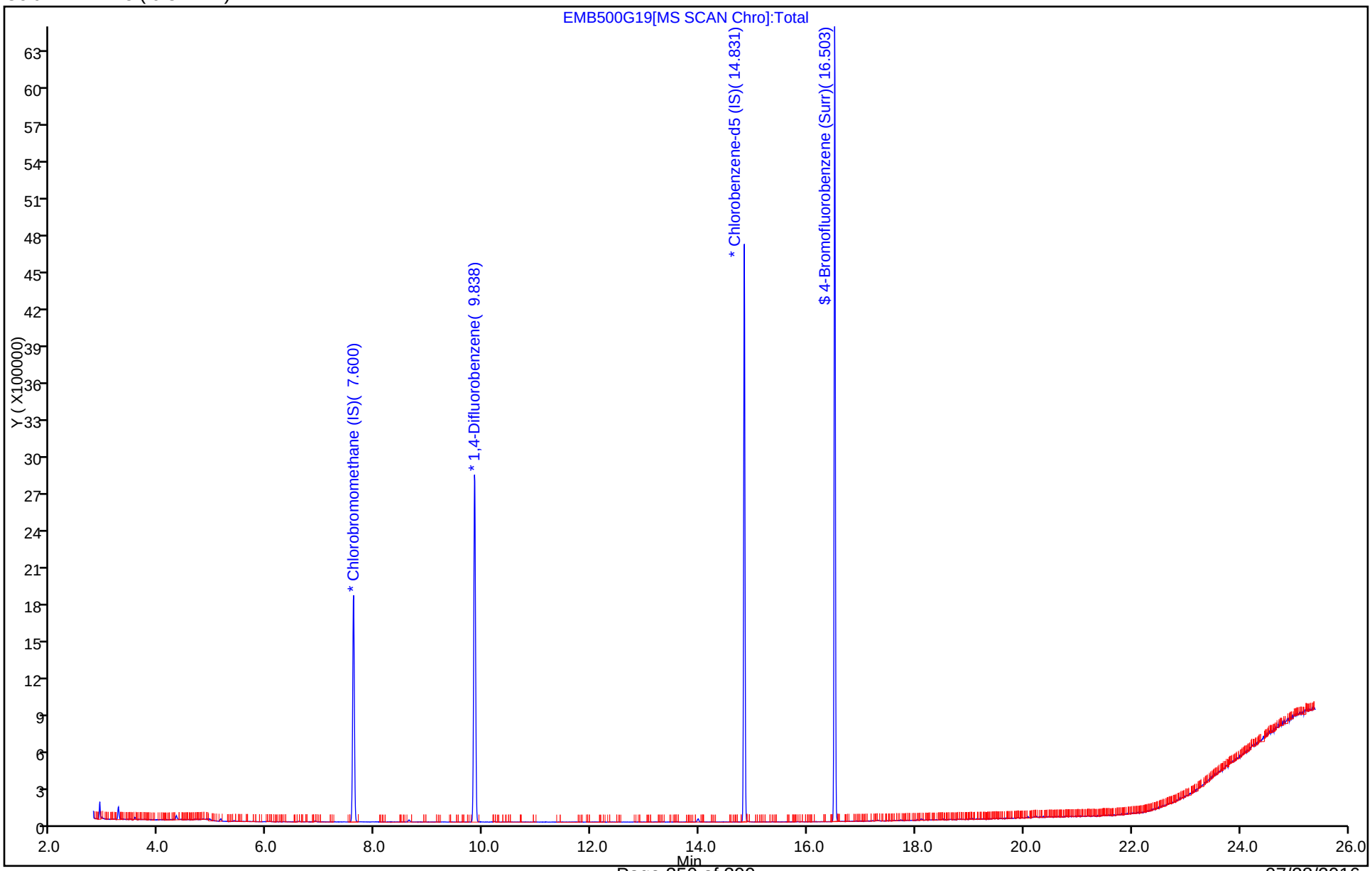
Report Date: 20-Jul-2016 12:48:50 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EMB500G19.D

Injection Date:	19-Jul-2016 12:58:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EMB500G19.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	19-Jul-2016 12:58:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-004				
Misc. Info.:	500ML BLK				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				

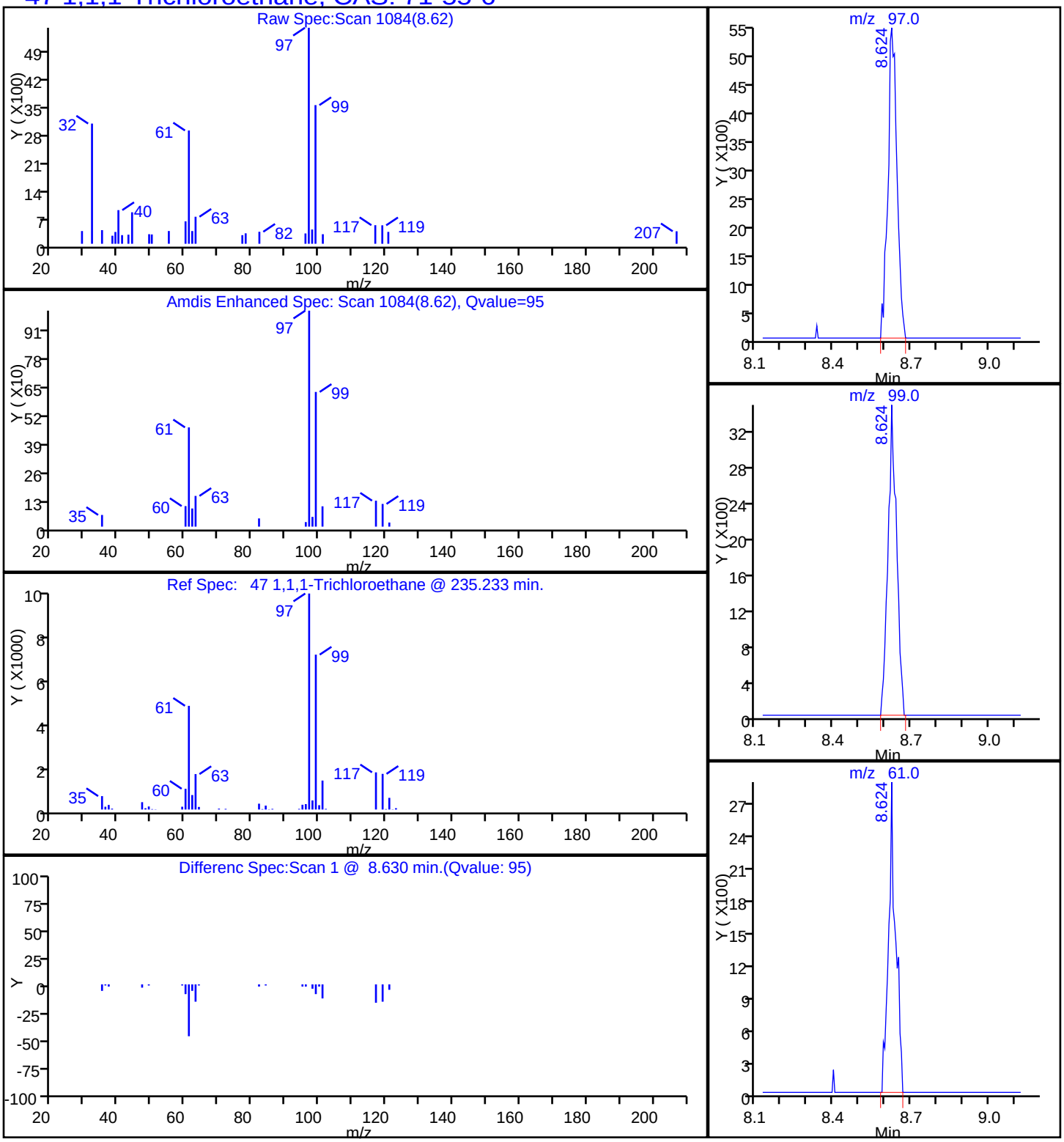
First Level Reviewer: barlozhetskayaa Date: 19-Jul-2016 15:03:34

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.00	99.96

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\EMB500G19.D
Injection Date: 19-Jul-2016 12:58:30 Instrument ID: ME
Lims ID: MB
Client ID:
Operator ID: 007126 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5356-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-5891/4

Matrix: Air | Lab File ID: J500BG20.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 07/20/2016 12:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5891 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-5891/4

Matrix: Air Lab File ID: J500BG20.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 07/20/2016 12:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5891 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\J500BG20.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 20-Jul-2016 12:51:30 ALS Bottle#: 16 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003196-004
Misc. Info.: 500ml blk
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Jul-2016 09:47:50 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: tajh Date: 20-Jul-2016 13:41:03

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.365	9.373	-0.008	91	271260	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.533	11.535	-0.002	96	1167996	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.213	16.216	-0.003	89	956164	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.837	17.835	0.002	89	567484	4.00	4.02	
65 4-Methyl-2-pentanone (MIBK	43	13.383	13.381	0.002	92	3558		0.0258	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

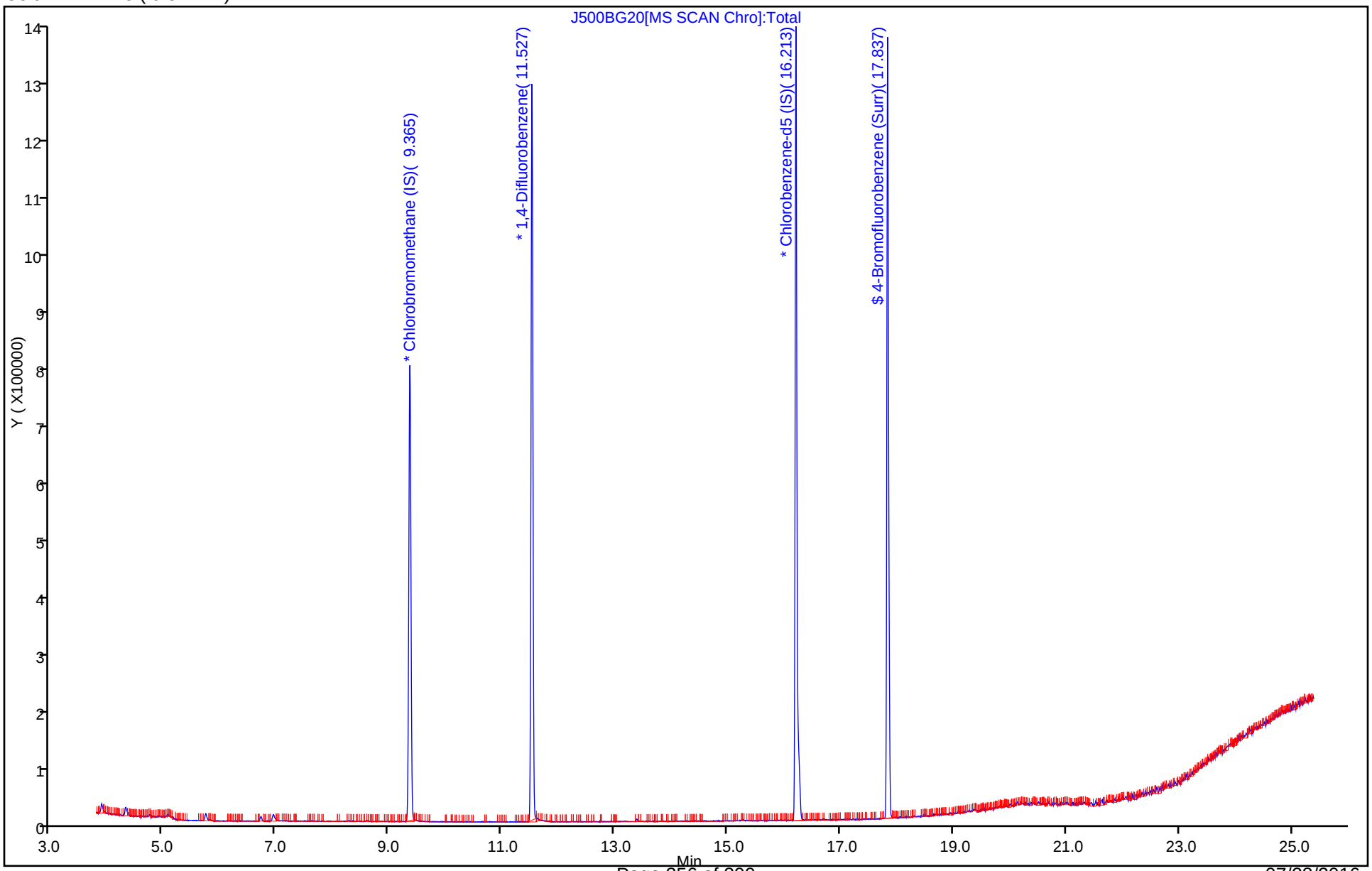
Report Date: 21-Jul-2016 09:59:03 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\J500BG20.D

Injection Date:	20-Jul-2016 12:51:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\J500BG20.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	20-Jul-2016 12:51:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-004				
Misc. Info.:	500ml blk				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:47:50	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				

First Level Reviewer: tajh Date: 20-Jul-2016 13:41:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.02	100.49

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-5859/1002

Matrix: Air Lab File ID: ECCVG19A-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 07/19/2016 10:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5859 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.04		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.12		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.98		0.080	0.015
67-66-3	Chloroform	119.38	1.97		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.07		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.02		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.89		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	1.76		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.51		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.94		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.07		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.68		0.40	0.068
91-20-3	Naphthalene	128.17	1.78		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.15		0.080	0.016
108-88-3	Toluene	92.14	1.96		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.19		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.24		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.92		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.00		0.080	0.021
79-01-6	Trichloroethene	131.39	2.20		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.86		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.84		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.87		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.31		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.64		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ECCVG19A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 19-Jul-2016 10:10:30 ALS Bottle#: 5 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003184-002
Misc. Info.: P20
Operator ID: 7126 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 20-Jul-2016 12:47:49 Calib Date: 28-Jun-2016 20:55:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK029

First Level Reviewer: tajh Date: 20-Jul-2016 12:47:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.605	7.605	0.000	84	575261	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.849	9.849	0.000	94	2439040	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.831	14.831	0.000	87	2438129	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.503	16.503	0.000	95	1913837	4.00	4.11	
6 Chlorodifluoromethane	67	2.925	2.925	0.000	95	157622	2.00	1.98	
7 Propene	41	2.930	2.930	0.000	97	309924	2.00	1.94	
8 Dichlorodifluoromethane	85	2.973	2.973	0.000	99	1350824	2.00	2.02	
9 Chloromethane	52	3.124	3.124	0.000	98	109323	2.00	2.16	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.135	3.135	0.000	91	864005	2.00	2.12	
11 Acetaldehyde	44	3.254	3.254	0.000	98	482859	10.0	7.67	
12 Vinyl chloride	62	3.270	3.270	0.000	99	407891	2.00	2.31	
14 Butadiene	54	3.340	3.340	0.000	73	285527	2.00	2.24	
13 Butane	43	3.340	3.340	0.000	82	528671	2.00	2.12	
15 Bromomethane	94	3.610	3.610	0.000	98	447028	2.00	2.58	
16 Chloroethane	64	3.723	3.723	0.000	100	201785	2.00	2.48	
17 Ethanol	31	3.815	3.815	0.000	96	492071	10.0	7.93	
18 Vinyl bromide	106	3.976	3.976	0.000	98	435517	2.00	2.54	
19 2-Methylbutane	43	4.019	4.019	0.000	86	359353	2.00	2.11	
20 Trichlorofluoromethane	101	4.203	4.203	0.000	99	1529123	2.00	2.22	
21 Acrolein	56	4.214	4.214	0.000	95	89489	2.00	1.90	
22 Acetonitrile	40	4.273	4.273	0.000	99	93464	2.00	1.77	
23 Acetone	58	4.311	4.311	0.000	98	312203	6.00	4.78	
24 Isopropyl alcohol	45	4.386	4.386	0.000	94	1192808	6.00	5.60	
25 Pentane	72	4.392	4.392	0.000	96	72775	2.00	2.51	
26 Ethyl ether	31	4.537	4.537	0.000	84	197271	2.00	1.46	
27 1,1-Dichloroethene	96	4.818	4.818	0.000	99	401459	2.00	2.51	
28 2-Methyl-2-propanol	59	4.915	4.915	0.000	93	538854	2.00	2.15	
29 Acrylonitrile	53	4.920	4.920	0.000	50	154623	2.00	1.83	
30 1,1,2-Trichloro-1,2,2-trif	101	4.979	4.979	0.000	96	817028	2.00	2.09	
31 Methylene Chloride	84	5.141	5.141	0.000	91	321638	2.00	2.07	
32 3-Chloro-1-propene	39	5.157	5.157	0.000	96	321487	2.00	1.47	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.287	5.287	0.000	99	1066662	2.00	2.21	
34 trans-1,2-Dichloroethene	96	5.912	5.912	0.000	98	392785	2.00	2.19	
35 2-Methylpentane	43	5.928	5.928	0.000	90	603133	2.00	1.78	
36 Methyl tert-butyl ether	73	6.042	6.042	0.000	94	848159	2.00	1.68	
37 1,1-Dichloroethane	63	6.317	6.317	0.000	99	637472	2.00	1.89	
38 Vinyl acetate	43	6.430	6.430	0.000	99	619969	2.00	1.46	
39 2-Butanone (MEK)	72	6.867	6.867	0.000	96	117319	2.00	1.48	
40 Hexane	56	6.877	6.877	0.000	84	252196	2.00	1.96	
41 Isopropyl ether	45	7.050	7.050	0.000	92	740084	2.00	1.50	
42 cis-1,2-Dichloroethene	96	7.282	7.282	0.000	95	380280	2.00	2.07	
43 Ethyl acetate	43	7.487	7.487	0.000	99	449634	2.00	1.37	
44 Chloroform	83	7.622	7.622	0.000	97	903525	2.00	1.97	
45 Tert-butyl ethyl ether	59	7.719	7.719	0.000	93	800175	2.00	1.67	
46 Tetrahydrofuran	42	8.026	8.026	0.000	85	227048	2.00	1.47	
47 1,1,1-Trichloroethane	97	8.635	8.635	0.000	95	1088971	2.00	1.92	
48 1,2-Dichloroethane	62	8.749	8.749	0.000	99	613590	2.00	1.76	
50 Cyclohexane	69	9.228	9.228	0.000	95	176328	2.00	2.23	
51 Benzene	78	9.239	9.239	0.000	96	938720	2.00	2.04	
49 n-Butanol	31	9.239	9.239	0.000	58	69736	2.00	1.43	
52 Carbon tetrachloride	117	9.261	9.261	0.000	98	1232807	2.00	2.12	
53 2,3-Dimethylpentane	71	9.374	9.374	0.000	87	236076	2.00	2.11	
54 Thiophene	84	9.525	9.525	0.000	93	581508	2.00	2.14	
55 Tert-amyl methyl ether	73	9.773	9.773	0.000	98	816779	2.00	1.73	
56 Isooctane	57	10.075	10.075	0.000	98	1413618	2.00	2.02	
57 n-Heptane	71	10.506	10.506	0.000	84	362081	2.00	2.12	
58 1,2-Dichloropropane	63	10.577	10.577	0.000	83	318127	2.00	1.91	
59 Trichloroethene	130	10.614	10.614	0.000	98	565752	2.00	2.20	
60 Dibromomethane	93	10.701	10.701	0.000	93	483602	2.00	1.99	
61 Dichlorobromomethane	83	10.868	10.868	0.000	99	923399	2.00	2.03	
62 1,4-Dioxane	88	10.900	10.900	0.000	82	135185	2.00	2.07	
63 Methyl methacrylate	41	11.008	11.008	0.000	83	267620	2.00	1.31	
64 Methylcyclohexane	83	11.439	11.439	0.000	93	821907	2.00	2.29	
65 4-Methyl-2-pentanone (MIBK	43	11.914	11.914	0.000	94	416408	2.00	1.22	
66 cis-1,3-Dichloropropene	75	11.957	11.957	0.000	92	607560	2.00	1.99	
67 trans-1,3-Dichloropropene	75	12.696	12.696	0.000	96	587952	2.00	1.86	
68 Toluene	91	12.804	12.804	0.000	94	1136698	2.00	1.96	
69 1,1,2-Trichloroethane	83	12.895	12.895	0.000	99	342811	2.00	2.00	
70 2-Methylthiophene	97	12.960	12.960	0.000	97	1008017	2.00	2.11	
71 3-Methylthiophene	97	13.170	13.170	0.000	98	973097	2.00	2.06	
72 2-Hexanone	58	13.316	13.316	0.000	96	225433	2.00	1.69	
73 n-Octane	85	13.548	13.548	0.000	84	412936	2.00	2.06	
74 Chlorodibromomethane	129	13.607	13.607	0.000	97	916071	2.00	2.06	
75 Ethylene Dibromide	107	13.904	13.904	0.000	100	690025	2.00	1.98	
76 Tetrachloroethene	129	13.985	13.985	0.000	96	575428	2.00	2.15	
77 Chlorobenzene	112	14.880	14.880	0.000	94	997582	2.00	2.07	
78 2,3-Dimethylheptane	43	14.928	14.928	0.000	85	763252	2.00	1.62	
79 Ethylbenzene	91	15.187	15.187	0.000	98	1532129	2.00	1.94	
80 2-Ethylthiophene	97	15.290	15.290	0.000	97	1268287	2.00	2.02	
81 m-Xylene & p-Xylene	91	15.354	15.354	0.000	98	2366152	4.00	3.77	
83 Bromoform	173	15.791	15.791	0.000	97	900649	2.00	1.44	
82 n-Nonane	57	15.802	15.802	0.000	82	598643	2.00	1.85	
84 Styrene	104	15.823	15.823	0.000	98	853668	2.00	1.98	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	15.883	15.883	0.000	99	1236282	2.00	1.87	
86 1,1,2,2-Tetrachloroethane	83	16.217	16.217	0.000	98	778507	2.00	1.91	
87 1,2,3-Trichloropropane	110	16.379	16.379	0.000	96	296162	2.00	1.85	
88 Isopropylbenzene	105	16.481	16.481	0.000	97	1679959	2.00	1.90	
89 N-Propylbenzene	120	17.037	17.037	0.000	99	470603	2.00	1.90	
90 2-Chlorotoluene	126	17.069	17.069	0.000	96	468252	2.00	1.98	
91 4-Ethyltoluene	105	17.193	17.193	0.000	98	1580698	2.00	1.89	
92 1,3,5-Trimethylbenzene	120	17.279	17.279	0.000	93	773955	2.00	1.87	
93 Alpha Methyl Styrene	118	17.527	17.527	0.000	88	643082	2.00	1.84	
94 n-Decane	57	17.614	17.614	0.000	94	712402	2.00	1.89	
95 tert-Butylbenzene	119	17.732	17.732	0.000	91	1493427	2.00	1.87	
96 1,2,4-Trimethylbenzene	105	17.748	17.748	0.000	95	1356336	2.00	1.84	
97 sec-Butylbenzene	105	18.023	18.023	0.000	97	1859821	2.00	1.84	
98 1,3-Dichlorobenzene	146	18.029	18.029	0.000	98	968340	2.00	1.65	
99 Benzyl chloride	91	18.115	18.115	0.000	98	1150190	2.00	1.81	
100 1,4-Dichlorobenzene	146	18.126	18.126	0.000	94	939684	2.00	1.65	
101 4-Isopropyltoluene	119	18.207	18.207	0.000	96	1622683	2.00	1.87	
102 1,2,3-Trimethylbenzene	105	18.250	18.250	0.000	98	1039008	2.00	1.86	
103 Butylcyclohexane	83	18.315	18.315	0.000	96	985614	2.00	1.98	
104 1,2-Dichlorobenzene	146	18.503	18.503	0.000	91	926447	2.00	1.63	
105 2,3-Dihydroindene	117	18.509	18.509	0.000	94	1243108	2.00	1.87	
106 Indene	116	18.644	18.644	0.000	92	912198	2.00	1.80	
107 n-Butylbenzene	91	18.665	18.665	0.000	98	1387447	2.00	1.81	
108 Undecane	57	19.010	19.010	0.000	91	649092	2.00	1.76	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.053	19.053	0.000	97	1111316	2.00	1.83	
110 1,2-Dibromo-3-Chloropropan	157	19.145	19.145	0.000	99	369562	2.00	1.46	
111 1,2,4,5-Tetramethylbenzene	119	19.452	19.452	0.000	96	1316457	2.00	1.86	
112 1,2,3,5-Tetramethylbenzene	119	19.506	19.506	0.000	95	798555	2.00	1.88	
113 1,2,3,4-Tetramethylbenzene	119	19.905	19.905	0.000	97	1055565	2.00	1.91	
114 Dodecane	57	20.083	20.083	0.000	95	491800	2.00	1.79	
115 1,2,4-Trichlorobenzene	180	20.240	20.240	0.000	94	666255	2.00	1.24	
116 Naphthalene	128	20.369	20.369	0.000	98	1240174	2.00	1.78	
117 Benzo(b)thiophene	134	20.466	20.466	0.000	99	751653	2.00	1.66	
118 Hexachlorobutadiene	225	20.585	20.585	0.000	96	903235	2.00	1.19	
119 1,2,3-Trichlorobenzene	180	20.644	20.644	0.000	95	612118	2.00	1.18	
120 2-Methylnaphthalene	142	21.469	21.469	0.000	99	506597	6.25	5.10	
121 1-Methylnaphthalene	142	21.674	21.674	0.000	99	427618	6.25	5.51	
A 124 Toluene Range	1	12.804	(12.774-12.834)		0	2737905	2.00	1.86	
A 125 C8 Range	1	13.548	(13.518-13.578)		0	3127273	2.00	1.76	
S 126 Xylenes, Total	100				0		6.00	5.64	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.26	

Reagents:

40CV101P_00020	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

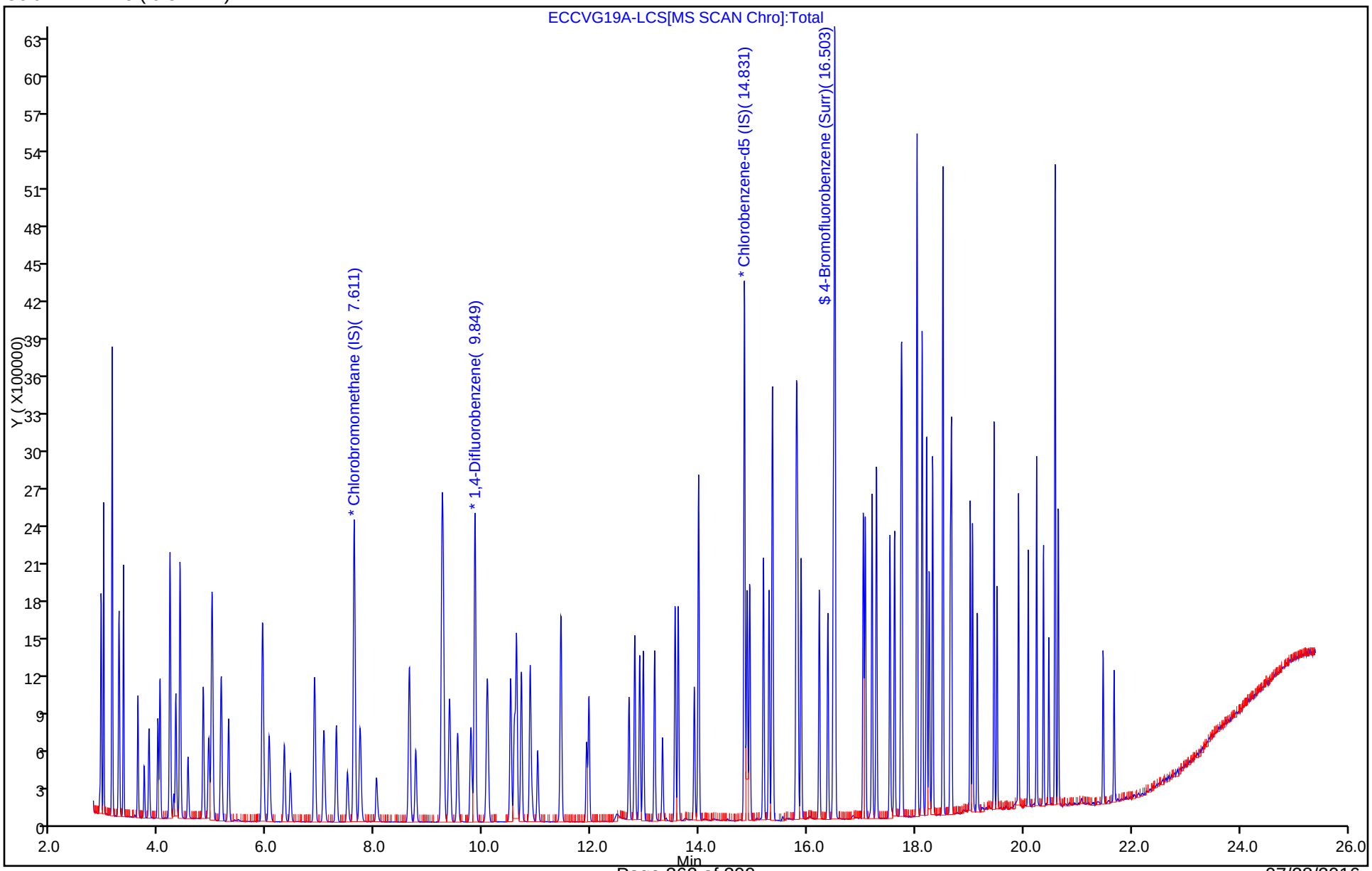
Report Date: 20-Jul-2016 12:47:56 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ECCVG19A-LCS.d

Injection Date:	19-Jul-2016 10:10:30	Instrument ID:	ME	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ECCVG19A-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	19-Jul-2016 10:10:30	ALS Bottle#:	5	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003184-002				
Misc. Info.:	P20				
Operator ID:	7126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160715-3184.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	20-Jul-2016 12:47:49	Calib Date:	28-Jun-2016 20:55:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160628-3101.b\EF28IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK029				

First Level Reviewer: tajh Date: 20-Jul-2016 12:47:49

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.66

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-5891/1002

Matrix: Air Lab File ID: JCCVG20-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 07/20/2016 11:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5891 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.79		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.37		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.31		0.080	0.015
67-66-3	Chloroform	119.38	2.01		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.88		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.40		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.05		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.08		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.02		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.75		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.02		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.93		0.40	0.068
91-20-3	Naphthalene	128.17	1.73		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.71		0.080	0.016
108-88-3	Toluene	92.14	1.65		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.06		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.92		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.15		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.75		0.080	0.021
79-01-6	Trichloroethene	131.39	1.73		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.93		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.96		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.78		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.26		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.36		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	112		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JCCVG20-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 20-Jul-2016 11:23:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003196-002
Misc. Info.: P20
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 21-Jul-2016 09:34:15 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK024

First Level Reviewer: tajh Date: 21-Jul-2016 09:34:15

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.373	9.373	0.000	96	211762	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.535	11.535	0.000	97	932413	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.216	16.216	0.000	89	833058	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.835	17.835	0.000	93	549606	4.00	4.47	
6 Chlorodifluoromethane	67	3.924	3.924	0.000	95	60700	2.00	2.31	
7 Propene	41	3.940	3.940	0.000	99	142618	2.00	2.33	
8 Dichlorodifluoromethane	85	3.993	3.993	0.000	100	559133	2.00	2.40	
9 Chloromethane	52	4.192	4.192	0.000	54	39056	2.00	2.38	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.198	4.198	0.000	89	303994	2.00	2.35	
11 Acetaldehyde	44	4.359	4.359	0.000	95	130956	10.0	9.18	
12 Vinyl chloride	62	4.381	4.381	0.000	99	125886	2.00	2.26	
14 Butadiene	54	4.478	4.478	0.000	74	91761	2.00	2.51	
13 Butane	43	4.478	4.478	0.000	81	159145	2.00	2.61	
15 Bromomethane	94	4.833	4.833	0.000	97	116395	2.00	2.22	
16 Chloroethane	64	4.983	4.983	0.000	97	45409	2.00	2.27	
17 Ethanol	31	5.075	5.075	0.000	93	104787	10.0	12.8	
18 Vinyl bromide	106	5.311	5.311	0.000	98	126511	2.00	2.04	
19 2-Methylbutane	43	5.360	5.360	0.000	90	179237	2.00	2.45	
20 Trichlorofluoromethane	101	5.602	5.602	0.000	99	508651	2.00	2.36	
21 Acrolein	56	5.613	5.613	0.000	92	31577	2.00	1.78	
22 Acetonitrile	40	5.688	5.688	0.000	97	41178	2.00	2.11	
23 Acetone	58	5.736	5.736	0.000	99	125365	6.00	5.17	
24 Isopropyl alcohol	45	5.806	5.806	0.000	92	590428	6.00	7.30	
25 Pentane	72	5.833	5.833	0.000	99	18822	2.00	2.06	
26 Ethyl ether	31	6.011	6.011	0.000	92	88202	2.00	2.13	
27 1,1-Dichloroethene	96	6.355	6.355	0.000	91	126739	2.00	2.02	
28 2-Methyl-2-propanol	59	6.441	6.441	0.000	94	241193	2.00	2.19	
29 Acrylonitrile	53	6.468	6.468	0.000	94	68038	2.00	1.83	
30 1,1,2-Trichloro-1,2,2-trif	101	6.538	6.538	0.000	94	312606	2.00	2.14	
31 Methylene Chloride	84	6.726	6.726	0.000	95	117322	2.00	2.02	
32 3-Chloro-1-propene	39	6.737	6.737	0.000	96	129229	2.00	2.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.904	6.904	0.000	99	372009	2.00	2.09	
34 trans-1,2-Dichloroethene	96	7.571	7.571	0.000	91	129239	2.00	2.06	
35 2-Methylpentane	43	7.582	7.582	0.000	94	310583	2.00	2.42	
36 Methyl tert-butyl ether	73	7.700	7.700	0.000	95	249161	2.00	1.93	
37 1,1-Dichloroethane	63	8.007	8.007	0.000	100	262656	2.00	2.05	
38 Vinyl acetate	43	8.109	8.109	0.000	100	215665	2.00	2.04	
39 2-Butanone (MEK)	72	8.577	8.577	0.000	95	33909	2.00	1.67	
40 Hexane	56	8.593	8.593	0.000	88	120161	2.00	2.18	
41 Isopropyl ether	45	8.749	8.749	0.000	97	330411	2.00	2.07	
42 cis-1,2-Dichloroethene	96	9.023	9.023	0.000	97	117846	2.00	1.88	
43 Ethyl acetate	43	9.201	9.201	0.000	99	188184	2.00	2.22	
44 Chloroform	83	9.378	9.378	0.000	98	285663	2.00	2.01	
45 Tert-butyl ethyl ether	59	9.448	9.448	0.000	95	313159	2.00	1.98	
46 Tetrahydrofuran	42	9.793	9.793	0.000	93	95439	2.00	2.11	
47 1,1,1-Trichloroethane	97	10.427	10.427	0.000	96	353005	2.00	2.15	
48 1,2-Dichloroethane	62	10.535	10.535	0.000	98	212021	2.00	2.08	
49 n-Butanol	31	10.933	10.933	0.000	82	33655	2.00	2.37	
51 Benzene	78	11.008	11.008	0.000	96	291526	2.00	1.79	
50 Cyclohexane	69	11.014	11.014	0.000	80	58655	2.00	2.15	
52 Carbon tetrachloride	117	11.035	11.035	0.000	98	409925	2.00	2.37	
53 2,3-Dimethylpentane	71	11.110	11.110	0.000	88	71087	2.00	1.90	
54 Thiophene	84	11.283	11.283	0.000	98	167915	2.00	1.81	
55 Tert-amyl methyl ether	73	11.460	11.460	0.000	95	236498	2.00	1.85	
56 Isooctane	57	11.740	11.740	0.000	98	610652	2.00	1.99	
57 n-Heptane	71	12.106	12.106	0.000	92	97189	2.00	1.81	
58 1,2-Dichloropropane	63	12.208	12.208	0.000	87	120991	2.00	1.84	
59 Trichloroethene	130	12.235	12.235	0.000	92	142162	2.00	1.73	
60 Dibromomethane	93	12.326	12.326	0.000	91	144603	2.00	1.99	
62 Dichlorobromomethane	83	12.466	12.466	0.000	99	268023	2.00	2.02	
61 1,4-Dioxane	88	12.477	12.477	0.000	91	38015	2.00	1.96	
63 Methyl methacrylate	41	12.541	12.541	0.000	93	104090	2.00	2.08	
64 Methylcyclohexane	83	12.993	12.993	0.000	89	232510	2.00	1.86	
65 4-Methyl-2-pentanone (MIBK	43	13.381	13.381	0.000	97	210352	2.00	1.91	
66 cis-1,3-Dichloropropene	75	13.445	13.445	0.000	97	156927	2.00	1.83	
67 trans-1,3-Dichloropropene	75	14.134	14.134	0.000	99	126313	2.00	1.85	
68 Toluene	91	14.257	14.257	0.000	92	292759	2.00	1.65	
69 1,1,2-Trichloroethane	83	14.333	14.333	0.000	96	89866	2.00	1.75	
70 2-Methylthiophene	97	14.413	14.413	0.000	98	254431	2.00	1.72	
71 3-Methylthiophene	97	14.607	14.607	0.000	99	240660	2.00	1.70	
72 2-Hexanone	58	14.693	14.693	0.000	94	100569	2.00	1.95	
73 n-Octane	85	14.914	14.914	0.000	93	101707	2.00	1.75	
74 Chlorodibromomethane	129	15.038	15.038	0.000	98	232572	2.00	1.89	
75 Ethylene Dibromide	107	15.328	15.328	0.000	98	162283	2.00	1.73	
76 Tetrachloroethene	129	15.387	15.387	0.000	91	142081	2.00	1.71	
77 2,3-Dimethylheptane	43	16.253	16.253	0.000	94	343188	2.00	2.07	
78 Chlorobenzene	112	16.259	16.259	0.000	91	227044	2.00	1.70	
79 Ethylbenzene	91	16.538	16.538	0.000	99	353167	2.00	1.75	
80 2-Ethylthiophene	97	16.641	16.641	0.000	98	272792	2.00	1.78	
81 m-Xylene & p-Xylene	91	16.700	16.700	0.000	99	559577	4.00	3.56	
82 n-Nonane	57	17.092	17.092	0.000	91	229109	2.00	1.97	
84 Styrene	104	17.162	17.162	0.000	98	177146	2.00	1.83	
83 Bromoform	173	17.162	17.162	0.000	93	167260	2.00	1.81	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	17.227	17.227	0.000	97	303086	2.00	1.80	
86 1,1,2,2-Tetrachloroethane	83	17.544	17.544	0.000	97	194737	2.00	1.81	
87 1,2,3-Trichloropropane	110	17.706	17.706	0.000	97	56523	2.00	1.86	
88 Isopropylbenzene	105	17.797	17.797	0.000	98	387298	2.00	1.83	
89 N-Propylbenzene	120	18.319	18.319	0.000	99	94218	2.00	1.77	
90 2-Chlorotoluene	126	18.367	18.367	0.000	97	95055	2.00	1.69	
91 4-Ethyltoluene	105	18.459	18.459	0.000	99	345522	2.00	1.91	
92 1,3,5-Trimethylbenzene	120	18.529	18.529	0.000	91	170346	2.00	1.78	
93 Alpha Methyl Styrene	118	18.755	18.755	0.000	85	122685	2.00	1.85	
94 n-Decane	57	18.792	18.792	0.000	89	238796	2.00	2.01	
95 tert-Butylbenzene	119	18.943	18.943	0.000	96	359686	2.00	1.89	
96 1,2,4-Trimethylbenzene	105	18.959	18.959	0.000	96	317486	2.00	1.96	
97 sec-Butylbenzene	105	19.207	19.207	0.000	98	463658	2.00	1.97	
98 1,3-Dichlorobenzene	146	19.228	19.228	0.000	98	143999	2.00	1.74	
99 Benzyl chloride	91	19.298	19.298	0.000	97	156888	2.00	1.93	
100 1,4-Dichlorobenzene	146	19.314	19.314	0.000	94	125421	2.00	1.77	
101 4-Isopropyltoluene	119	19.363	19.363	0.000	96	375790	2.00	1.94	
102 1,2,3-Trimethylbenzene	105	19.416	19.416	0.000	99	247281	2.00	1.93	
103 Butylcyclohexane	83	19.465	19.465	0.000	87	256762	2.00	1.83	
105 1,2-Dichlorobenzene	146	19.664	19.664	0.000	95	148257	2.00	1.76	
104 2,3-Dihydroindene	117	19.664	19.664	0.000	93	256605	2.00	1.90	
106 n-Butylbenzene	91	19.782	19.782	0.000	98	302302	2.00	2.02	
107 Indene	116	19.793	19.793	0.000	90	151013	2.00	1.95	
108 Undecane	57	20.073	20.073	0.000	93	240547	2.00	2.12	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.148	20.148	0.000	97	246122	2.00	1.96	
110 1,2-Dibromo-3-Chloropropan	157	20.256	20.256	0.000	91	46043	2.00	1.67	
111 1,2,4,5-Tetramethylbenzene	119	20.535	20.535	0.000	96	296221	2.00	1.92	
112 1,2,3,5-Tetramethylbenzene	119	20.589	20.589	0.000	94	187275	2.00	1.89	
113 1,2,3,4-Tetramethylbenzene	119	21.003	21.003	0.000	96	235446	2.00	1.92	
114 Dodecane	57	21.149	21.149	0.000	95	235200	2.00	2.33	
115 1,2,4-Trichlorobenzene	180	21.385	21.385	0.000	94	42712	2.00	1.92	
116 Naphthalene	128	21.525	21.525	0.000	98	102243	2.00	1.73	
117 Benzo(b)thiophene	134	21.622	21.622	0.000	99	42359	2.00	2.04	
118 Hexachlorobutadiene	225	21.703	21.703	0.000	96	161283	2.00	1.82	
119 1,2,3-Trichlorobenzene	180	21.762	21.762	0.000	96	46874	2.00	1.92	
120 2-Methylnaphthalene	142	22.305	22.305	0.000	98	24522	6.25	6.36	
121 1-Methylnaphthalene	142	22.429	22.429	0.000	98	26796	6.25	6.61	
A 124 Toluene Range	1	14.257	(14.227-14.287)		0	694636	2.00	1.76	
A 125 C8 Range	1	14.915	(14.881-14.949)		0	1060876	2.00	2.05	
S 126 Xylenes, Total	100				0		6.00	5.36	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.94	

Reagents:

40CV101P_00020	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

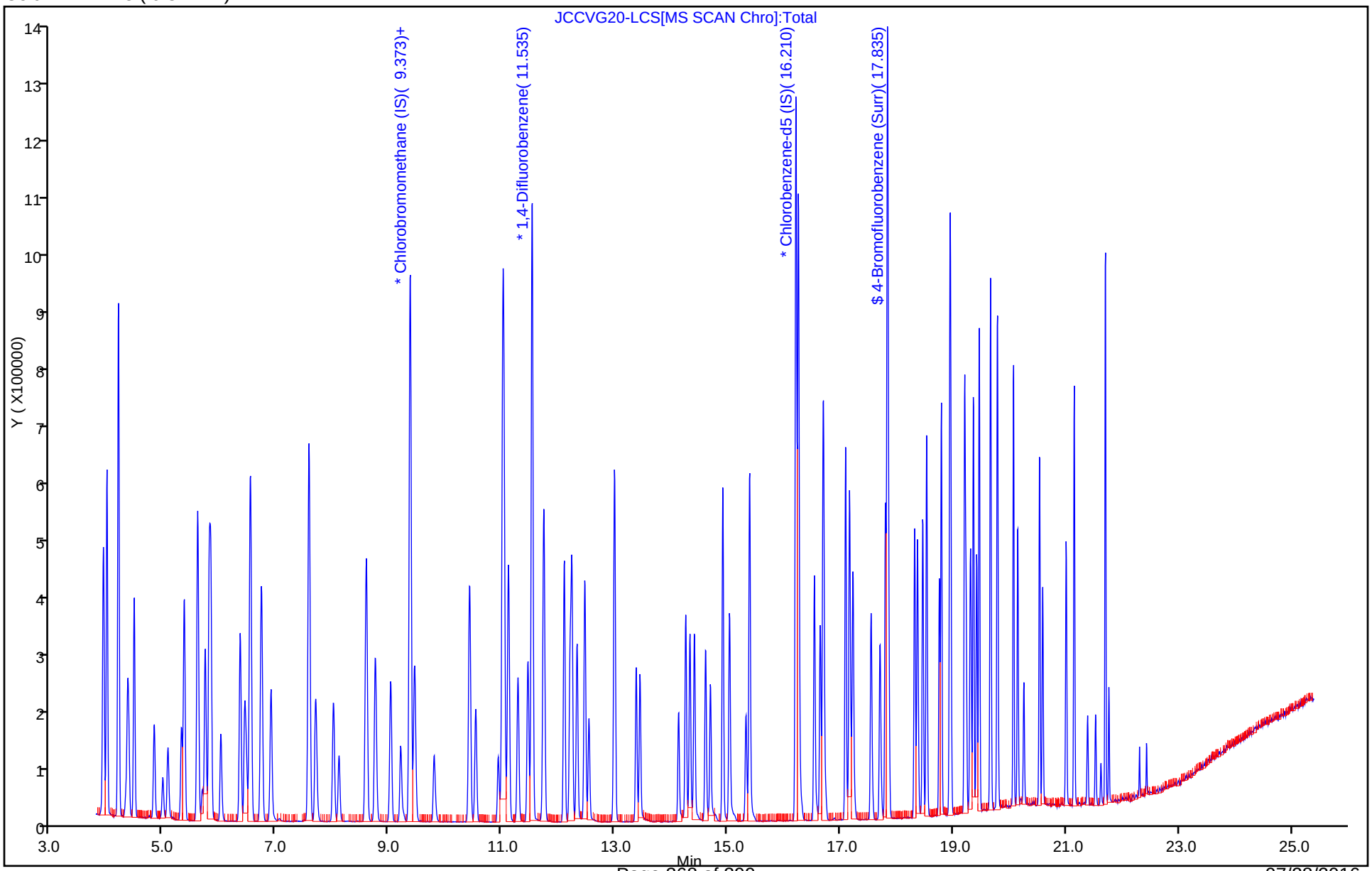
Report Date: 21-Jul-2016 09:34:20 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JCCVG20-LCS.d

Injection Date:	20-Jul-2016 11:23:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\JCCVG20-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	20-Jul-2016 11:23:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003196-002				
Misc. Info.:	P20				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160718-3196.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jul-2016 09:34:15	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK024				

First Level Reviewer: tajh Date: 21-Jul-2016 09:34:15

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.47	111.71

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Instrument ID: MJ Start Date: 06/22/2016 15:21

Analysis Batch Number: 5523 End Date: 06/23/2016 09:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5523/1		06/22/2016 15:21	1	JBFBF22Z.D	RTX-5 0.32(mm)
IC 140-5523/2		06/22/2016 15:49	1	JF22IC01.D	RTX-5 0.32(mm)
IC 140-5523/3		06/22/2016 16:44	1	JF22IC02.D	RTX-5 0.32(mm)
IC 140-5523/4		06/22/2016 17:38	1	JF22IC03.D	RTX-5 0.32(mm)
IC 140-5523/5		06/22/2016 18:32	1	JF22IC04.D	RTX-5 0.32(mm)
IC 140-5523/6		06/22/2016 19:26	1	JF22IC05.D	RTX-5 0.32(mm)
ICIS 140-5523/7		06/22/2016 20:20	1	JF22IC06.D	RTX-5 0.32(mm)
IC 140-5523/8		06/22/2016 21:14	1	JF22IC07.D	RTX-5 0.32(mm)
IC 140-5523/9		06/22/2016 22:07	1	JF22IC08.D	RTX-5 0.32(mm)
IC 140-5523/10		06/22/2016 23:00	1	JF22IC09.D	RTX-5 0.32(mm)
ICV 140-5523/17		06/23/2016 09:52	1	JF22ICVR.D	RTX-5 0.32(mm)

160622

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	21.6	6/22/2016	3:21:41 PM
ICAL01	7 - 102 mL	33.5	6/22/2016	3:49:35 PM
ICAL02	7 - 201 mL	32.7	6/22/2016	4:44:18 PM
ICAL03	8 - 201 mL	33.6	6/22/2016	5:38:34 PM
ICAL04	9 - 201 mL	34.1	6/22/2016	6:32:36 PM
ICAL05	10 - 201 mL	33.9	6/22/2016	7:26:38 PM
ICAL06	11 - 201 mL	34.1	6/22/2016	8:20:39 PM
ICAL07	12 - 200 mL	32.1	6/22/2016	9:14:20 PM
ICAL08	13 - 200 mL	30.6	6/22/2016	10:07:38 PM
ICAL09	14 - 202 mL	33.7	6/22/2016	11:00:52 PM
PRIME	15 - 51 mL	31.4	6/22/2016	11:53:57 PM
ICV	15 - 100 mL	30.6	6/23/2016	12:47:06 AM
DNUFLUSH	16 - 100 mL	21.2	6/23/2016	1:35:22 AM
MB	16 - 500 mL	20.2	6/23/2016	2:04:58 AM
MDL	7 - 50 mL	32.1	6/23/2016	2:58:15 AM
LCS	5 - 100 mL	33.5	6/23/2016	9:06:17 AM
ICV	15 - 100 mL	29.7	6/23/2016	9:52:34 AM

ICAL MJ WL3070

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	6/23/16	Instrument:	MJ	Chrom WL #:	3070	TALS Batch & Event #	TO14/15: 5523 642	AFCEE: 5522 / 641
							DOD: 5520 / 639	OHIO: 5521 / 640

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DNU TPH as Hexane	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	→	→	→	naph @ 33	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	→	→	→		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	→	→	→		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→				NA	→		
21. Is the second source analysis within limits? [F8 , icv]	✓	→	→	→		✓	✓	✓	✓
22. Analyst/Date: 6/23/16	2nd Level Reviewer/Date: ATB 6/27/16								

Comments:

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL			✓						
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	
27. If criteria not met, was a NCM generated?	NA	→	→	→		NA	→	→	→
28. After review in TALS, approve the method in TALS.	✓	✓	✓	✓					
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>	✓	✓	✓	✓		✓	✓	✓	✓
30. Checklist & Entech report scanned, attached & assigned properly?					OK	✓	✓	✓	✓

Analyst: ATB Date: 6/27/16 | 2nd Level Reviewer : | Date: 6/28/16

Comments: 6/23/16

UR 48 IM TUBE, UR8 benzo(b) thiophene

~~UR C8. 8WL~~ 8/23/16 M

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Instrument ID: ME Start Date: 06/28/2016 14:10

Analysis Batch Number: 5589 End Date: 06/28/2016 22:26

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5589/1		06/28/2016 14:10	1	EBFBF28.D	RTX-5 0.32(mm)
IC 140-5589/2		06/28/2016 14:43	1	EF28IC01.D	RTX-5 0.32(mm)
IC 140-5589/3		06/28/2016 15:30	1	EF28IC02.D	RTX-5 0.32(mm)
IC 140-5589/4		06/28/2016 16:17	1	EF28IC03.D	RTX-5 0.32(mm)
IC 140-5589/5		06/28/2016 17:03	1	EF28IC04.D	RTX-5 0.32(mm)
IC 140-5589/6		06/28/2016 17:50	1	EF28IC05.D	RTX-5 0.32(mm)
ICIS 140-5589/7		06/28/2016 18:37	1	EF28IC06.D	RTX-5 0.32(mm)
IC 140-5589/8		06/28/2016 19:23	1	EF28IC07.D	RTX-5 0.32(mm)
IC 140-5589/9		06/28/2016 20:09	1	EF28IC08.D	RTX-5 0.32(mm)
IC 140-5589/10		06/28/2016 20:55	1	EF28IC09.D	RTX-5 0.32(mm)
ICV 140-5589/12		06/28/2016 22:26	1	EF28ICV.D	RTX-5 0.32(mm)

160628

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	31.3	6/28/2016	2:10:54 PM
ICAL01	7 - 101 mL	35.5	6/28/2016	2:43:07 PM
ICAL02	7 - 201 mL	34.8	6/28/2016	3:30:21 PM
ICAL03	8 - 201 mL	34.9	6/28/2016	4:17:00 PM
ICAL04	9 - 201 mL	36.3	6/28/2016	5:03:50 PM
ICAL05	10 - 200 mL	35.7	6/28/2016	5:50:27 PM
ICAL06	11 - 201 mL	34.1	6/28/2016	6:37:07 PM
ICAL07	12 - 201 mL	33.5	6/28/2016	7:23:12 PM
ICAL08	13 - 201 mL	32.5	6/28/2016	8:09:39 PM
ICAL09	14 - 201 mL	35.4	6/28/2016	8:55:10 PM
DNUprime	15 - 21 mL	31	6/28/2016	9:40:42 PM
ICV/LCS	15 - 101 mL	29.9	6/28/2016	10:26:04 PM
DNUflush	16 - 200 mL	31	6/28/2016	11:11:51 PM
BLANK	16 - 502 mL	30.3	6/28/2016	11:43:43 PM
MDLV	7 - 52 mL	34.3	6/29/2016	12:29:24 AM
LCS/ICV	1 - 101 mL	34.9	6/29/2016	1:15:16 AM

WL ME 3101

ICAL

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	6/28/16	Instrument:	MS	Chrom WL #:	3101	TALS Batch & Event #	TO14/15: 5589 / 649	AFCEE: 5588 / 648
							DOD: 5586 / 646	OHIO: 5587 / 647

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓		NA ✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		
12. Elution order checked on isomeric pairs? [Chrom]			✓
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DNH TPH as Hexane	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	✓	✓	✓	acetaldehyde 32	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	N	→	→	→	~~acetaldehyde~~ 32 6/29/16 ✓	NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	N	→	→			NA	→	→	
19. Is the intercept less than the RL for each curve? [F6]	N	→	→			NA	→	→	
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	N	→				NA	→		
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. **Analyst/Date:** 6/29/16		**2nd Level Reviewer/Date:**					JS 7/1/16		
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL			✓						
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NA	→	→	→		N	→	→	→
28. After review in TALS, approve the method in TALS.	✓	✓	✓	✓			OH		
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>	✓	✓	✓	✓					
30. Checklist & Entech report scanned, attached & assigned properly?									
Analyst: JHB **Date:** 6/29/16		**2nd Level Reviewer :**					**Date:** 7/6/16		
Comments:		**Comments:**							

VR @ ~~acetonitrile~~, propene ✓ 6/29/16 JS 7/1/16

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Instrument ID: ME Start Date: 07/19/2016 09:38

Analysis Batch Number: 5859 End Date: 07/20/2016 09:13

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5859/1		07/19/2016 09:38	1	EBFBG19A.D	RTX-5 0.32(mm)
CCVIS 140-5859/2		07/19/2016 10:10	1	ECCVG19A.D	RTX-5 0.32(mm)
LCS 140-5859/1002		07/19/2016 10:10	1	ECCVG19A-LCS.d	RTX-5 0.32(mm)
MB 140-5859/4		07/19/2016 12:58	1	EMB500G19.D	RTX-5 0.32(mm)
ZZZZZ		07/19/2016 13:44	46.15		RTX-5 0.32(mm)
ZZZZZ		07/19/2016 14:30	39.44		RTX-5 0.32(mm)
ZZZZZ		07/19/2016 15:15	9.26		RTX-5 0.32(mm)
140-5356-4		07/19/2016 20:34	1	EG19P110.D	RTX-5 0.32(mm)
140-5356-5		07/19/2016 21:19	1	EG19P111.D	RTX-5 0.32(mm)
140-5356-6		07/19/2016 22:05	1	EG19P112.D	RTX-5 0.32(mm)
ZZZZZ		07/19/2016 22:50	1		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 02:35	1		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 03:20	170.75		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 09:13	1		RTX-5 0.32(mm)

160719

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	34.1	7/19/2016	9:38:12 AM
CCV	9 - 100 mL	19.8	7/19/2016	10:10:08 AM
dnuleak	16 - 51 mL	32.4	7/19/2016	12:14:15 PM
MB500	16 - 501 mL	33.3	7/19/2016	12:58:45 PM
5358-01	1 - 19 mL	16.3	7/19/2016	1:44:52 PM
5358-02	2 - 11 mL	15	7/19/2016	2:30:22 PM
5358-03	3 - 24 mL	15.5	7/19/2016	3:15:57 PM
5358-04	4 - 16 mL	16.2	7/19/2016	4:02:42 PM
5358-05	5 - 23 mL	16.6	7/19/2016	4:47:31 PM
5358-06	6 - 21 mL	15.2	7/19/2016	5:32:20 PM
5356-01	7 - 21 mL	13.5	7/19/2016	6:17:51 PM
5356-02	8 - 101 mL	9.3	7/19/2016	7:03:53 PM
5356-03	9 - 101 mL	8.7	7/19/2016	7:49:51 PM
5356-04	10 - 101 mL	10.3	7/19/2016	8:34:52 PM
5356-05	11 - 101 mL	10.1	7/19/2016	9:19:50 PM
5356-06	12 - 101 mL	9.9	7/19/2016	10:05:11 PM
5356-06	12 - 101 mL	4.1	7/19/2016	10:50:30 PM
5349-01	13 - 101 mL	15.5	7/19/2016	11:35:41 PM
5348-01	14 - 101 mL	15.1	7/20/2016	12:21:08 AM
5348-02	15 - 101 mL	14.9	7/20/2016	1:05:14 AM
BAG114523-02	1 - 26 mL	14.9	7/20/2016	1:49:56 AM
BAG114523-01	2 - 26 mL	14.9	7/20/2016	2:35:24 AM
5358-04R	4 - 16 mL	14.6	7/20/2016	3:20:37 AM
BAG114523-02	1 - 26 mL	18.5	7/20/2016	9:13:28 AM

ME WL 3184

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	M E 7/19/16	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3184 / CCAL Batch #	5859			
ICAL Chrom WL #	3101 / ICAL Batch # / Event #	5589.649	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]		□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] NFA 124 TCBT MIBK	✓	□ CCV - %D - LCS criteria met (NCM# 4701) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		✓
7. Has the RT been updated to the method? 7/28/16			✓
Analyst: **Date:**		**2nd Level Reviewer:** **Date:** 07/28/16	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		✓
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	N/A		N/A
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP. Number of target analytes in LCS / # marginal exceedances of LCS control limits allowed: >90: 5; 71 - 90: 4; 51 - 70: 3; 31 - 50: 2; 11 - 30: 1; < 11: 0	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		N/A
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓	J value - not sRL	✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 66 **200 mL blank ID:** —	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 7/30/16
Comments:	
Example Calculation: 5358-1 PCE	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
6.8905 x 19mL x 46.15 = 836.33	

2nd Level Reviewer :	**Date:** 07/2116
Comments:	

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5356-1

SDG No.:

Instrument ID: MJ Start Date: 07/20/2016 10:56

Analysis Batch Number: 5891 End Date: 07/21/2016 09:31

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5891/1		07/20/2016 10:56	1	JBFBG20.D	RTX-5 0.32(mm)
CCVIS 140-5891/2		07/20/2016 11:23	1	JCCVG20.D	RTX-5 0.32(mm)
LCS 140-5891/1002		07/20/2016 11:23	1	JCCVG20-LCS.d	RTX-5 0.32(mm)
MB 140-5891/4		07/20/2016 12:51	1	J500BG20.D	RTX-5 0.32(mm)
ZZZZZ		07/20/2016 15:43	1		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 16:25	1		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 19:06	36.12		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 19:59	1.46		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 20:54	1.35		RTX-5 0.32(mm)
ZZZZZ		07/20/2016 21:48	1.4		RTX-5 0.32(mm)
140-5356-1		07/20/2016 22:42	1	JG20P108.D	RTX-5 0.32(mm)
140-5356-2		07/20/2016 23:36	1	JG20P109.D	RTX-5 0.32(mm)
140-5356-3		07/21/2016 00:29	1	JG20P110.D	RTX-5 0.32(mm)
ZZZZZ		07/21/2016 01:23	3.37		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 02:16	3.13		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 03:10	3.13		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 04:04	1		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 04:59	1		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 05:53	1		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 06:48	1		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 08:38	6.77		RTX-5 0.32(mm)
ZZZZZ		07/21/2016 09:31	300		RTX-5 0.32(mm)

160720

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	37.2	7/20/2016	10:56:23 AM
CCV	15 - 101 mL	15	7/20/2016	11:23:06 AM
dnuflush	16 - 101 mL	37.1	7/20/2016	12:21:29 PM
mb500	16 - 501 mL	36.1	7/20/2016	12:51:00 PM
mb200	16 - 201 mL	36.2	7/20/2016	1:44:19 PM
dnuflush	16 - 21 mL	36.2	7/20/2016	3:16:13 PM
mb200	16 - 201 mL	35.5	7/20/2016	3:43:19 PM
5376-01	1 - 10 mL	11.4	7/20/2016	4:25:02 PM
5361-01	2 - 26 mL	8.4	7/20/2016	5:19:02 PM
5362-01	3 - 91 mL	8.4	7/20/2016	6:12:43 PM
5363-01	4 - 72 mL	13	7/20/2016	7:06:25 PM
5348-01	5 - 730 mL	5.1	7/20/2016	7:59:53 PM
5348-02	6 - 675 mL	4.5	7/20/2016	8:54:08 PM
5349-01	7 - 751 mL	5.3	7/20/2016	9:48:28 PM
5356-01	8 - 20 mL	5.3	7/20/2016	10:42:45 PM
5356-02	9 - 100 mL	1.5	7/20/2016	11:36:24 PM
5356-03	10 - 101 mL	1.6	7/21/2016	12:29:54 AM
5258-05	11 - 61 mL	11.5	7/21/2016	1:23:28 AM
5258-06	12 - 80 mL	10.6	7/21/2016	2:16:51 AM
5258-06	12 - 80 mL	10.2	7/21/2016	3:10:41 AM
LOT5367	13 - 501 mL	21.4	7/21/2016	4:04:43 AM
LOT5368	14 - 501 mL	22.6	7/21/2016	4:59:04 AM
5297BK9	15 - 501 mL	2.1	7/21/2016	5:53:56 AM
5297BK13	16 - 501 mL	9.4	7/21/2016	6:48:26 AM
5376-01	1 - 11 mL	10.3	7/21/2016	7:44:01 AM
5361-01R	2 - 101 mL	6.9	7/21/2016	8:38:06 AM
5362-01R	3 - 251 mL	2.1	7/21/2016	9:31:38 AM

MJ WL 3196

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MJ 7/20/16	Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3196 / CCAL Batch #	5891			
ICAL Chrom WL #	3070 / ICAL Batch # / Event #	5523 / 642	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓		✓
7. Has the RT been updated to the method?	✓		✓
Analyst:	**Date:** 7/21/16	**2nd Level Reviewer :**	**Date:** 7/21/16
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	NA	□ ICAL – Range Exceeded; Minimum Dilution	NA
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		✓
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]			
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?			
22. Sample special instructions verified?			
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.		□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]			
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]			
26. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		NA
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]			
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*			
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]		**500 mL blank ID:** 4 **200 mL blank ID:** 25	
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]			
31. Correct ICV linked to each MB? [QC Links]			
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]			
33. Runs set to 1st level review?		Runs set to 2nd level review?	
34. QC checker run and items addressed?			
35. Checklist & Entech report scanned, attached & assigned properly?			

Analyst:	**Date:** 7/21/16	**2nd Level Reviewer :**	**Date:** 07/22/16
Comments:		**Comments:**	

NCM 4716 - Est ace/propene J5348, J5349

Example Calculation: 5363-1 +01

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

2.670 x 70mL x 36.12 = 688.99

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5164-1

SDG No.:

Client Sample ID: 10782 | Lab Sample ID: 140-5164-14

Matrix: Air | Lab File ID: LOT5164.D

Analysis Method: TO-15 | Date Collected: 06/17/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 06/20/2016 14:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5384 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5164-1

SDG No.:

Client Sample ID: 10782 | Lab Sample ID: 140-5164-14

Matrix: Air | Lab File ID: LOT5164.D

Analysis Method: TO-15 | Date Collected: 06/17/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 06/20/2016 14:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5384 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5164-1

SDG No.:

Client Sample ID: 10782 | Lab Sample ID: 140-5164-14

Matrix: Air | Lab File ID: LOT5164.D

Analysis Method: TO-15 | Date Collected: 06/17/2016 09:50

Sample wt/vol: 200(mL) | Date Analyzed: 06/20/2016 14:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5384 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5164-1

SDG No.:

Client Sample ID: 10782 Lab Sample ID: 140-5164-14

Matrix: Air Lab File ID: LOT5164.D

Analysis Method: TO-15 Date Collected: 06/17/2016 09:50

Sample wt/vol: 200(mL) Date Analyzed: 06/20/2016 14:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5384 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160616-3028.b\LOT5164.D				
Lims ID:	140-5164-A-14				
Client ID:	10782				
Sample Type:	Client				
Inject. Date:	20-Jun-2016 14:19:30	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10782				
Misc. Info.:	J062016,T15,,140-0003028-011				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160616-3028.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	21-Jun-2016 11:53:03	Calib Date:	28-Jan-2016 00:38:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160127-2524.b\JA27ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK034				
First Level Reviewer: barlozhetskayaa		Date:	20-Jun-2016 15:19:36		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.383	9.385	-0.002	92	350008	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.553	-0.002	96	1614356	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.233	-0.002	88	1428260	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.856	17.852	0.004	92	823153	3.41	
31 Methylene Chloride	84	6.737	6.738	-0.001	95	6953	0.0618	
47 1,1,1-Trichloroethane	97	10.443	10.445	-0.002	92	8737	0.0348	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

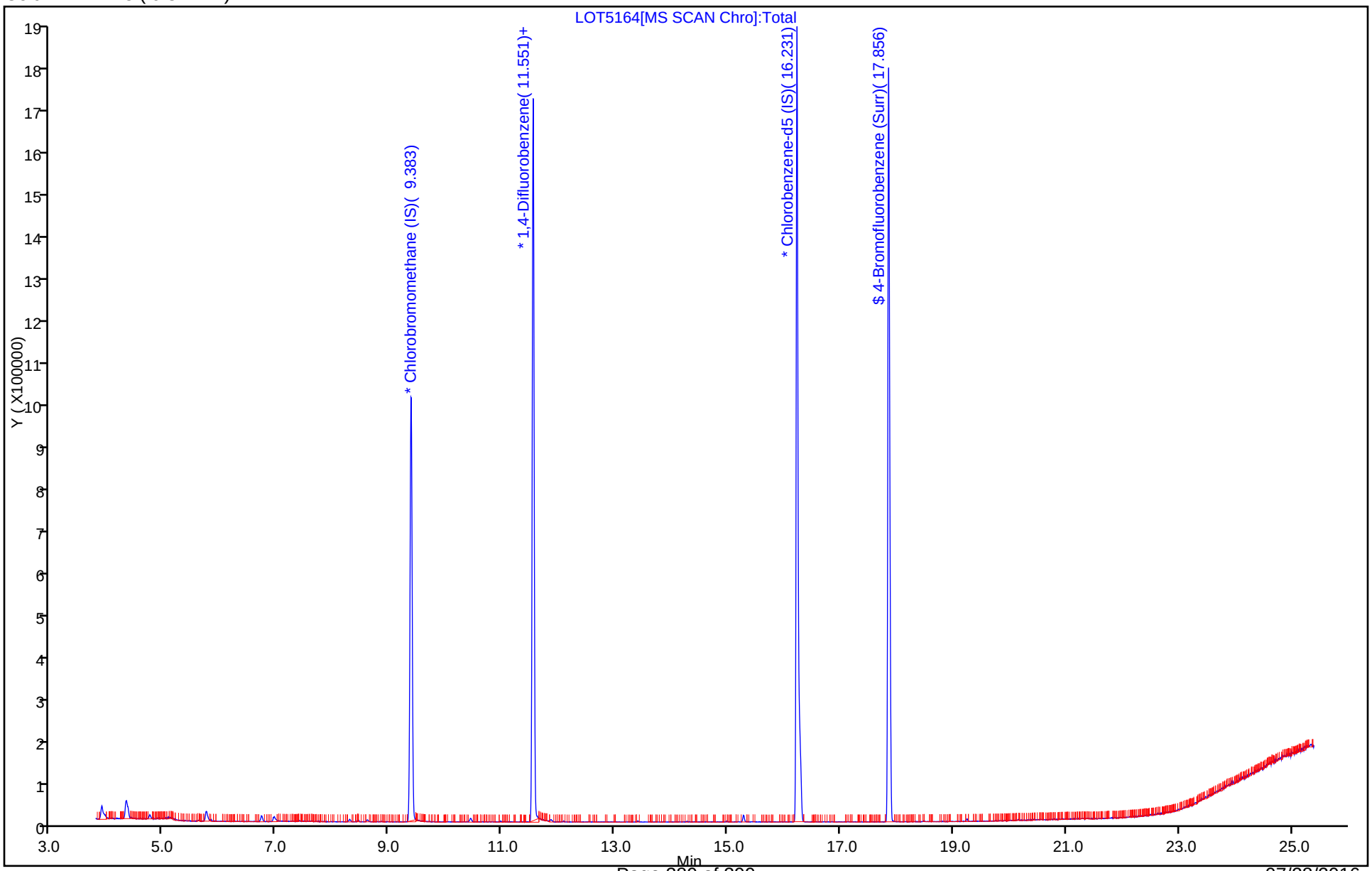
Report Date: 21-Jun-2016 11:53:21 Chrom Revision: 2.2 07-Jun-2016 12:31:34

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160616-3028.b\LOT5164.D

Injection Date:	20-Jun-2016 14:19:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-5164-A-14	Lab Sample ID:	140-5164-14	Worklist Smp#:	11
Client ID:	10782				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5188-1

SDG No.:

Client Sample ID: 09835 | Lab Sample ID: 140-5188-15

Matrix: Air | Lab File ID: LOT5188.D

Analysis Method: TO-15 | Date Collected: 06/21/2016 14:35

Sample wt/vol: 200(mL) | Date Analyzed: 06/22/2016 12:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5461 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5188-1

SDG No.:

Client Sample ID: 09835 | Lab Sample ID: 140-5188-15

Matrix: Air | Lab File ID: LOT5188.D

Analysis Method: TO-15 | Date Collected: 06/21/2016 14:35

Sample wt/vol: 200(mL) | Date Analyzed: 06/22/2016 12:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5461 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5188-1

SDG No.:

Client Sample ID: 09835 Lab Sample ID: 140-5188-15

Matrix: Air Lab File ID: LOT5188.D

Analysis Method: TO-15 Date Collected: 06/21/2016 14:35

Sample wt/vol: 200(mL) Date Analyzed: 06/22/2016 12:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5461 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5188-1

SDG No.:

Client Sample ID: 09835 Lab Sample ID: 140-5188-15

Matrix: Air Lab File ID: LOT5188.D

Analysis Method: TO-15 Date Collected: 06/21/2016 14:35

Sample wt/vol: 200(mL) Date Analyzed: 06/22/2016 12:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5461 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MG\20160621-3051.b\LOT5188.D
Lims ID: 140-5188-A-15
Client ID: 09835
Sample Type: Client
Inject. Date: 22-Jun-2016 12:20:30 ALS Bottle#: 2 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 09835
Misc. Info.: G062216,TO15,140-0003051-005
Operator ID: 7126 Instrument ID: MG

Method: \\ChromNA\Knoxville\ChromData\MG\20160621-3051.b\MG_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 23-Jun-2016 08:00:38 Calib Date: 23-May-2016 19:26:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MG\20160523-2910.b\GE23ICL9.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: tajh Date: 22-Jun-2016 13:09:04

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.514	8.519	-0.005	94	218997	4.00	
* 2 1,4-Difluorobenzene	114	10.687	10.687	0.000	97	1079683	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.459	15.459	0.000	95	1008084	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.114	17.114	0.000	80	801074	4.38	
29 2-Methyl-2-propanol	59	5.909	5.855	0.054	72	1445	0.0152	
31 Methylene Chloride	84	6.098	6.092	0.006	94	4679	0.0749	
47 1,1,1-Trichloroethane	97	9.544	9.538	0.006	95	5271	0.0328	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

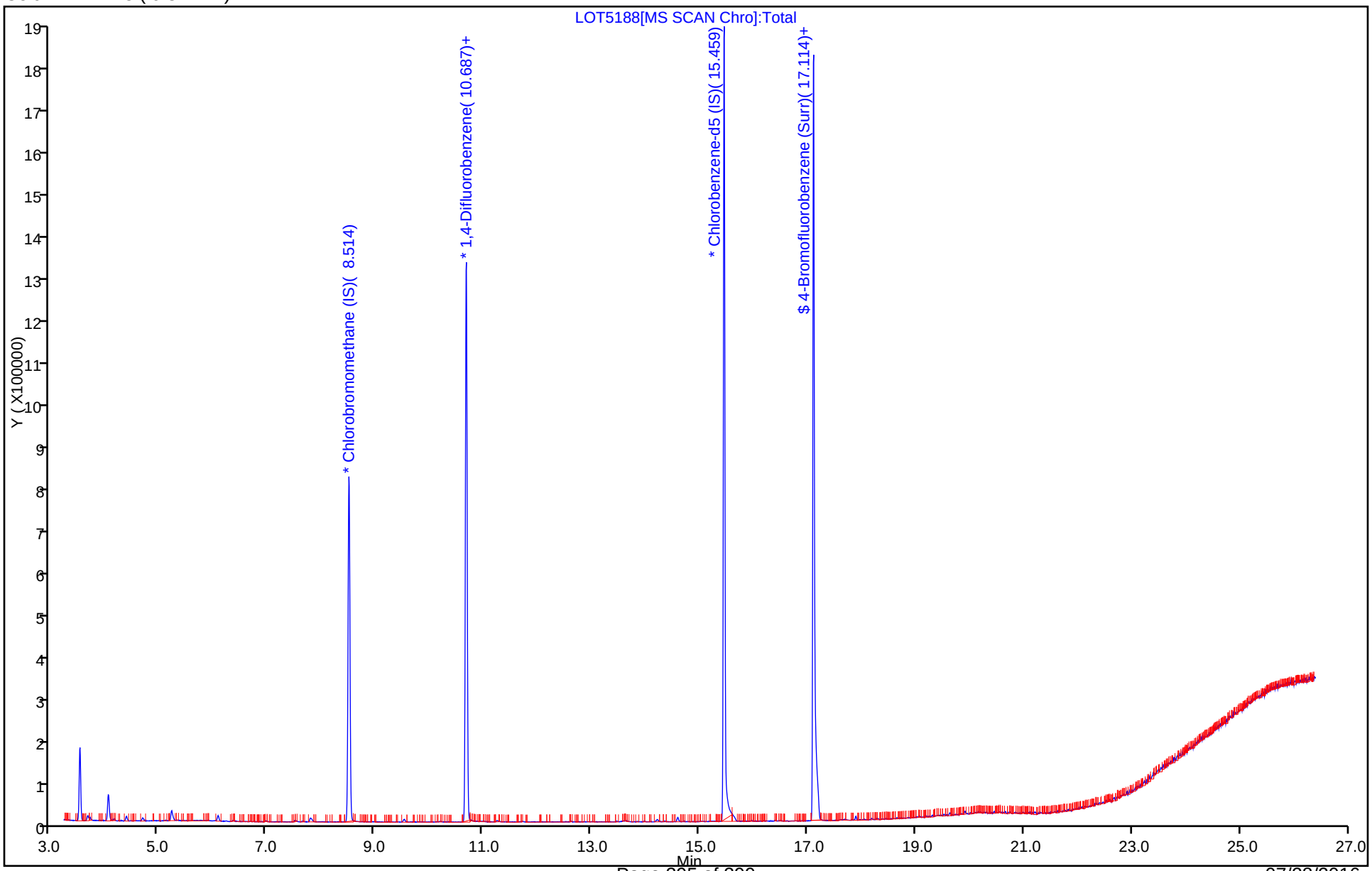
Report Date: 23-Jun-2016 08:05:22 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160621-3051.b\LOT5188.D

Injection Date:	22-Jun-2016 12:20:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5188-A-15	Lab Sample ID:	140-5188-15	Worklist Smp#:	5
Client ID:	09835				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	Project Manager: Peter Rich	Sampled By: DLM	1 of 1 COCs
Company: TetraTech	Phone: 410-990-4607		
Address: 51 Franklin St. Suite 400	Site Contact: Dawn Manico		
City/State/Zip Annapolis, MD 21403	TAL Contact:		
Phone: 410-990-4607			
FAX:			
Project Name: SSD 0401	Analysis Turnaround Time		
Site/location: Linc MPE	Standard (Specify) X		
PO # 117-0512121	Rush (Specify)		

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
A-INFLUENT	7/14/16	1142	N/A	-29	0	28	09582	X											
A-MID GAC	"	1140	"	-30	0	99	11270	X											
A-EFFLUENT	"	1138	"	-28.5	0	71	10783	X											
C-INFLUENT	"	1012	"	-29	0	74	11139	X											
C-MID GAC	"	1008	"	-29.5	0	193	10347	X											
C-EFFLUENT	↓	1006	↓	-30	0	139	10340	X											

10341

Sampled by :

140-5356 Chain of Custody

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

CUSTODY SEALS INTACT
RECEIVED AT AMBIENT TEMP RT 21.7 °C
BIO 7-18-16 CT 21.7 °C

1 COOLER FED EX # 8101 0986 7965
6 CANS / 6 FLOWS (R)

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time: 7/15/16 @ 1000	Canisters Received by:
Samples Relinquished by:	Date/Time:	Received by: 7-18-16 10:00
Relinquished by:	Date/Time:	Received by:

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 7/18/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-5356-A-1	09582	5188	B	1	+0.5	1635	
AFB	140-5356-A-2	11270	5164	B	1	-1.4	1636	
AFB	140-5356-A-3	10783	5188	B	1	-1.6	1637	
AFB	140-5356-A-4	11139	5164	B	1	0	1638	
AFB	140-5356-A-5	10341	5188	B	1	0	1639	
AFB	140-5356-A-6	10340	5164	B	1	0	1640	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 140-5356-1

Login Number: 5356
List Number: 1
Creator: Dameron, Bryan K

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	False	Refer to Job Narrative for details.
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	CHECKED IN LAB
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

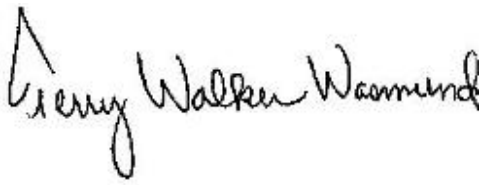
ANALYTICAL REPORT

Job Number: 140-5545-1

Job Description: LMMRC SSDS - Middle River

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
8/17/2016 2:30 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
08/17/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-5545-1

Receipt
The samples were received on 8/5/2016 at 8:45 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL, TO-15: The continuing calibration verification (CCV) associated with batch 140-6172 exhibited % difference of > 30% for 1,2,4-trichlorobenzene and naphthalene; however, the results were within the LCS acceptance limits. The EPA method requires that all target analytes in the continuing calibration verification standard be within 30% difference from the initial calibration. According to the laboratory standard operating procedure, the continuing calibration is acceptable if it meets the laboratory control sample acceptance criteria.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-5545-1

Client Sample ID: BUILDING-A-INFLUENT — Lab Sample ID: 140-5545-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	6.2		2.0	0.58	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	23		2.0	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.1		2.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	17		2.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	85		2.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	160		1.0	0.35	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.7	J	2.0	0.63	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	20		6.4	1.8	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	92		7.9	2.4	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	17		8.1	1.0	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	68		7.9	1.4	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	460		11	1.6	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	860		5.4	1.9	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	8.2	J	9.8	3.1	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BUILDING-A-MIDGAC — Lab Sample ID: 140-5545-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.65		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.41		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.53		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	39		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.46		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.1		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.16	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	24		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.66	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.66		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	43		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	2.6		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.34	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.5		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.35	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.42	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.1		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.6		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	160		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	25		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.65	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	96		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	2.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.6		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	240		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	14		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.7	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	7.5		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BUILDING-A-MIDGAC (Continued) — Lab Sample ID: 140-5545-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,3,5-Trimethylbenzene	1.7	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.8	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: BUILDING-A-EFFLUENT — Lab Sample ID: 140-5545-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.24	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.51		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.47		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	37		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.69		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.7		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	29		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.20	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	0.96	J	1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.46		0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.76		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.69		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	17		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	4.1		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.84		0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.7		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.77		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.69	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.77	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.8		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.3		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	150		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	3.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	23		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	120		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	0.85	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.3	J	3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	3.2		2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.9		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.7		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	95		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	22		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	4.1		2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	18		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	3.8		2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	3.0	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: BUILDING-A-INFLUENT

Lab Sample ID: 140-5545-1

Date Collected: 08/04/16 14:02

Matrix: Air

Date Received: 08/05/16 08:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**6.2**		2.0	0.58	ppb v/v			08/05/16 20:00	1
Carbon tetrachloride	ND		2.0	0.38	ppb v/v			08/05/16 20:00	1
Chlorodifluoromethane	ND		2.0	0.38	ppb v/v			08/05/16 20:00	1
Chloroform	ND		2.0	0.38	ppb v/v			08/05/16 20:00	1
cis-1,2-Dichloroethene	**23**		2.0	0.60	ppb v/v			08/05/16 20:00	1
Dichlorodifluoromethane	ND		2.0	0.68	ppb v/v			08/05/16 20:00	1
1,1-Dichloroethane	**4.1**		2.0	0.25	ppb v/v			08/05/16 20:00	1
1,2-Dichloroethane	ND		2.0	0.48	ppb v/v			08/05/16 20:00	1
1,1-Dichloroethene	**17**		2.0	0.35	ppb v/v			08/05/16 20:00	1
Ethylbenzene	ND		2.0	0.68	ppb v/v			08/05/16 20:00	1
Methylene Chloride	ND		5.0	3.3	ppb v/v			08/05/16 20:00	1
Methyl tert-butyl ether	ND		10	1.7	ppb v/v			08/05/16 20:00	1
Naphthalene	ND		1.0	1.0	ppb v/v			08/05/16 20:00	1
Tetrachloroethene	ND		2.0	0.40	ppb v/v			08/05/16 20:00	1
Toluene	ND		3.0	3.0	ppb v/v			08/05/16 20:00	1
trans-1,2-Dichloroethene	ND		2.0	0.50	ppb v/v			08/05/16 20:00	1
1,2,4-Trichlorobenzene	ND		2.0	0.98	ppb v/v			08/05/16 20:00	1
1,1,1-Trichloroethane	**85**		2.0	0.30	ppb v/v			08/05/16 20:00	1
1,1,2-Trichloroethane	ND		2.0	0.53	ppb v/v			08/05/16 20:00	1
Trichloroethene	**160**		1.0	0.35	ppb v/v			08/05/16 20:00	1
1,2,3-Trimethylbenzene	ND		2.0	0.85	ppb v/v			08/05/16 20:00	1
1,2,4-Trimethylbenzene	**1.7**	**J**	2.0	0.63	ppb v/v			08/05/16 20:00	1
1,3,5-Trimethylbenzene	ND		2.0	0.65	ppb v/v			08/05/16 20:00	1
Vinyl chloride	ND		1.0	0.73	ppb v/v			08/05/16 20:00	1
Xylenes, Total	ND		4.0	0.60	ppb v/v			08/05/16 20:00	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**20**		6.4	1.8	ug/m3			08/05/16 20:00	1
Carbon tetrachloride	ND		13	2.4	ug/m3			08/05/16 20:00	1
Chlorodifluoromethane	ND		7.1	1.3	ug/m3			08/05/16 20:00	1
Chloroform	ND		9.8	1.8	ug/m3			08/05/16 20:00	1
cis-1,2-Dichloroethene	**92**		7.9	2.4	ug/m3			08/05/16 20:00	1
Dichlorodifluoromethane	ND		9.9	3.3	ug/m3			08/05/16 20:00	1
1,1-Dichloroethane	**17**		8.1	1.0	ug/m3			08/05/16 20:00	1
1,2-Dichloroethane	ND		8.1	1.9	ug/m3			08/05/16 20:00	1
1,1-Dichloroethene	**68**		7.9	1.4	ug/m3			08/05/16 20:00	1
Ethylbenzene	ND		8.7	2.9	ug/m3			08/05/16 20:00	1
Methylene Chloride	ND		17	11	ug/m3			08/05/16 20:00	1
Methyl tert-butyl ether	ND		36	6.1	ug/m3			08/05/16 20:00	1
Naphthalene	ND		5.2	5.2	ug/m3			08/05/16 20:00	1
Tetrachloroethene	ND		14	2.7	ug/m3			08/05/16 20:00	1
Toluene	ND		11	11	ug/m3			08/05/16 20:00	1
trans-1,2-Dichloroethene	ND		7.9	2.0	ug/m3			08/05/16 20:00	1
1,2,4-Trichlorobenzene	ND		15	7.2	ug/m3			08/05/16 20:00	1
1,1,1-Trichloroethane	**460**		11	1.6	ug/m3			08/05/16 20:00	1
1,1,2-Trichloroethane	ND		11	2.9	ug/m3			08/05/16 20:00	1
Trichloroethene	**860**		5.4	1.9	ug/m3			08/05/16 20:00	1
1,2,3-Trimethylbenzene	ND		9.8	4.2	ug/m3			08/05/16 20:00	1
1,2,4-Trimethylbenzene	**8.2**	**J**	9.8	3.1	ug/m3			08/05/16 20:00	1

Client Sample ID: BUILDING-A-INFLUENT

Lab Sample ID: 140-5545-1

Date Collected: 08/04/16 14:02

Matrix: Air

Date Received: 08/05/16 08:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		9.8	3.2	ug/m3			08/05/16 20:00	1
Vinyl chloride	ND		2.6	1.9	ug/m3			08/05/16 20:00	1
Xylenes, Total	ND		17	2.6	ug/m3			08/05/16 20:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*08/05/16 20:00*	*1*

Client Sample ID: BUILDING-A-MIDGAC

Lab Sample ID: 140-5545-2

Date Collected: 08/04/16 14:07

Matrix: Air

Date Received: 08/05/16 08:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.65**		0.40	0.12	ppb v/v			08/05/16 20:53	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			08/05/16 20:53	1
Chlorodifluoromethane	**0.41**		0.40	0.075	ppb v/v			08/05/16 20:53	1
Chloroform	**0.53**		0.40	0.075	ppb v/v			08/05/16 20:53	1
cis-1,2-Dichloroethene	**39**		0.40	0.12	ppb v/v			08/05/16 20:53	1
Dichlorodifluoromethane	**0.46**		0.40	0.14	ppb v/v			08/05/16 20:53	1
1,1-Dichloroethane	**6.1**		0.40	0.050	ppb v/v			08/05/16 20:53	1
1,2-Dichloroethane	**0.16**	**J**	0.40	0.095	ppb v/v			08/05/16 20:53	1
1,1-Dichloroethene	**24**		0.40	0.070	ppb v/v			08/05/16 20:53	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			08/05/16 20:53	1
Methylene Chloride	**0.66**	**J**	1.0	0.65	ppb v/v			08/05/16 20:53	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			08/05/16 20:53	1
Naphthalene	ND		0.20	0.20	ppb v/v			08/05/16 20:53	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			08/05/16 20:53	1
Toluene	ND		0.60	0.60	ppb v/v			08/05/16 20:53	1
trans-1,2-Dichloroethene	**0.66**		0.40	0.10	ppb v/v			08/05/16 20:53	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			08/05/16 20:53	1
1,1,1-Trichloroethane	**43**		0.40	0.060	ppb v/v			08/05/16 20:53	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			08/05/16 20:53	1
Trichloroethene	**2.6**		0.20	0.070	ppb v/v			08/05/16 20:53	1
1,2,3-Trimethylbenzene	**0.34**	**J**	0.40	0.17	ppb v/v			08/05/16 20:53	1
1,2,4-Trimethylbenzene	**1.5**		0.40	0.13	ppb v/v			08/05/16 20:53	1
1,3,5-Trimethylbenzene	**0.35**	**J**	0.40	0.13	ppb v/v			08/05/16 20:53	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			08/05/16 20:53	1
Xylenes, Total	**0.42**	**J**	0.80	0.12	ppb v/v			08/05/16 20:53	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.1**		1.3	0.37	ug/m3			08/05/16 20:53	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			08/05/16 20:53	1
Chlorodifluoromethane	**1.5**		1.4	0.27	ug/m3			08/05/16 20:53	1
Chloroform	**2.6**		2.0	0.37	ug/m3			08/05/16 20:53	1
cis-1,2-Dichloroethene	**160**		1.6	0.48	ug/m3			08/05/16 20:53	1
Dichlorodifluoromethane	**2.3**		2.0	0.67	ug/m3			08/05/16 20:53	1
1,1-Dichloroethane	**25**		1.6	0.20	ug/m3			08/05/16 20:53	1
1,2-Dichloroethane	**0.65**	**J**	1.6	0.38	ug/m3			08/05/16 20:53	1
1,1-Dichloroethene	**96**		1.6	0.28	ug/m3			08/05/16 20:53	1
Ethylbenzene	ND		1.7	0.59	ug/m3			08/05/16 20:53	1
Methylene Chloride	**2.3**	**J**	3.5	2.3	ug/m3			08/05/16 20:53	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			08/05/16 20:53	1
Naphthalene	ND		1.0	1.0	ug/m3			08/05/16 20:53	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			08/05/16 20:53	1
Toluene	ND		2.3	2.3	ug/m3			08/05/16 20:53	1
trans-1,2-Dichloroethene	**2.6**		1.6	0.40	ug/m3			08/05/16 20:53	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			08/05/16 20:53	1
1,1,1-Trichloroethane	**240**		2.2	0.33	ug/m3			08/05/16 20:53	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			08/05/16 20:53	1
Trichloroethene	**14**		1.1	0.38	ug/m3			08/05/16 20:53	1
1,2,3-Trimethylbenzene	**1.7**	**J**	2.0	0.84	ug/m3			08/05/16 20:53	1
1,2,4-Trimethylbenzene	**7.5**		2.0	0.61	ug/m3			08/05/16 20:53	1

Client Sample ID: BUILDING-A-MIDGAC

Lab Sample ID: 140-5545-2

Date Collected: 08/04/16 14:07

Matrix: Air

Date Received: 08/05/16 08:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.7**	**J**	2.0	0.64	ug/m3			08/05/16 20:53	1
Vinyl chloride	ND		0.51	0.37	ug/m3			08/05/16 20:53	1
Xylenes, Total	**1.8**	**J**	3.5	0.52	ug/m3			08/05/16 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*60 - 140*		*08/05/16 20:53*	*1*

Client Sample ID: BUILDING-A-EFFLUENT

Lab Sample ID: 140-5545-3

Date Collected: 08/04/16 14:12

Matrix: Air

Date Received: 08/05/16 08:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.24**	**J**	0.40	0.12	ppb v/v			08/08/16 23:47	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			08/08/16 23:47	1
Chlorodifluoromethane	**0.51**		0.40	0.075	ppb v/v			08/08/16 23:47	1
Chloroform	**0.47**		0.40	0.075	ppb v/v			08/08/16 23:47	1
cis-1,2-Dichloroethene	**37**		0.40	0.12	ppb v/v			08/08/16 23:47	1
Dichlorodifluoromethane	**0.69**		0.40	0.14	ppb v/v			08/08/16 23:47	1
1,1-Dichloroethane	**5.7**		0.40	0.050	ppb v/v			08/08/16 23:47	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			08/08/16 23:47	1
1,1-Dichloroethene	**29**		0.40	0.070	ppb v/v			08/08/16 23:47	1
Ethylbenzene	**0.20**	**J**	0.40	0.14	ppb v/v			08/08/16 23:47	1
Methylene Chloride	**0.96**	**J**	1.0	0.65	ppb v/v			08/08/16 23:47	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			08/08/16 23:47	1
Naphthalene	ND		0.20	0.20	ppb v/v			08/08/16 23:47	1
Tetrachloroethene	**0.46**		0.40	0.080	ppb v/v			08/08/16 23:47	1
Toluene	**0.76**		0.60	0.60	ppb v/v			08/08/16 23:47	1
trans-1,2-Dichloroethene	**0.69**		0.40	0.10	ppb v/v			08/08/16 23:47	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			08/08/16 23:47	1
1,1,1-Trichloroethane	**17**		0.40	0.060	ppb v/v			08/08/16 23:47	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			08/08/16 23:47	1
Trichloroethene	**4.1**		0.20	0.070	ppb v/v			08/08/16 23:47	1
1,2,3-Trimethylbenzene	**0.84**		0.40	0.17	ppb v/v			08/08/16 23:47	1
1,2,4-Trimethylbenzene	**3.7**		0.40	0.13	ppb v/v			08/08/16 23:47	1
1,3,5-Trimethylbenzene	**0.77**		0.40	0.13	ppb v/v			08/08/16 23:47	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			08/08/16 23:47	1
Xylenes, Total	**0.69**	**J**	0.80	0.12	ppb v/v			08/08/16 23:47	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.77**	**J**	1.3	0.37	ug/m3			08/08/16 23:47	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			08/08/16 23:47	1
Chlorodifluoromethane	**1.8**		1.4	0.27	ug/m3			08/08/16 23:47	1
Chloroform	**2.3**		2.0	0.37	ug/m3			08/08/16 23:47	1
cis-1,2-Dichloroethene	**150**		1.6	0.48	ug/m3			08/08/16 23:47	1
Dichlorodifluoromethane	**3.4**		2.0	0.67	ug/m3			08/08/16 23:47	1
1,1-Dichloroethane	**23**		1.6	0.20	ug/m3			08/08/16 23:47	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			08/08/16 23:47	1
1,1-Dichloroethene	**120**		1.6	0.28	ug/m3			08/08/16 23:47	1
Ethylbenzene	**0.85**	**J**	1.7	0.59	ug/m3			08/08/16 23:47	1
Methylene Chloride	**3.3**	**J**	3.5	2.3	ug/m3			08/08/16 23:47	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			08/08/16 23:47	1
Naphthalene	ND		1.0	1.0	ug/m3			08/08/16 23:47	1
Tetrachloroethene	**3.2**		2.7	0.54	ug/m3			08/08/16 23:47	1
Toluene	**2.9**		2.3	2.3	ug/m3			08/08/16 23:47	1
trans-1,2-Dichloroethene	**2.7**		1.6	0.40	ug/m3			08/08/16 23:47	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			08/08/16 23:47	1
1,1,1-Trichloroethane	**95**		2.2	0.33	ug/m3			08/08/16 23:47	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			08/08/16 23:47	1
Trichloroethene	**22**		1.1	0.38	ug/m3			08/08/16 23:47	1
1,2,3-Trimethylbenzene	**4.1**		2.0	0.84	ug/m3			08/08/16 23:47	1
1,2,4-Trimethylbenzene	**18**		2.0	0.61	ug/m3			08/08/16 23:47	1

Client Sample ID: BUILDING-A-EFFLUENT

Lab Sample ID: 140-5545-3

Date Collected: 08/04/16 14:12

Matrix: Air

Date Received: 08/05/16 08:45

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**3.8**		2.0	0.64	ug/m3			08/08/16 23:47	1
Vinyl chloride	ND		0.51	0.37	ug/m3			08/08/16 23:47	1
Xylenes, Total	**3.0**	**J**	3.5	0.52	ug/m3			08/08/16 23:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*08/08/16 23:47*	*1*

Default Detection Limits

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-5545-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-5545-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
140-5545-1	BUILDING-A-INFLUENT	96
140-5545-2	BUILDING-A-MIDGAC	98
140-5545-3	BUILDING-A-EFFLUENT	102
LCS 140-6126/1006	Lab Control Sample	110
LCS 140-6172/1002	Lab Control Sample	112
MB 140-6126/8	Method Blank	102
MB 140-6172/5	Method Blank	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-6126/8
Matrix: Air
Analysis Batch: 6126

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			08/08/16 12:57	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			08/08/16 12:57	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			08/08/16 12:57	1
Chloroform	ND		0.080	0.015	ppb v/v			08/08/16 12:57	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/08/16 12:57	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			08/08/16 12:57	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			08/08/16 12:57	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			08/08/16 12:57	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			08/08/16 12:57	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			08/08/16 12:57	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			08/08/16 12:57	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			08/08/16 12:57	1
Naphthalene	ND		0.040	0.040	ppb v/v			08/08/16 12:57	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/08/16 12:57	1
Toluene	ND		0.12	0.12	ppb v/v			08/08/16 12:57	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			08/08/16 12:57	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			08/08/16 12:57	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			08/08/16 12:57	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			08/08/16 12:57	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/08/16 12:57	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			08/08/16 12:57	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			08/08/16 12:57	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			08/08/16 12:57	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/08/16 12:57	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			08/08/16 12:57	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			08/08/16 12:57	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			08/08/16 12:57	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			08/08/16 12:57	1
Chloroform	ND		0.39	0.073	ug/m3			08/08/16 12:57	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/08/16 12:57	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			08/08/16 12:57	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			08/08/16 12:57	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			08/08/16 12:57	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			08/08/16 12:57	1
Ethylbenzene	ND		0.35	0.12	ug/m3			08/08/16 12:57	1
Methylene Chloride	ND		0.69	0.45	ug/m3			08/08/16 12:57	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			08/08/16 12:57	1
Naphthalene	ND		0.21	0.21	ug/m3			08/08/16 12:57	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/08/16 12:57	1
Toluene	ND		0.45	0.45	ug/m3			08/08/16 12:57	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			08/08/16 12:57	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			08/08/16 12:57	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			08/08/16 12:57	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			08/08/16 12:57	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/08/16 12:57	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			08/08/16 12:57	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-6126/8
Matrix: Air
Analysis Batch: 6126

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			08/08/16 12:57	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			08/08/16 12:57	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/08/16 12:57	1
Xylenes, Total	ND		0.69	0.10	ug/m3			08/08/16 12:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*102*		*60 - 140*		*08/08/16 12:57*	*1*

Lab Sample ID: LCS 140-6126/1006
Matrix: Air
Analysis Batch: 6126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.73		ppb v/v		86	70 - 130
Carbon tetrachloride	2.00	2.25		ppb v/v		112	70 - 130
Chlorodifluoromethane	2.00	2.11		ppb v/v		106	60 - 140
Chloroform	2.00	1.83		ppb v/v		92	70 - 130
cis-1,2-Dichloroethene	2.00	1.86		ppb v/v		93	70 - 130
Dichlorodifluoromethane	2.00	2.11		ppb v/v		105	60 - 140
1,1-Dichloroethane	2.00	1.91		ppb v/v		95	70 - 130
1,2-Dichloroethane	2.00	2.02		ppb v/v		101	70 - 130
1,1-Dichloroethene	2.00	1.87		ppb v/v		93	70 - 130
Ethylbenzene	2.00	1.79		ppb v/v		89	70 - 130
Methylene Chloride	2.00	1.91		ppb v/v		95	70 - 130
Methyl tert-butyl ether	2.00	1.79		ppb v/v		89	60 - 140
Naphthalene	2.00	2.25		ppb v/v		112	60 - 140
Tetrachloroethene	2.00	1.81		ppb v/v		91	70 - 130
Toluene	2.00	1.66		ppb v/v		83	70 - 130
trans-1,2-Dichloroethene	2.00	1.90		ppb v/v		95	70 - 130
1,2,4-Trichlorobenzene	2.00	2.38		ppb v/v		119	60 - 140
1,1,1-Trichloroethane	2.00	1.97		ppb v/v		98	70 - 130
1,1,2-Trichloroethane	2.00	1.69		ppb v/v		84	70 - 130
Trichloroethene	2.00	1.76		ppb v/v		88	70 - 130
1,2,3-Trimethylbenzene	2.00	2.09		ppb v/v		105	70 - 130
1,2,4-Trimethylbenzene	2.00	2.03		ppb v/v		102	70 - 130
1,3,5-Trimethylbenzene	2.00	1.90		ppb v/v		95	70 - 130
Vinyl chloride	2.00	1.97		ppb v/v		99	70 - 130
Xylenes, Total	6.00	5.52		ppb v/v		92	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	5.52		ug/m3		86	70 - 130
Carbon tetrachloride	13	14.1		ug/m3		112	70 - 130
Chlorodifluoromethane	7.1	7.48		ug/m3		106	60 - 140
Chloroform	9.8	8.96		ug/m3		92	70 - 130
cis-1,2-Dichloroethene	7.9	7.39		ug/m3		93	70 - 130
Dichlorodifluoromethane	9.9	10.4		ug/m3		105	60 - 140
1,1-Dichloroethane	8.1	7.72		ug/m3		95	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6126/1006
Matrix: Air
Analysis Batch: 6126

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.17		ug/m3		101	70 - 130
1,1-Dichloroethene	7.9	7.40		ug/m3		93	70 - 130
Ethylbenzene	8.7	7.76		ug/m3		89	70 - 130
Methylene Chloride	7.0	6.62		ug/m3		95	70 - 130
Methyl tert-butyl ether	7.2	6.44		ug/m3		89	60 - 140
Naphthalene	10	11.8		ug/m3		112	60 - 140
Tetrachloroethene	14	12.3		ug/m3		91	70 - 130
Toluene	7.5	6.27		ug/m3		83	70 - 130
trans-1,2-Dichloroethene	7.9	7.52		ug/m3		95	70 - 130
1,2,4-Trichlorobenzene	15	17.7		ug/m3		119	60 - 140
1,1,1-Trichloroethane	11	10.7		ug/m3		98	70 - 130
1,1,2-Trichloroethane	11	9.20		ug/m3		84	70 - 130
Trichloroethene	11	9.43		ug/m3		88	70 - 130
1,2,3-Trimethylbenzene	9.8	10.3		ug/m3		105	70 - 130
1,2,4-Trimethylbenzene	9.8	10.0		ug/m3		102	70 - 130
1,3,5-Trimethylbenzene	9.8	9.33		ug/m3		95	70 - 130
Vinyl chloride	5.1	5.05		ug/m3		99	70 - 130
Xylenes, Total	26	24.0		ug/m3		92	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*110*		*60 - 140*

Lab Sample ID: MB 140-6172/5
Matrix: Air
Analysis Batch: 6172

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			08/05/16 19:06	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			08/05/16 19:06	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			08/05/16 19:06	1
Chloroform	ND		0.080	0.015	ppb v/v			08/05/16 19:06	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			08/05/16 19:06	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			08/05/16 19:06	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			08/05/16 19:06	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			08/05/16 19:06	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			08/05/16 19:06	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			08/05/16 19:06	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			08/05/16 19:06	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			08/05/16 19:06	1
Naphthalene	ND		0.040	0.040	ppb v/v			08/05/16 19:06	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			08/05/16 19:06	1
Toluene	ND		0.12	0.12	ppb v/v			08/05/16 19:06	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			08/05/16 19:06	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			08/05/16 19:06	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			08/05/16 19:06	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			08/05/16 19:06	1
Trichloroethene	ND		0.040	0.014	ppb v/v			08/05/16 19:06	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-6172/5
Matrix: Air
Analysis Batch: 6172

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			08/05/16 19:06	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			08/05/16 19:06	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			08/05/16 19:06	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			08/05/16 19:06	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			08/05/16 19:06	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			08/05/16 19:06	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			08/05/16 19:06	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			08/05/16 19:06	1
Chloroform	ND		0.39	0.073	ug/m3			08/05/16 19:06	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			08/05/16 19:06	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			08/05/16 19:06	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			08/05/16 19:06	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			08/05/16 19:06	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			08/05/16 19:06	1
Ethylbenzene	ND		0.35	0.12	ug/m3			08/05/16 19:06	1
Methylene Chloride	ND		0.69	0.45	ug/m3			08/05/16 19:06	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			08/05/16 19:06	1
Naphthalene	ND		0.21	0.21	ug/m3			08/05/16 19:06	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			08/05/16 19:06	1
Toluene	ND		0.45	0.45	ug/m3			08/05/16 19:06	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			08/05/16 19:06	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			08/05/16 19:06	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			08/05/16 19:06	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			08/05/16 19:06	1
Trichloroethene	ND		0.21	0.075	ug/m3			08/05/16 19:06	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			08/05/16 19:06	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			08/05/16 19:06	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			08/05/16 19:06	1
Vinyl chloride	ND		0.10	0.074	ug/m3			08/05/16 19:06	1
Xylenes, Total	ND		0.69	0.10	ug/m3			08/05/16 19:06	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*08/05/16 19:06*	*1*

Lab Sample ID: LCS 140-6172/1002
Matrix: Air
Analysis Batch: 6172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	1.94		ppb v/v		97	70 - 130
Carbon tetrachloride	2.00	2.00		ppb v/v		100	70 - 130
Chlorodifluoromethane	2.00	1.91		ppb v/v		96	60 - 140
Chloroform	2.00	2.07		ppb v/v		103	70 - 130
cis-1,2-Dichloroethene	2.00	1.97		ppb v/v		99	70 - 130
Dichlorodifluoromethane	2.00	1.99		ppb v/v		100	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6172/1002
Matrix: Air
Analysis Batch: 6172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	2.08		ppb v/v		104	70 - 130
1,2-Dichloroethane	2.00	2.05		ppb v/v		103	70 - 130
1,1-Dichloroethene	2.00	1.89		ppb v/v		95	70 - 130
Ethylbenzene	2.00	1.92		ppb v/v		96	70 - 130
Methylene Chloride	2.00	1.84		ppb v/v		92	70 - 130
Methyl tert-butyl ether	2.00	2.04		ppb v/v		102	60 - 140
Naphthalene	2.00	1.23		ppb v/v		62	60 - 140
Tetrachloroethene	2.00	1.76		ppb v/v		88	70 - 130
Toluene	2.00	1.84		ppb v/v		92	70 - 130
trans-1,2-Dichloroethene	2.00	1.93		ppb v/v		96	70 - 130
1,2,4-Trichlorobenzene	2.00	1.33		ppb v/v		67	60 - 140
1,1,1-Trichloroethane	2.00	2.10		ppb v/v		105	70 - 130
1,1,2-Trichloroethane	2.00	1.89		ppb v/v		94	70 - 130
Trichloroethene	2.00	1.81		ppb v/v		91	70 - 130
1,2,3-Trimethylbenzene	2.00	1.75		ppb v/v		88	70 - 130
1,2,4-Trimethylbenzene	2.00	1.85		ppb v/v		93	70 - 130
1,3,5-Trimethylbenzene	2.00	1.79		ppb v/v		90	70 - 130
Vinyl chloride	2.00	1.84		ppb v/v		92	70 - 130
Xylenes, Total	6.00	5.66		ppb v/v		94	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.20		ug/m3		97	70 - 130
Carbon tetrachloride	13	12.6		ug/m3		100	70 - 130
Chlorodifluoromethane	7.1	6.76		ug/m3		96	60 - 140
Chloroform	9.8	10.1		ug/m3		103	70 - 130
cis-1,2-Dichloroethene	7.9	7.82		ug/m3		99	70 - 130
Dichlorodifluoromethane	9.9	9.85		ug/m3		100	60 - 140
1,1-Dichloroethane	8.1	8.41		ug/m3		104	70 - 130
1,2-Dichloroethane	8.1	8.30		ug/m3		103	70 - 130
1,1-Dichloroethene	7.9	7.51		ug/m3		95	70 - 130
Ethylbenzene	8.7	8.33		ug/m3		96	70 - 130
Methylene Chloride	6.9	6.38		ug/m3		92	70 - 130
Methyl tert-butyl ether	7.2	7.36		ug/m3		102	60 - 140
Naphthalene	10	6.47		ug/m3		62	60 - 140
Tetrachloroethene	14	11.9		ug/m3		88	70 - 130
Toluene	7.5	6.95		ug/m3		92	70 - 130
trans-1,2-Dichloroethene	7.9	7.65		ug/m3		96	70 - 130
1,2,4-Trichlorobenzene	15	9.88		ug/m3		67	60 - 140
1,1,1-Trichloroethane	11	11.4		ug/m3		105	70 - 130
1,1,2-Trichloroethane	11	10.3		ug/m3		94	70 - 130
Trichloroethene	11	9.74		ug/m3		91	70 - 130
1,2,3-Trimethylbenzene	9.8	8.61		ug/m3		88	70 - 130
1,2,4-Trimethylbenzene	9.8	9.12		ug/m3		93	70 - 130
1,3,5-Trimethylbenzene	9.8	8.82		ug/m3		90	70 - 130
Vinyl chloride	5.1	4.70		ug/m3		92	70 - 130
Xylenes, Total	26	24.6		ug/m3		94	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6172/1002
Matrix: Air
Analysis Batch: 6172

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*112*		*60 - 140*

Air - GC/MS VOA

Analysis Batch: 6126

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5545-3	BUILDING-A-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-6126/8	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-6126/1006	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 6172

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5545-1	BUILDING-A-INFLUENT	Total/NA	Air	TO 15 LL	
140-5545-2	BUILDING-A-MIDGAC	Total/NA	Air	TO 15 LL	
MB 140-6172/5	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-6172/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Client Sample ID: BUILDING-A-INFLUENT
Lab Sample ID: 140-5545-1
Date Collected: 08/04/16 14:02
Matrix: Air
Date Received: 08/05/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	20 mL	500 mL	6172	08/05/16 20:00	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BUILDING-A-MIDGAC
Lab Sample ID: 140-5545-2
Date Collected: 08/04/16 14:07
Matrix: Air
Date Received: 08/05/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6172	08/05/16 20:53	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: BUILDING-A-EFFLUENT
Lab Sample ID: 140-5545-3
Date Collected: 08/04/16 14:12
Matrix: Air
Date Received: 08/05/16 08:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6126	08/08/16 23:47	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-6126/8
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6126	08/08/16 12:57	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Method Blank
Lab Sample ID: MB 140-6172/5
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6172	08/05/16 19:06	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample
Lab Sample ID: LCS 140-6126/1006
Date Collected: N/A
Matrix: Air
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6126	08/08/16 11:30	HMT	TAL KNX
	Instrument ID: MJ									

Client Sample ID: Lab Control Sample — **Lab Sample ID: LCS 140-6172/1002**
Date Collected: N/A — **Matrix: Air**
Date Received: N/A

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6172	08/05/16 16:19	HMT	TAL KNX
	Instrument ID: MJ									

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-5545-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River

TestAmerica Job ID: 140-5545-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5545-1	BUILDING-A-INFLUENT	Air	08/04/16 14:02	08/05/16 08:45
140-5545-2	BUILDING-A-MIDGAC	Air	08/04/16 14:07	08/05/16 08:45
140-5545-3	BUILDING-A-EFFLUENT	Air	08/04/16 14:12	08/05/16 08:45

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
BUILDING-A-INFLUENT	140-5545-1	96
BUILDING-A-MIDGAC	140-5545-2	98
BUILDING-A-EFFLUENT	140-5545-3	102
	MB 140-6126/8	102
	MB 140-6172/5	97
	LCS 140-6126/1006	110
	LCS 140-6172/1002	112

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVF08A-LCS.d

Lab ID: LCS 140-6126/1006 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.73	86	70-130	
Carbon tetrachloride	2.00	2.25	112	70-130	
Chlorodifluoromethane	2.00	2.11	106	60-140	
Chloroform	2.00	1.83	92	70-130	
cis-1,2-Dichloroethene	2.00	1.86	93	70-130	
Dichlorodifluoromethane	2.00	2.11	105	60-140	
1,1-Dichloroethane	2.00	1.91	95	70-130	
1,2-Dichloroethane	2.00	2.02	101	70-130	
1,1-Dichloroethene	2.00	1.87	93	70-130	
Ethylbenzene	2.00	1.79	89	70-130	
Methylene Chloride	2.00	1.91	95	70-130	
Methyl tert-butyl ether	2.00	1.79	89	60-140	
Naphthalene	2.00	2.25	112	60-140	
Tetrachloroethene	2.00	1.81	91	70-130	
Toluene	2.00	1.66	83	70-130	
trans-1,2-Dichloroethene	2.00	1.90	95	70-130	
1,2,4-Trichlorobenzene	2.00	2.38	119	60-140	
1,1,1-Trichloroethane	2.00	1.97	98	70-130	
1,1,2-Trichloroethane	2.00	1.69	84	70-130	
Trichloroethene	2.00	1.76	88	70-130	
1,2,3-Trimethylbenzene	2.00	2.09	105	70-130	
1,2,4-Trimethylbenzene	2.00	2.03	102	70-130	
1,3,5-Trimethylbenzene	2.00	1.90	95	70-130	
Vinyl chloride	2.00	1.97	99	70-130	
Xylenes, Total	6.00	5.52	92	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Matrix: Air Level: Low Lab File ID: JCCVF05b-LCS.d

Lab ID: LCS 140-6172/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	1.94	97	70-130	
Carbon tetrachloride	2.00	2.00	100	70-130	
Chlorodifluoromethane	2.00	1.91	96	60-140	
Chloroform	2.00	2.07	103	70-130	
cis-1,2-Dichloroethene	2.00	1.97	99	70-130	
Dichlorodifluoromethane	2.00	1.99	100	60-140	
1,1-Dichloroethane	2.00	2.08	104	70-130	
1,2-Dichloroethane	2.00	2.05	103	70-130	
1,1-Dichloroethene	2.00	1.89	95	70-130	
Ethylbenzene	2.00	1.92	96	70-130	
Methylene Chloride	2.00	1.84	92	70-130	
Methyl tert-butyl ether	2.00	2.04	102	60-140	
Naphthalene	2.00	1.23	62	60-140	
Tetrachloroethene	2.00	1.76	88	70-130	
Toluene	2.00	1.84	92	70-130	
trans-1,2-Dichloroethene	2.00	1.93	96	70-130	
1,2,4-Trichlorobenzene	2.00	1.33	67	60-140	
1,1,1-Trichloroethane	2.00	2.10	105	70-130	
1,1,2-Trichloroethane	2.00	1.89	94	70-130	
Trichloroethene	2.00	1.81	91	70-130	
1,2,3-Trimethylbenzene	2.00	1.75	88	70-130	
1,2,4-Trimethylbenzene	2.00	1.85	93	70-130	
1,3,5-Trimethylbenzene	2.00	1.79	90	70-130	
Vinyl chloride	2.00	1.84	92	70-130	
Xylenes, Total	6.00	5.66	94	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab File ID: Jmb500F05.D Lab Sample ID: MB 140-6172/5

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 08/05/2016 19:06

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
BUILDING-A-INFLUENT	140-5545-1	JF05P101.D	08/05/2016 20:00
BUILDING-A-MIDGAC	140-5545-2	JF05P102.D	08/05/2016 20:53

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab File ID: J500BG08.D Lab Sample ID: MB 140-6126/8

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: MJ Date Analyzed: 08/08/2016 12:57

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6126/1006	JCCVF08A-LCS.d	08/08/2016 11:30
BUILDING-A-EFFLUENT	140-5545-3	JG08P109.D	08/08/2016 23:47

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab File ID: JBFBF22Z.D BFB Injection Date: 06/22/2016

Instrument ID: MJ BFB Injection Time: 15:21

Analysis Batch No.: 5523

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.9	
75	30.0 - 60.0 % of mass 95	52.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	114.8	
175	5.0 - 9.0 % of mass 174	9.0	(7.9) 1
176	95.0 - 101.0 % of mass 174	111.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-5523/2	JF22IC01.D	06/22/2016	15:49
	IC 140-5523/3	JF22IC02.D	06/22/2016	16:44
	IC 140-5523/4	JF22IC03.D	06/22/2016	17:38
	IC 140-5523/5	JF22IC04.D	06/22/2016	18:32
	IC 140-5523/6	JF22IC05.D	06/22/2016	19:26
	ICIS 140-5523/7	JF22IC06.D	06/22/2016	20:20
	IC 140-5523/8	JF22IC07.D	06/22/2016	21:14
	IC 140-5523/9	JF22IC08.D	06/22/2016	22:07
	IC 140-5523/10	JF22IC09.D	06/22/2016	23:00
	ICV 140-5523/17	JF22ICVR.D	06/23/2016	09:52

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab File ID: JBFBF05b.D BFB Injection Date: 08/05/2016

Instrument ID: MJ BFB Injection Time: 15:53

Analysis Batch No.: 6172

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.3	
75	30.0 - 60.0 % of mass 95	52.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.7	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	114.4	
175	5.0 - 9.0 % of mass 174	9.1	(8.0) 1
176	95.0 - 101.0 % of mass 174	111.8	(97.8) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6172/2	JCCVF05b.D	08/05/2016	16:19
	LCS 140-6172/1002	JCCVF05b-LCS .d	08/05/2016	16:19
	MB 140-6172/5	Jmb500F05.D	08/05/2016	19:06
BUILDING-A-INFLUENT	140-5545-1	JF05P101.D	08/05/2016	20:00
BUILDING-A-MIDGAC	140-5545-2	JF05P102.D	08/05/2016	20:53

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab File ID: JBFBF08A.D BFB Injection Date: 08/08/2016

Instrument ID: MJ BFB Injection Time: 11:03

Analysis Batch No.: 6126

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.9	
75	30.0 - 60.0 % of mass 95	51.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.2	
173	Less than 2.0 % of mass 174	0.0	(0.0) 1
174	50.0 - 120.00 % of mass 95	114.5	
175	5.0 - 9.0 % of mass 174	9.0	(7.9) 1
176	95.0 - 101.0 % of mass 174	111.6	(97.5) 1
177	5.0 - 9.0 % of mass 176	7.4	(6.7) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6126/6	JCCVF08A.D	08/08/2016	11:30
	LCS 140-6126/1006	JCCVF08A-LCS .d	08/08/2016	11:30
	MB 140-6126/8	J500BG08.D	08/08/2016	12:57
BUILDING-A-EFFLUENT	140-5545-3	JG08P109.D	08/08/2016	23:47

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Sample No.: ICIS 140-5523/7 Date Analyzed: 06/22/2016 20:20

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JF22IC06.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		295193	9.39	1295936	11.55	1130543	16.23
UPPER LIMIT		413270	9.72	1814310	11.88	1582760	16.56
LOWER LIMIT		177116	9.06	777562	11.22	678326	15.90
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-5523/17		332894	9.39	1464991	11.55	1301938	16.23

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Sample No.: CCVIS 140-6172/2 Date Analyzed: 08/05/2016 16:19

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVF05b.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		234888	9.36	1103464	11.52	997157	16.20
UPPER LIMIT		328843	9.69	1544850	11.85	1396020	16.53
LOWER LIMIT		140933	9.03	662078	11.19	598294	15.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6172/1002		234888	9.36	1103464	11.52	997157	16.20
MB 140-6172/5		286108	9.36	1244765	11.52	1027856	16.20
140-5545-1	BUILDING-A-INFLUENT	218533	9.35	971531	11.52	782725	16.20
140-5545-2	BUILDING-A-MIDGAC	239984	9.36	1089443	11.52	937699	16.20

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Sample No.: CCVIS 140-6126/6 Date Analyzed: 08/08/2016 11:30

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): JCCVF08A.D Heated Purge: (Y/N) N

Calibration ID: 642

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		223098	9.36	957132	11.52	790881	16.20
UPPER LIMIT		312337	9.69	1339985	11.85	1107233	16.53
LOWER LIMIT		133859	9.03	574279	11.19	474529	15.87
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6126/1006		223098	9.36	957132	11.52	790881	16.20
MB 140-6126/8		241773	9.35	1048700	11.52	844641	16.20
140-5545-3	BUILDING-A-EFFLUENT	186751	9.35	827291	11.51	785268	16.20

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: BUILDING-A-INFLUENT Lab Sample ID: 140-5545-1

Matrix: Air Lab File ID: JF05P101.D

Analysis Method: TO 15 LL Date Collected: 08/04/2016 14:02

Sample wt/vol: 20(mL) Date Analyzed: 08/05/2016 20:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	6.2		2.0	0.58
56-23-5	Carbon tetrachloride	153.81	ND		2.0	0.38
75-45-6	Chlorodifluoromethane	86.47	ND		2.0	0.38
67-66-3	Chloroform	119.38	ND		2.0	0.38
156-59-2	cis-1,2-Dichloroethene	96.94	23		2.0	0.60
75-71-8	Dichlorodifluoromethane	120.91	ND		2.0	0.68
75-34-3	1,1-Dichloroethane	98.96	4.1		2.0	0.25
107-06-2	1,2-Dichloroethane	98.96	ND		2.0	0.48
75-35-4	1,1-Dichloroethene	96.94	17		2.0	0.35
100-41-4	Ethylbenzene	106.17	ND		2.0	0.68
75-09-2	Methylene Chloride	84.93	ND		5.0	3.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		10	1.7
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.0	0.40
108-88-3	Toluene	92.14	ND		3.0	3.0
156-60-5	trans-1,2-Dichloroethene	96.94	ND		2.0	0.50
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		2.0	0.98
71-55-6	1,1,1-Trichloroethane	133.41	85		2.0	0.30
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.0	0.53
79-01-6	Trichloroethene	131.39	160		1.0	0.35
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.85
95-63-6	1,2,4-Trimethylbenzene	120.20	1.7	J	2.0	0.63
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.65
75-01-4	Vinyl chloride	62.50	ND		1.0	0.73
1330-20-7	Xylenes, Total	106.17	ND		4.0	0.60

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: BUILDING-A-INFLUENT Lab Sample ID: 140-5545-1

Matrix: Air Lab File ID: JF05P101.D

Analysis Method: TO 15 LL Date Collected: 08/04/2016 14:02

Sample wt/vol: 20(mL) Date Analyzed: 08/05/2016 20:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	20		6.4	1.8
56-23-5	Carbon tetrachloride	153.81	ND		13	2.4
75-45-6	Chlorodifluoromethane	86.47	ND		7.1	1.3
67-66-3	Chloroform	119.38	ND		9.8	1.8
156-59-2	cis-1,2-Dichloroethene	96.94	92		7.9	2.4
75-71-8	Dichlorodifluoromethane	120.91	ND		9.9	3.3
75-34-3	1,1-Dichloroethane	98.96	17		8.1	1.0
107-06-2	1,2-Dichloroethane	98.96	ND		8.1	1.9
75-35-4	1,1-Dichloroethene	96.94	68		7.9	1.4
100-41-4	Ethylbenzene	106.17	ND		8.7	2.9
75-09-2	Methylene Chloride	84.93	ND		17	11
1634-04-4	Methyl tert-butyl ether	88.15	ND		36	6.1
91-20-3	Naphthalene	128.17	ND		5.2	5.2
127-18-4	Tetrachloroethene	165.83	ND		14	2.7
108-88-3	Toluene	92.14	ND		11	11
156-60-5	trans-1,2-Dichloroethene	96.94	ND		7.9	2.0
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		15	7.2
71-55-6	1,1,1-Trichloroethane	133.41	460		11	1.6
79-00-5	1,1,2-Trichloroethane	133.41	ND		11	2.9
79-01-6	Trichloroethene	131.39	860		5.4	1.9
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		9.8	4.2
95-63-6	1,2,4-Trimethylbenzene	120.20	8.2	J	9.8	3.1
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		9.8	3.2
75-01-4	Vinyl chloride	62.50	ND		2.6	1.9
1330-20-7	Xylenes, Total	106.17	ND		17	2.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D
Lims ID: 140-5545-A-1
Client ID: BUILDING-A-INFLUENT
Sample Type: Client
Inject. Date: 05-Aug-2016 20:00:30 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003263-006
Misc. Info.: 140-5545-a-1
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Aug-2016 11:51:31 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: tajh Date: 08-Aug-2016 11:41:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.351	9.355	-0.004	95	218533	4.00	
* 2 1,4-Difluorobenzene	114	11.519	11.518	0.001	96	971531	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.199	16.198	0.001	89	782725	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.824	17.822	0.002	87	444043	3.84	
27 1,1-Dichloroethene	96	6.344	6.343	0.001	92	44652	0.6906	
31 Methylene Chloride	84	6.710	6.714	-0.004	97	5929	0.0987	
37 1,1-Dichloroethane	63	7.995	7.994	0.001	99	21880	0.1657	
42 cis-1,2-Dichloroethene	96	9.012	9.005	0.007	98	60023	0.9286	
47 1,1,1-Trichloroethane	97	10.405	10.404	0.001	96	575173	3.40	
51 Benzene	78	10.992	10.996	-0.004	98	42390	0.2499	
59 Trichloroethene	130	12.223	12.222	0.001	95	546999	6.39	
68 Toluene	91	14.241	14.245	-0.004	93	10157	0.0609	
96 1,2,4-Trimethylbenzene	105	18.942	18.947	-0.005	98	10166	0.0669	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

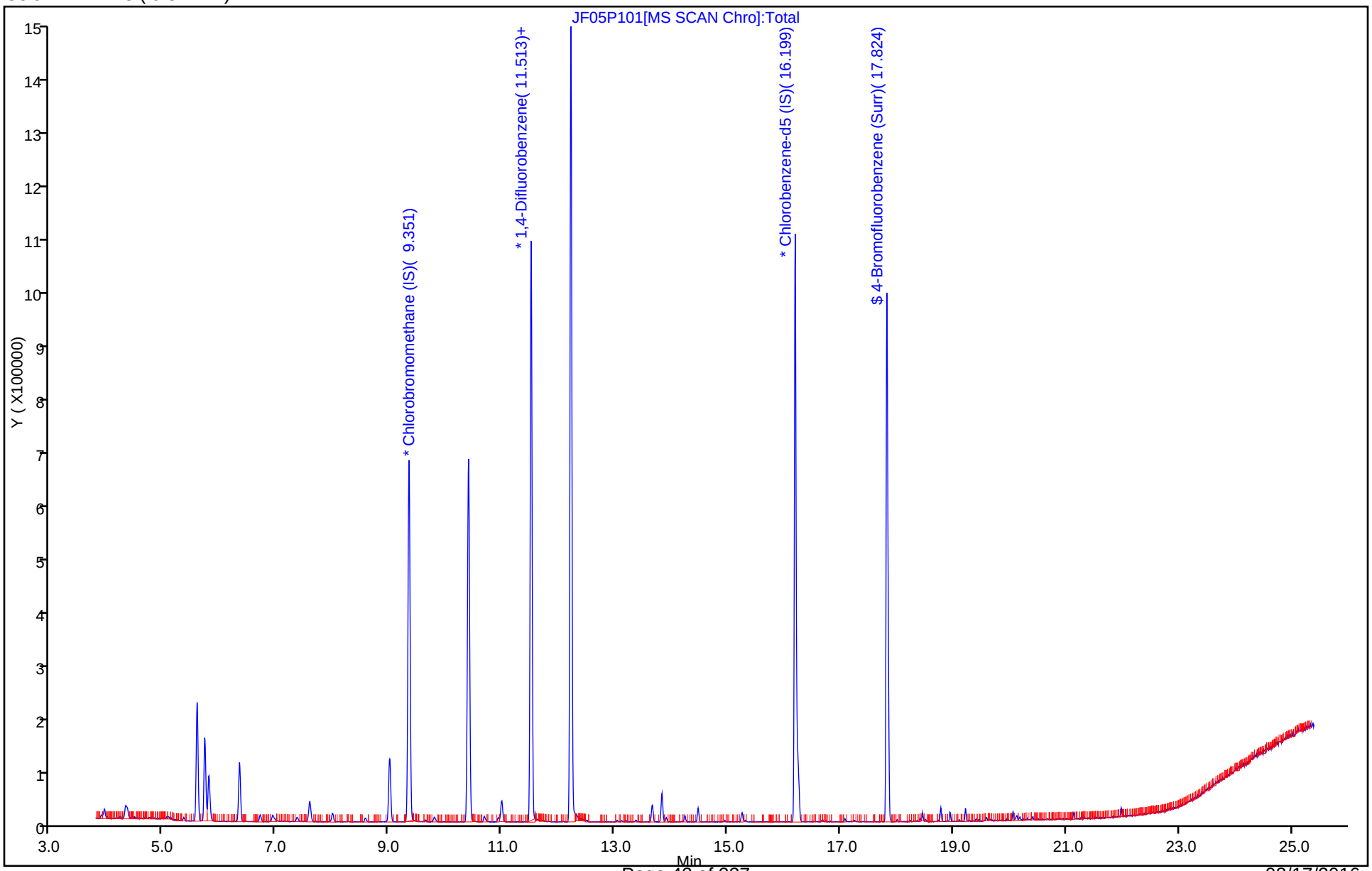
Report Date: 08-Aug-2016 11:52:03 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D

Injection Date:	05-Aug-2016 20:00:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-5545-A-1	Lab Sample ID:	140-5545-1	Worklist Smp#:	6
Client ID:	BUILDING-A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D				
Lims ID:	140-5545-A-1				
Client ID:	BUILDING-A-INFLUENT				
Sample Type:	Client				
Inject. Date:	05-Aug-2016 20:00:30	ALS Bottle#:	1	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003263-006				
Misc. Info.:	140-5545-a-1				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Aug-2016 11:51:31	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK049				

First Level Reviewer: tajh Date: 08-Aug-2016 11:41:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.84	96.06

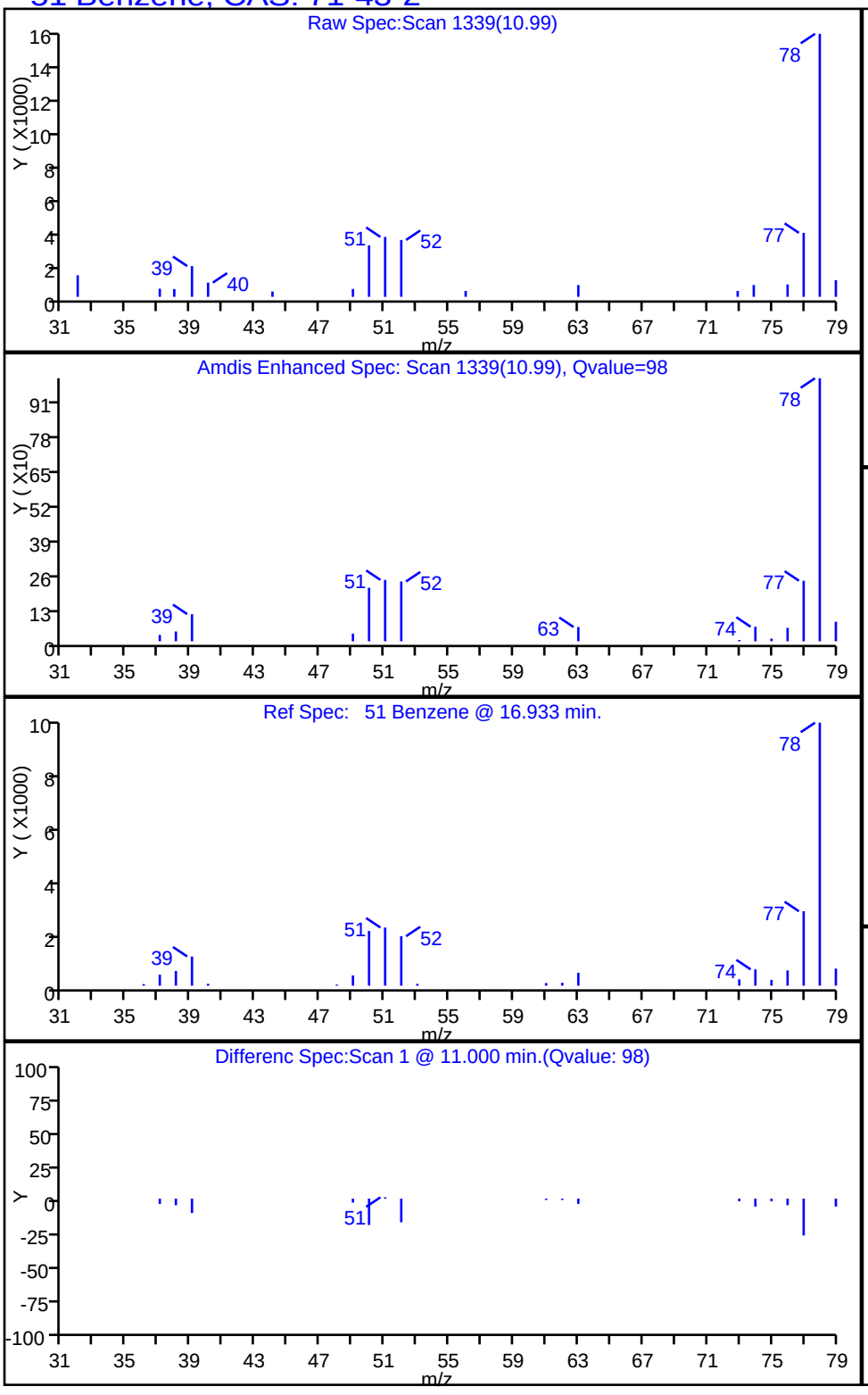
Report Date: 08-Aug-2016 11:52:04 Chrom Revision: 2.2 18-Jul-2016 15:30:42

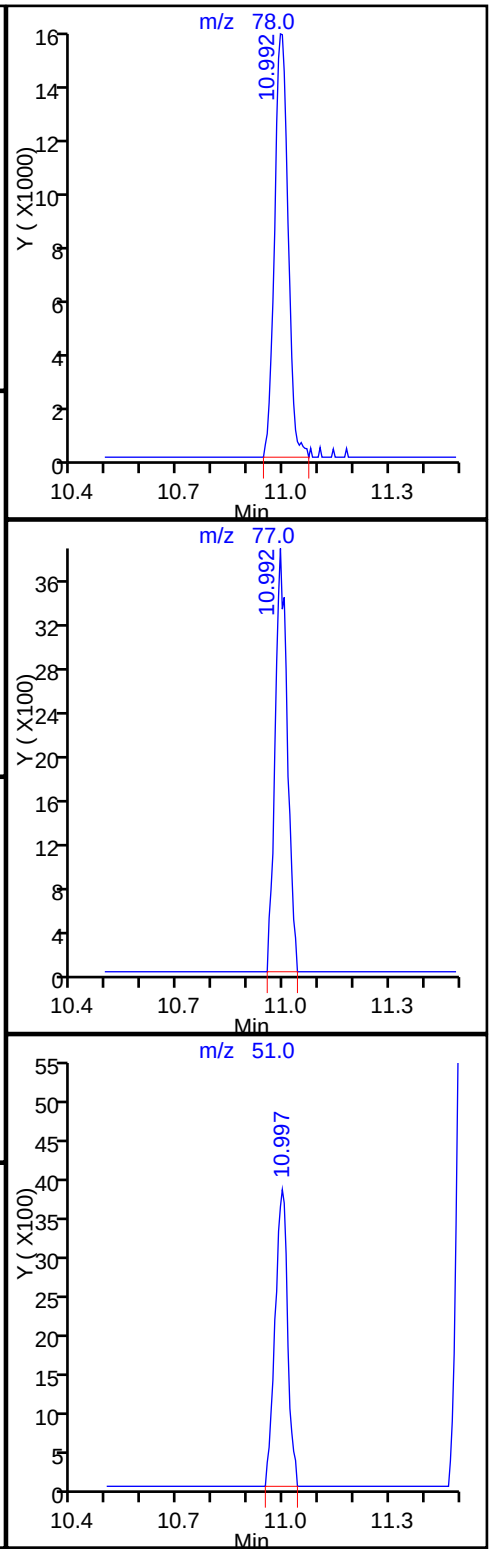
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D

Injection Date:	05-Aug-2016 20:00:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-1	Lab Sample ID:	140-5545-1		
Client ID:	BUILDING-A-INFLUENT				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

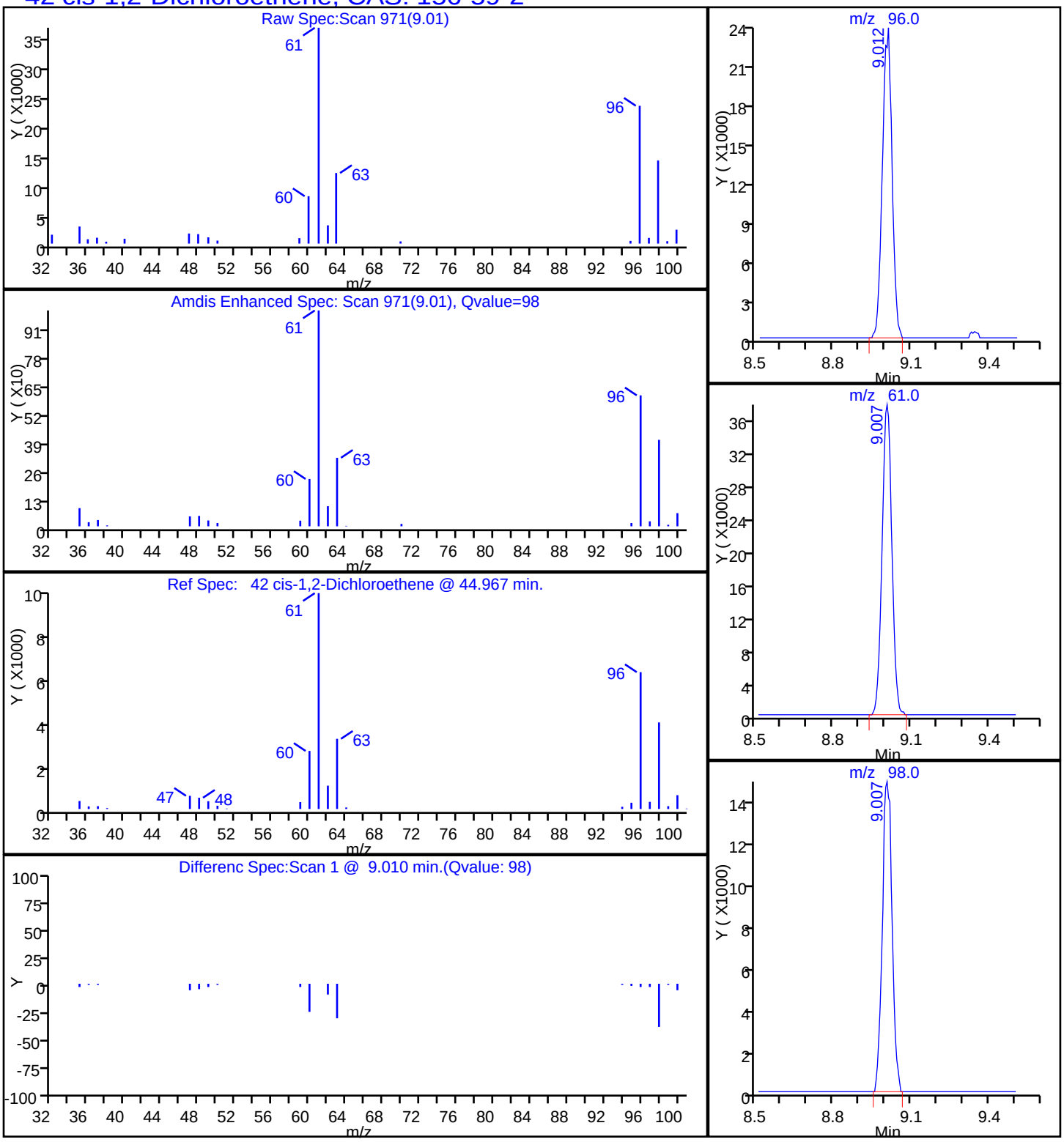
51 Benzene, CAS: 71-43-2





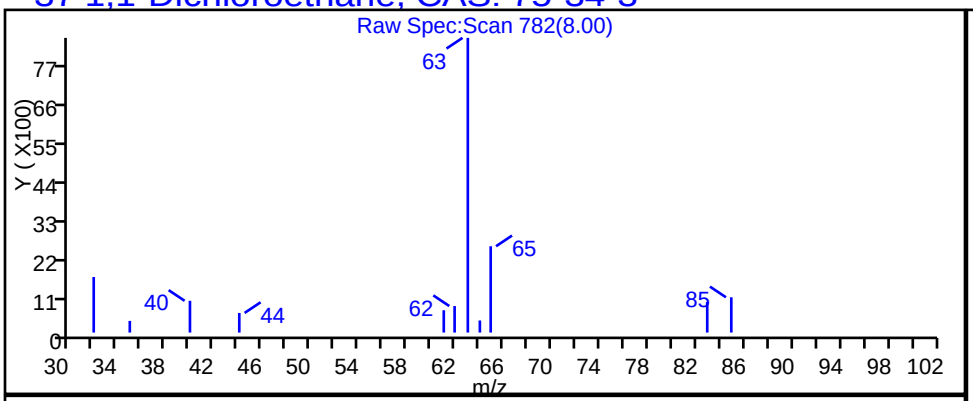
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D
Injection Date: 05-Aug-2016 20:00:30 Instrument ID: MJ
Lims ID: 140-5545-A-1 Lab Sample ID: 140-5545-1
Client ID: BUILDING-A-INFLUENT
Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

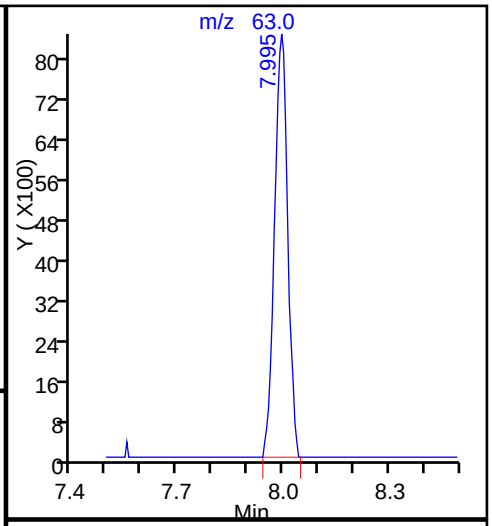
42 cis-1,2-Dichloroethene, CAS: 156-59-2

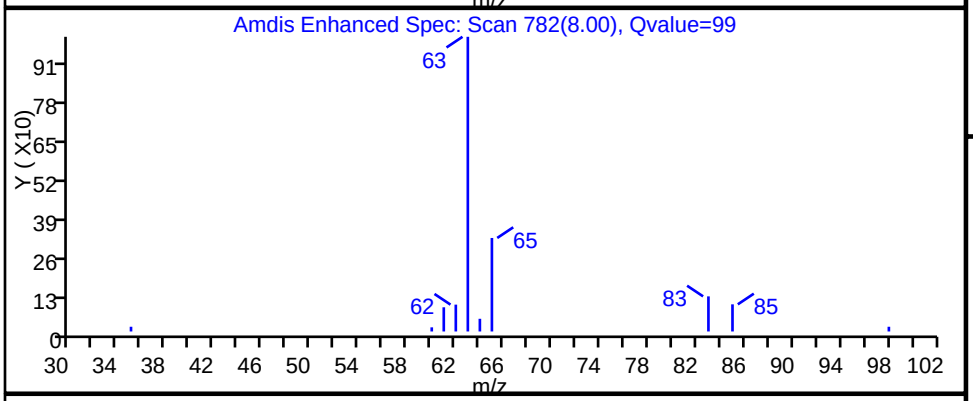


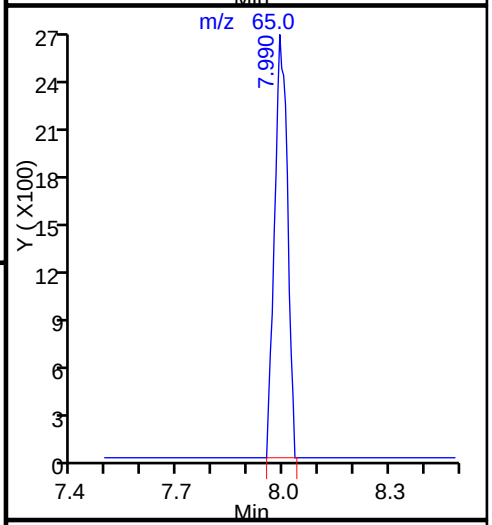
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D
Injection Date: 05-Aug-2016 20:00:30 Instrument ID: MJ
Lims ID: 140-5545-A-1 Lab Sample ID: 140-5545-1
Client ID: BUILDING-A-INFLUENT
Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

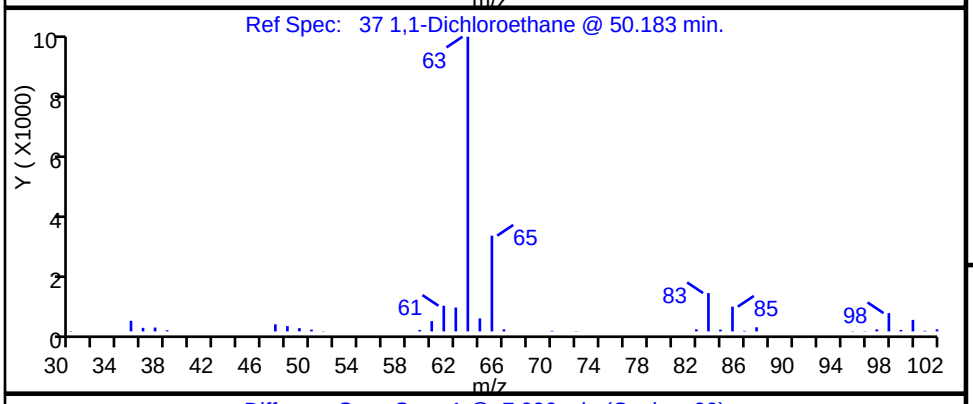
37 1,1-Dichloroethane, CAS: 75-34-3

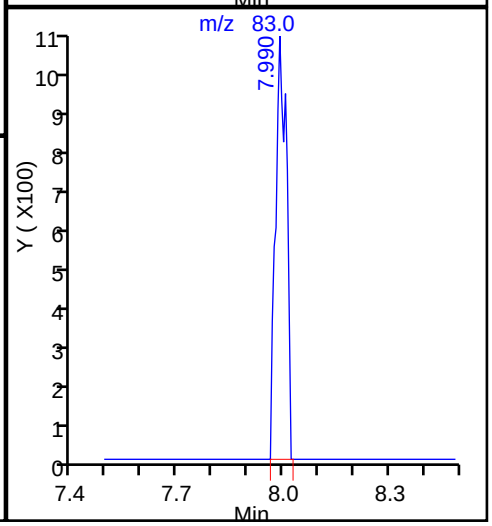


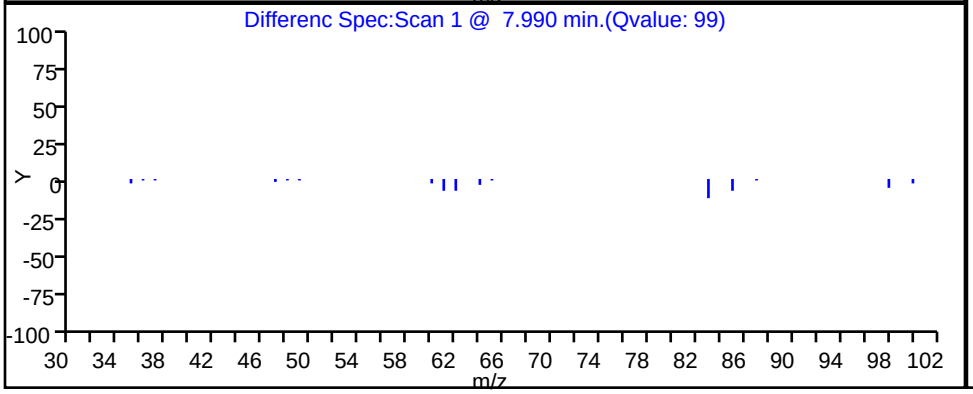






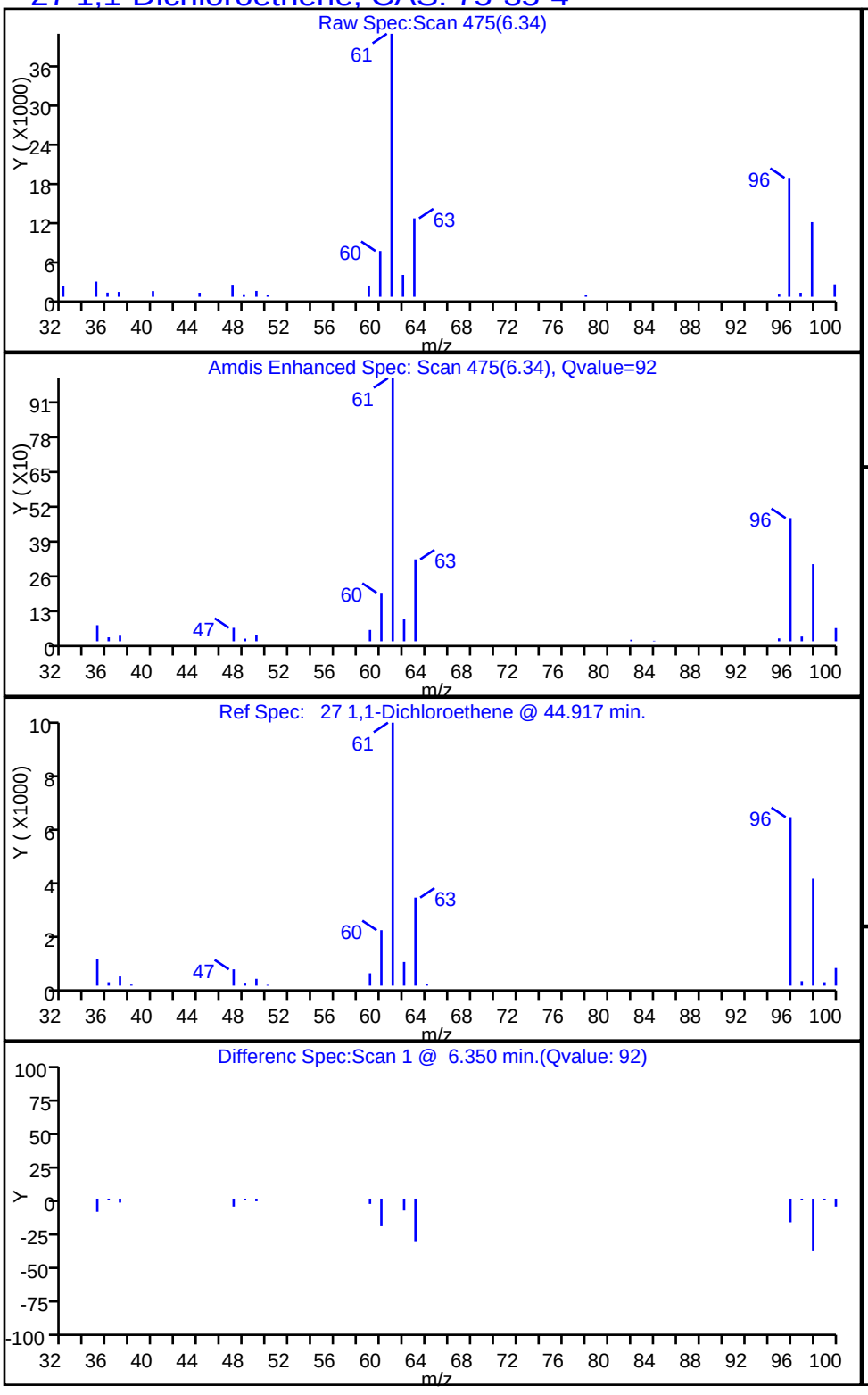


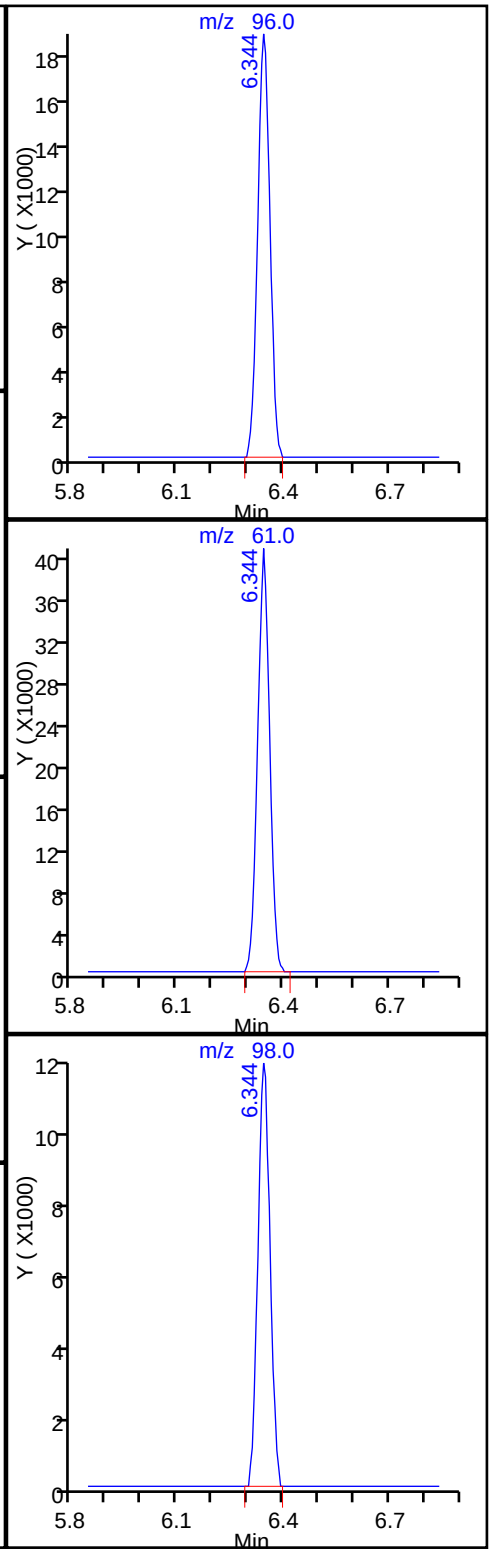




Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D
Injection Date: 05-Aug-2016 20:00:30 Instrument ID: MJ
Lims ID: 140-5545-A-1 Lab Sample ID: 140-5545-1
Client ID: BUILDING-A-INFLUENT
Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

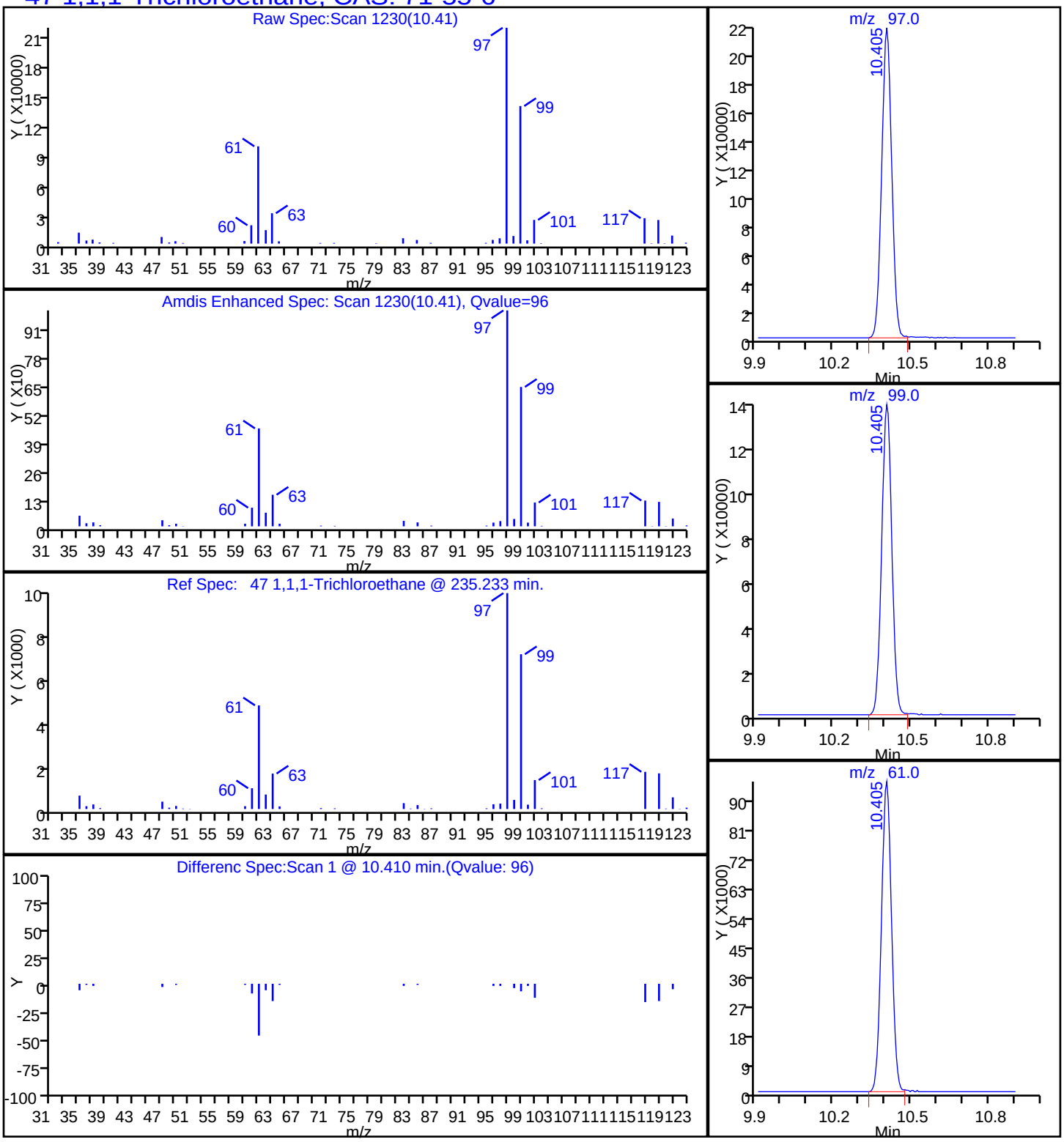
27 1,1-Dichloroethene, CAS: 75-35-4





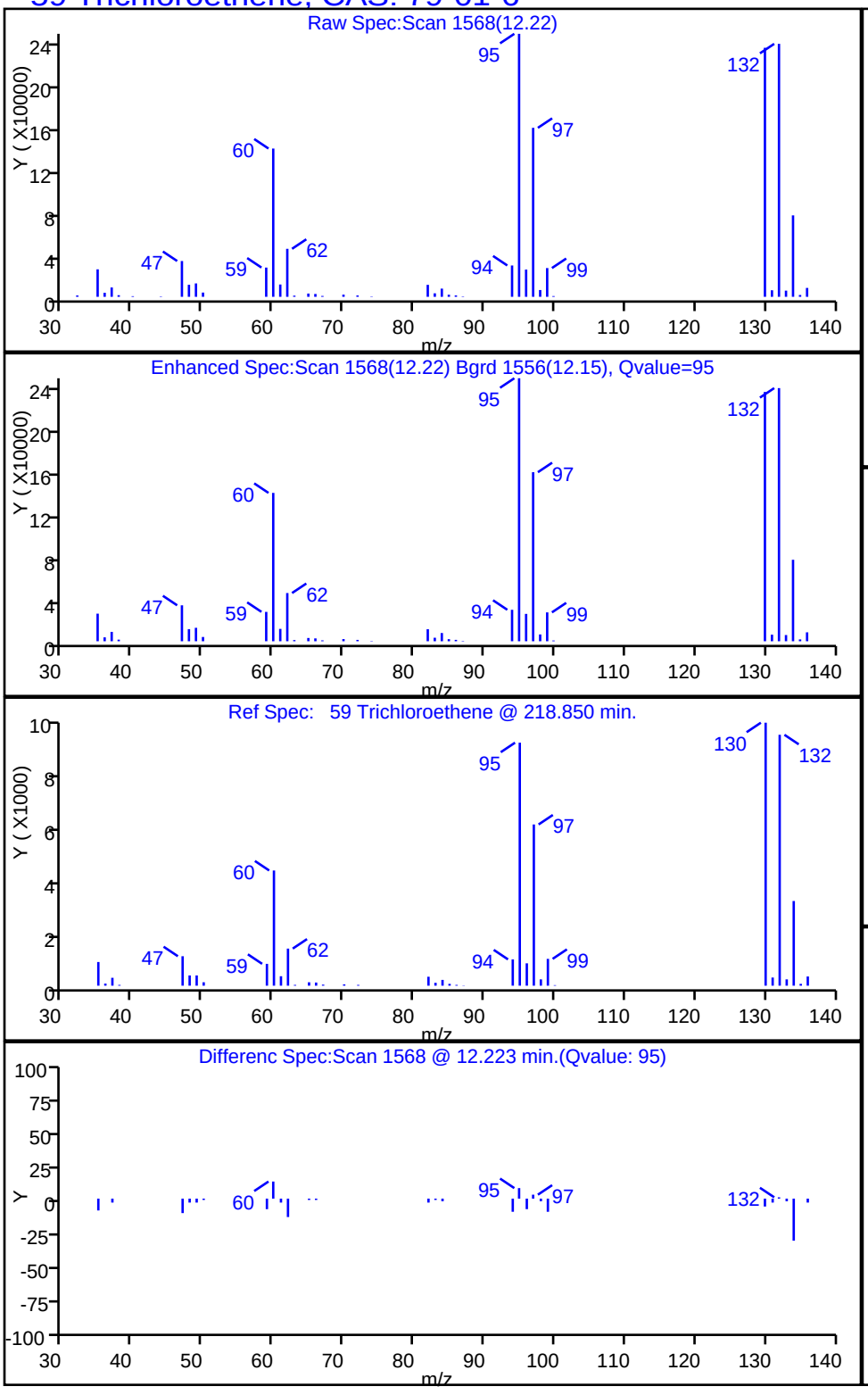
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D
Injection Date: 05-Aug-2016 20:00:30 Instrument ID: MJ
Lims ID: 140-5545-A-1 Lab Sample ID: 140-5545-1
Client ID: BUILDING-A-INFLUENT
Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

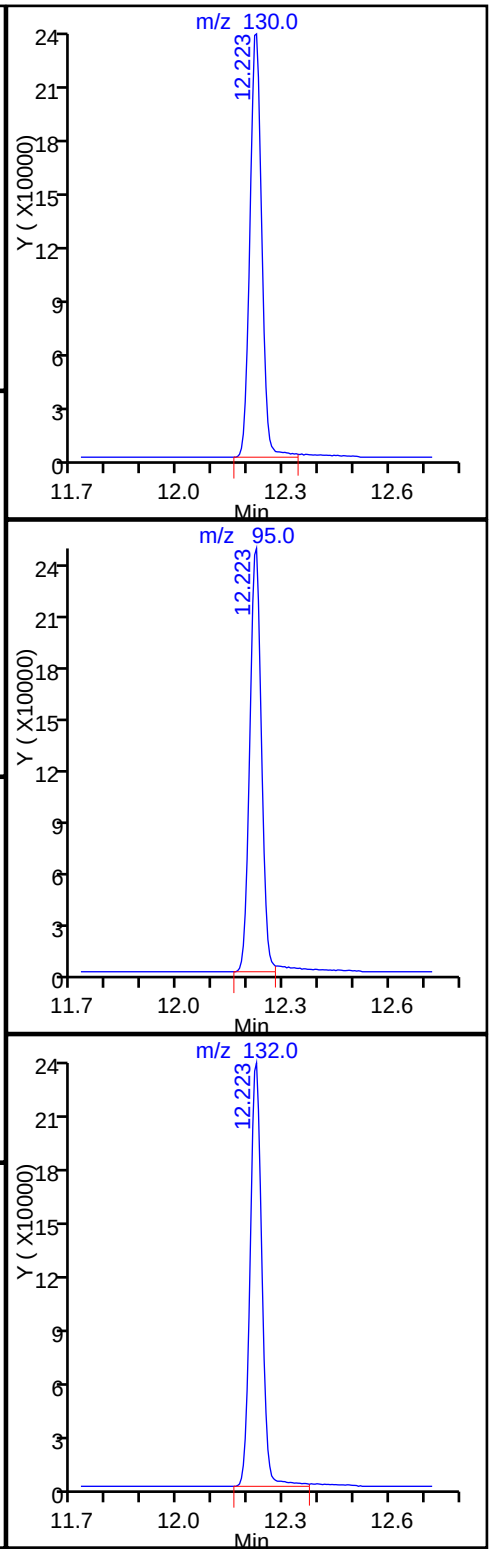
47 1,1,1-Trichloroethane, CAS: 71-55-6



Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D
Injection Date: 05-Aug-2016 20:00:30 Instrument ID: MJ
Lims ID: 140-5545-A-1 Lab Sample ID: 140-5545-1
Client ID: BUILDING-A-INFLUENT
Operator ID: 403648 ALS Bottle#: 1 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

59 Trichloroethene, CAS: 79-01-6





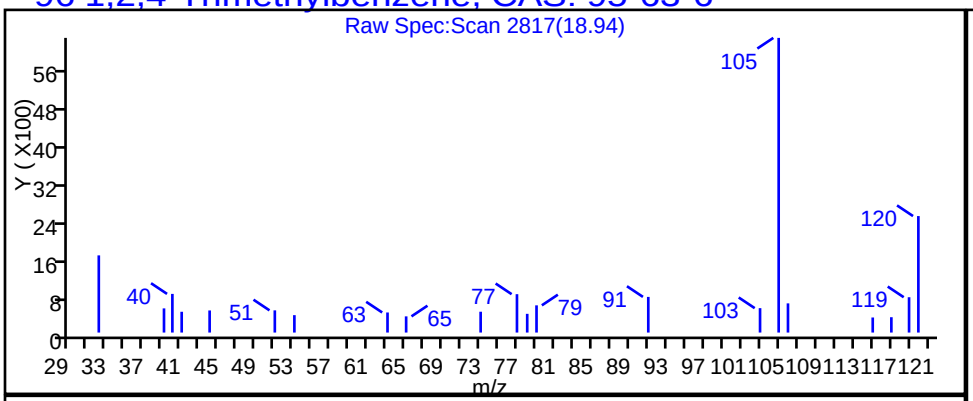
Report Date: 08-Aug-2016 11:52:04 Chrom Revision: 2.2 18-Jul-2016 15:30:42

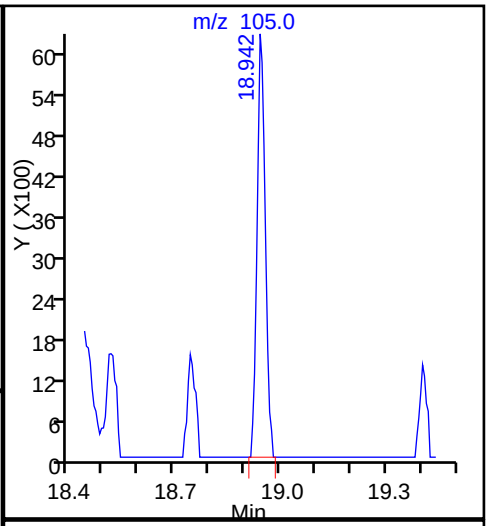
TestAmerica Knoxville

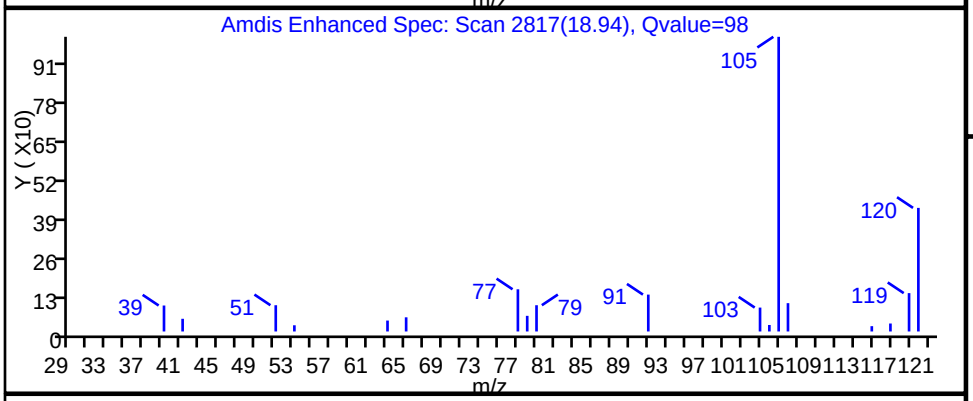
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P101.D

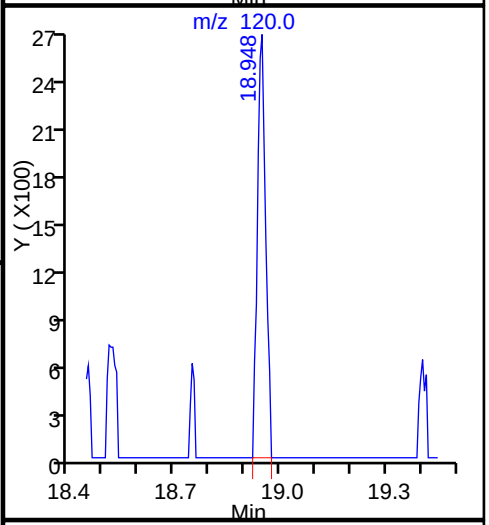
Injection Date:	05-Aug-2016 20:00:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-1	Lab Sample ID:	140-5545-1		
Client ID:	BUILDING-A-INFLUENT				
Operator ID:	403648	ALS Bottle#:	1	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

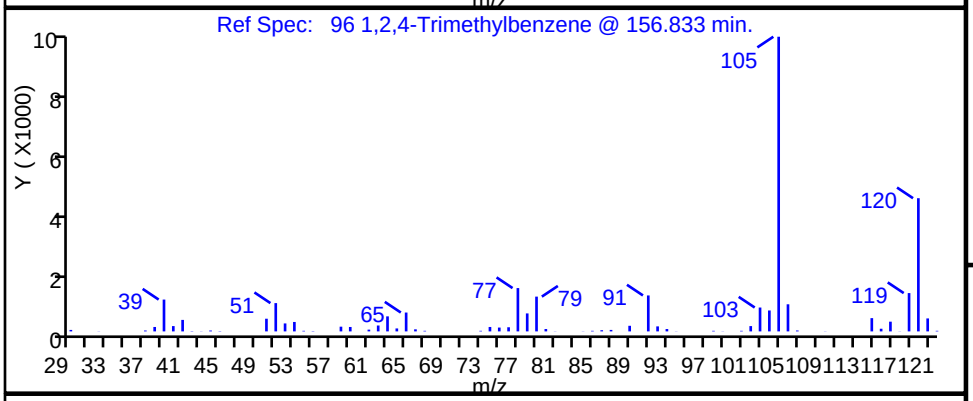
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

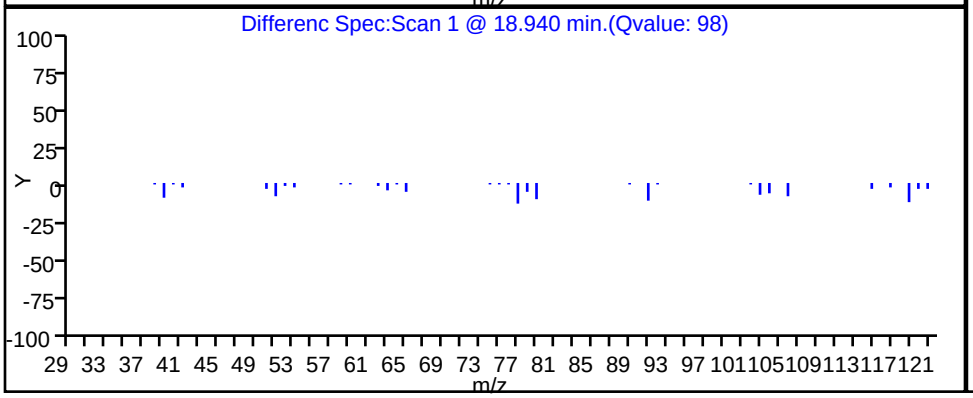


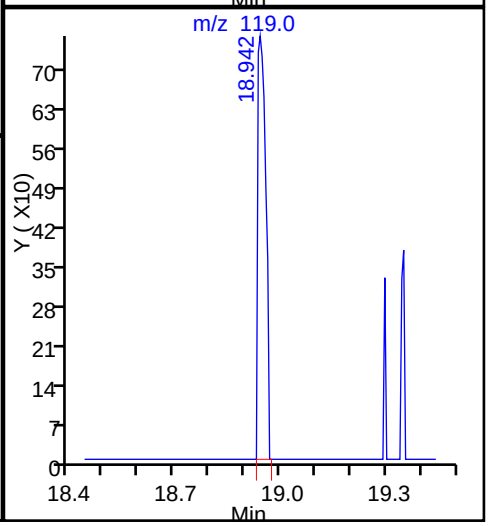












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: BUILDING-A-MIDGAC Lab Sample ID: 140-5545-2

Matrix: Air Lab File ID: JF05P102.D

Analysis Method: TO 15 LL Date Collected: 08/04/2016 14:07

Sample wt/vol: 100(mL) Date Analyzed: 08/05/2016 20:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.65		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.41		0.40	0.075
67-66-3	Chloroform	119.38	0.53		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	39		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.46		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	6.1		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.16	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	24		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	0.66	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.66		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	43		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	2.6		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.34	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	1.5		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.35	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.42	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: BUILDING-A-MIDGAC Lab Sample ID: 140-5545-2

Matrix: Air Lab File ID: JF05P102.D

Analysis Method: TO 15 LL Date Collected: 08/04/2016 14:07

Sample wt/vol: 100(mL) Date Analyzed: 08/05/2016 20:53

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.1		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.5		1.4	0.27
67-66-3	Chloroform	119.38	2.6		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	160		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.3		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	25		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	0.65	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	96		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	2.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.6		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	240		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	14		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.7	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	7.5		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.7	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	98		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Lims ID: 140-5545-A-2
Client ID: BUILDING-A-MIDGAC
Sample Type: Client
Inject. Date: 05-Aug-2016 20:53:30 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003263-007
Misc. Info.: 140-5545-a-2
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Aug-2016 11:51:31 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: tajh Date: 08-Aug-2016 11:26:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.357	9.355	0.002	94	239984	4.00	
* 2 1,4-Difluorobenzene	114	11.519	11.518	0.001	96	1089443	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.199	16.198	0.001	89	937699	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.824	17.822	0.002	87	543325	3.92	
6 Chlorodifluoromethane	67	3.923	3.911	0.012	95	2462	0.0827	
8 Dichlorodifluoromethane	85	3.999	3.981	0.018	99	24232	0.0919	
27 1,1-Dichloroethene	96	6.355	6.343	0.012	93	344363	4.85	
31 Methylene Chloride	84	6.721	6.714	0.007	96	8749	0.1327	
34 trans-1,2-Dichloroethene	96	7.554	7.553	0.001	93	9466	0.1329	
37 1,1-Dichloroethane	63	8.001	7.994	0.007	100	178182	1.23	
42 cis-1,2-Dichloroethene	96	9.012	9.005	0.007	99	554998	7.82	
44 Chloroform	83	9.362	9.360	0.002	29	16890	0.1051	
47 1,1,1-Trichloroethane	97	10.411	10.404	0.007	97	1608134	8.66	
48 1,2-Dichloroethane	62	10.519	10.517	0.002	92	3809	0.0320	
51 Benzene	78	11.003	10.996	0.007	98	24837	0.1306	
59 Trichloroethene	130	12.229	12.222	0.007	94	49500	0.5158	
68 Toluene	91	14.246	14.245	0.001	91	23236	0.1164	
81 m-Xylene & p-Xylene	91	16.689	16.687	0.002	97	9485	0.0537	
85 o-Xylene	91	17.216	17.209	0.007	95	5657	0.0298	
92 1,3,5-Trimethylbenzene	120	18.518	18.522	-0.004	90	7534	0.0701	
96 1,2,4-Trimethylbenzene	105	18.948	18.947	0.001	98	55592	0.3055	
102 1,2,3-Trimethylbenzene	105	19.411	19.409	0.002	97	9730	0.0673	
S 126 Xylenes, Total	100				0		0.0835	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

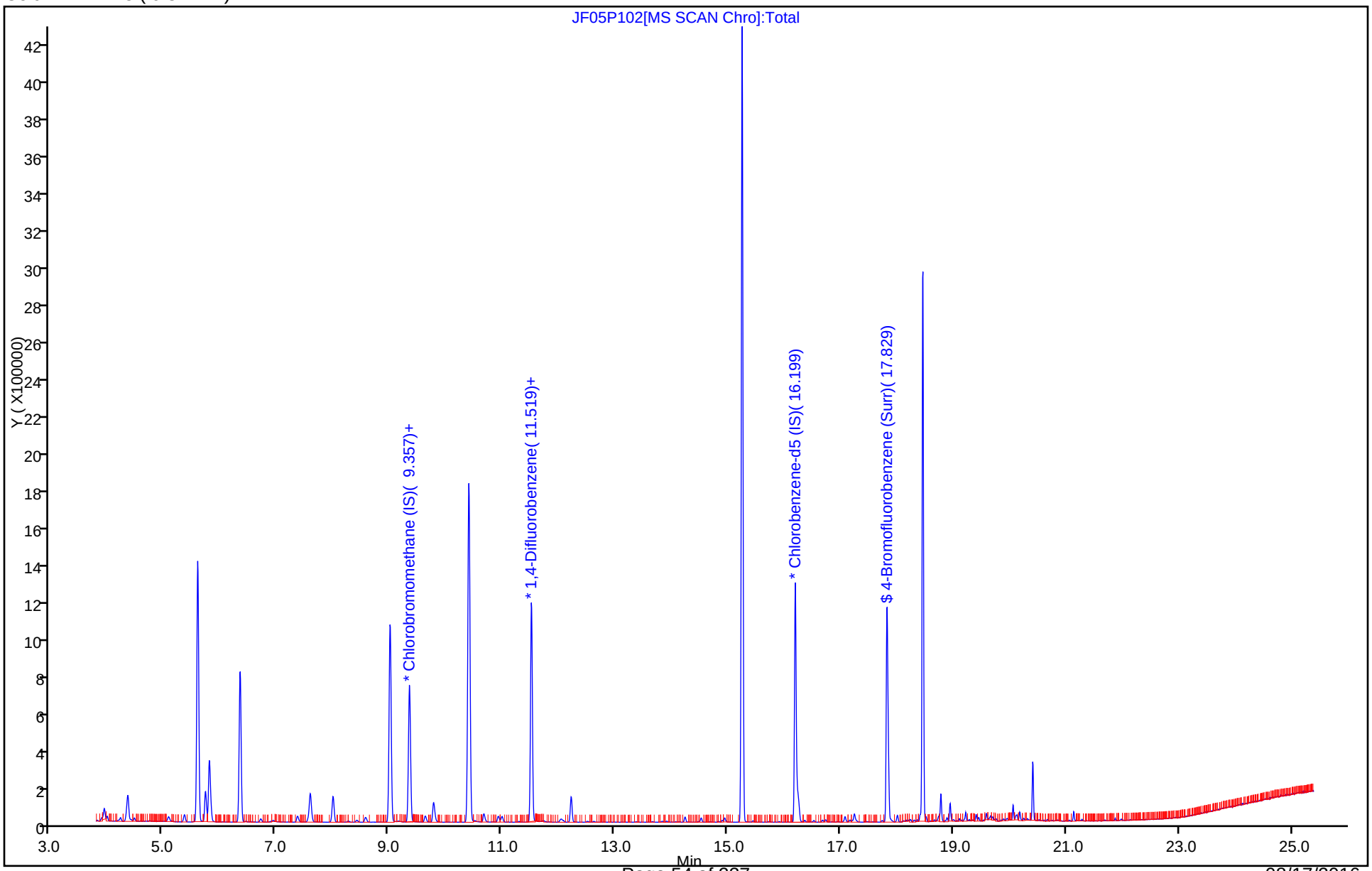
Report Date: 08-Aug-2016 11:52:07 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D

Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2	Worklist Smp#:	7
Client ID:	BUILDING-A-MIDGAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



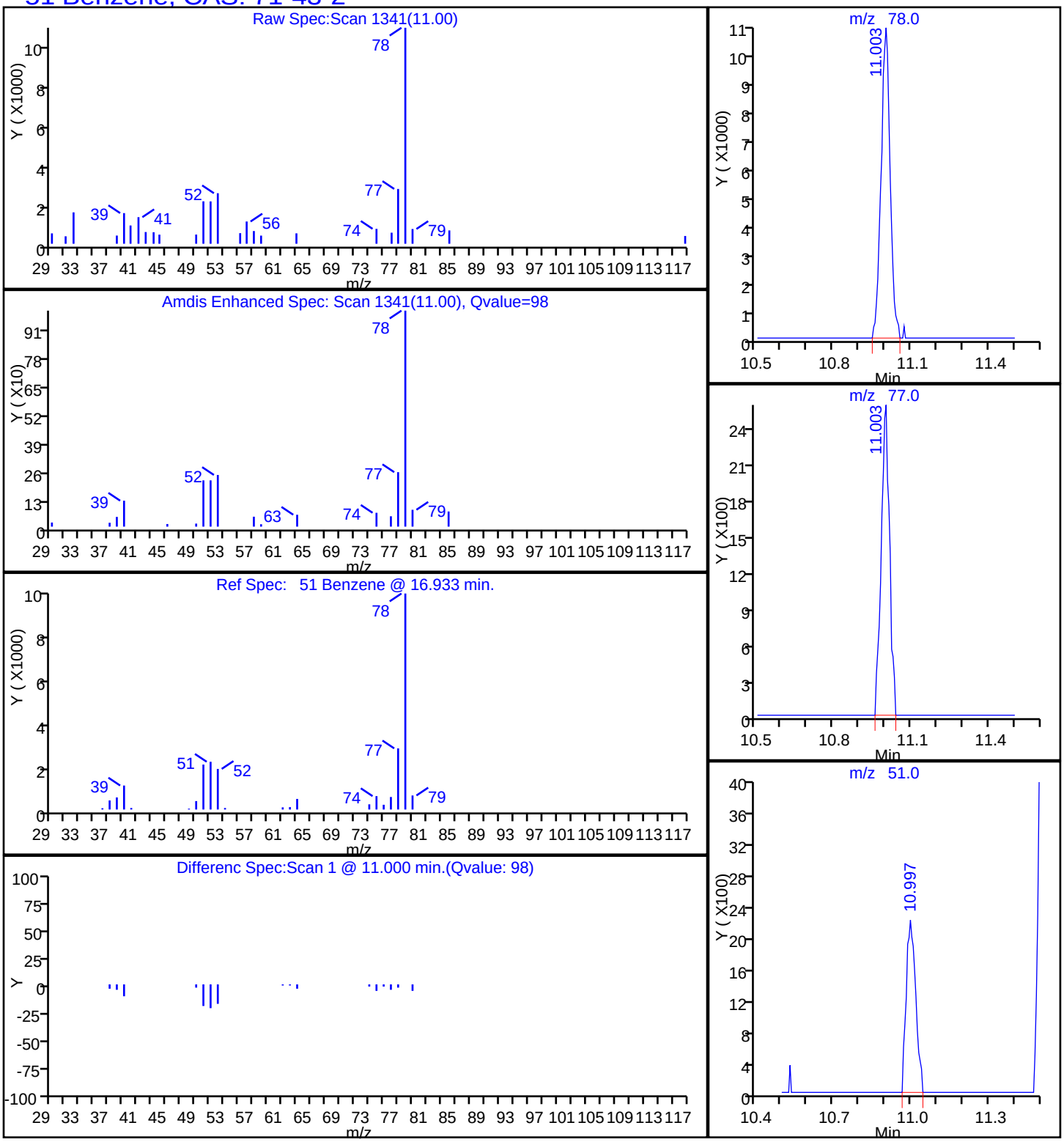
TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D				
Lims ID:	140-5545-A-2				
Client ID:	BUILDING-A-MIDGAC				
Sample Type:	Client				
Inject. Date:	05-Aug-2016 20:53:30	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003263-007				
Misc. Info.:	140-5545-a-2				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Aug-2016 11:51:31	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK049				
First Level Reviewer: tajh		Date:	08-Aug-2016 11:26:31		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.92	98.11

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

51 Benzene, CAS: 71-43-2



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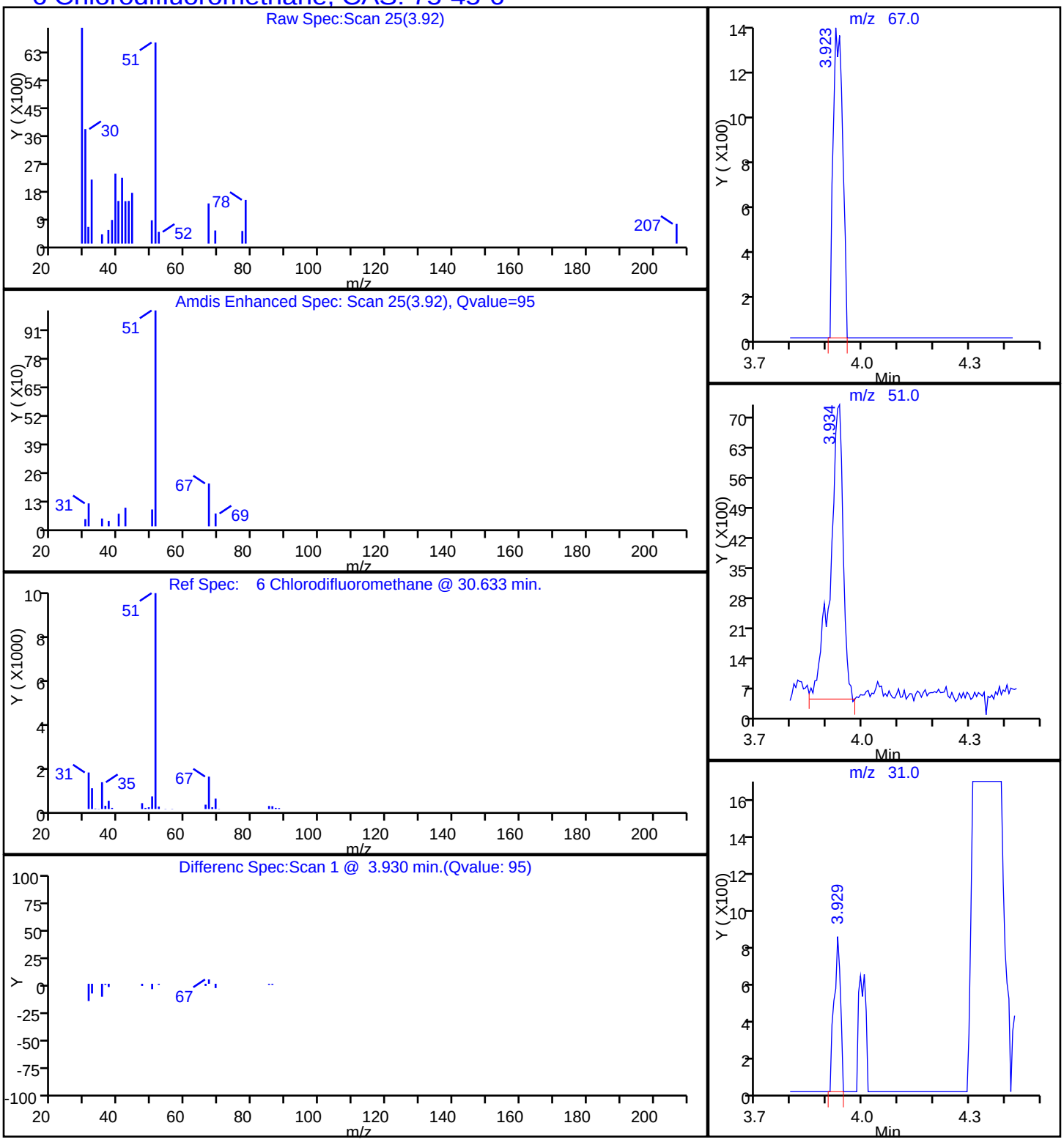
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

6 Chlorodifluoromethane, CAS: 75-45-6



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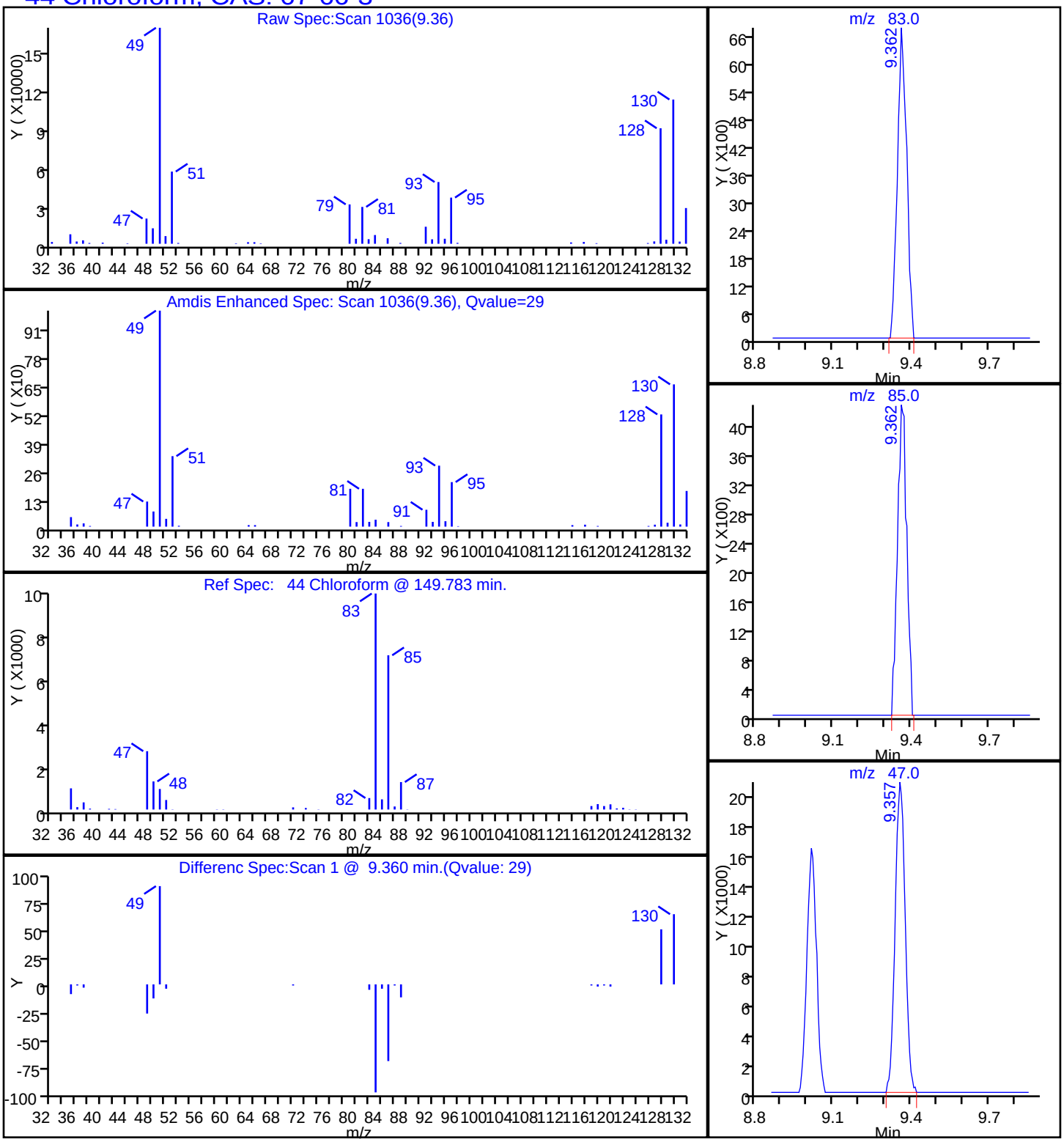
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

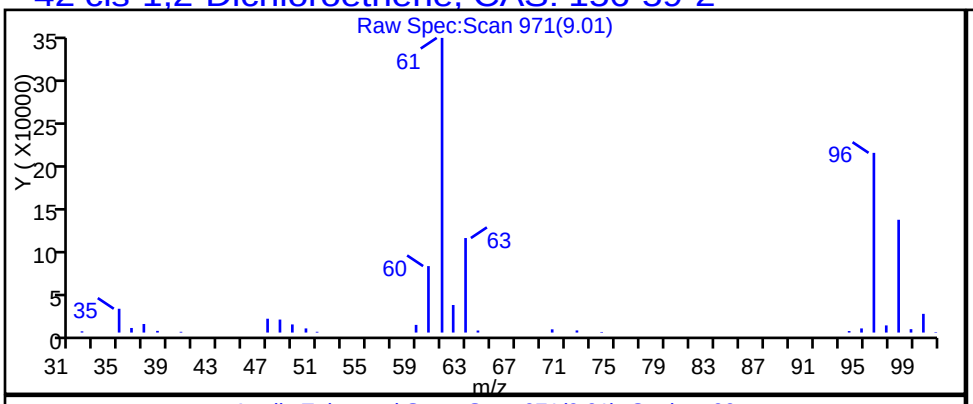
44 Chloroform, CAS: 67-66-3

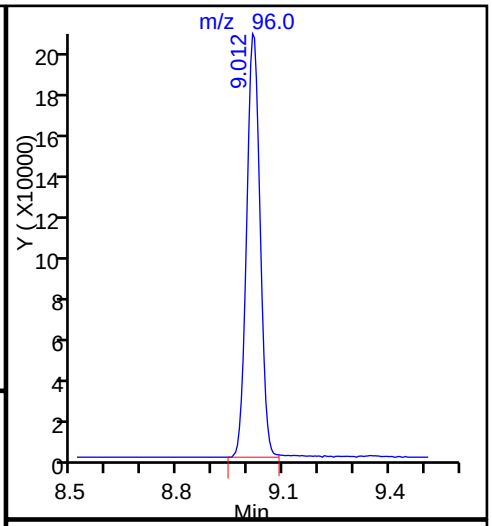


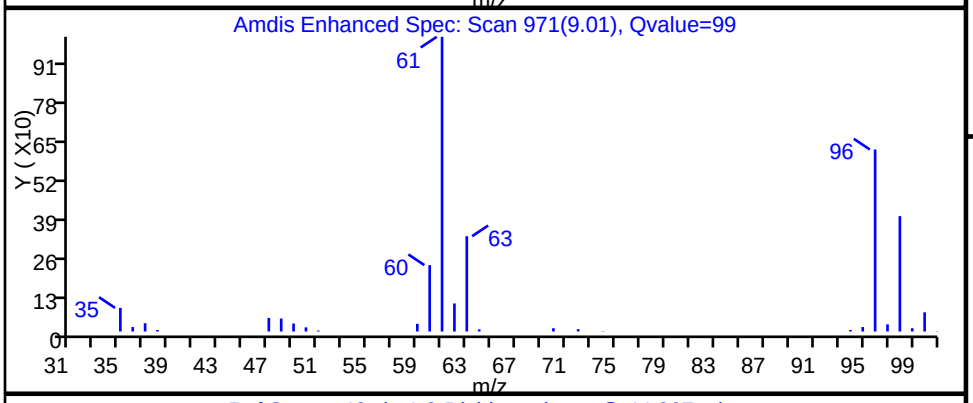
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D

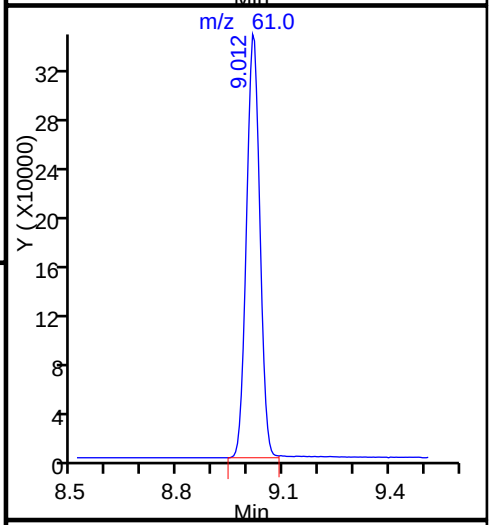
Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2		
Client ID:	BUILDING-A-MIDGAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

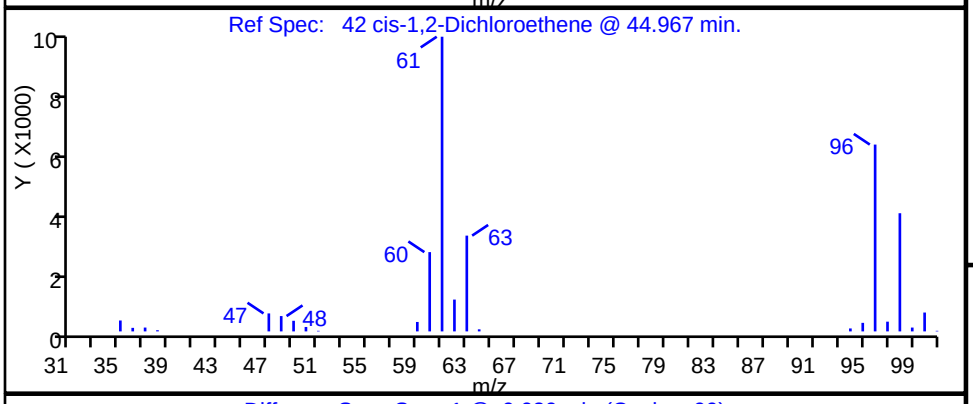
42 cis-1,2-Dichloroethene, CAS: 156-59-2

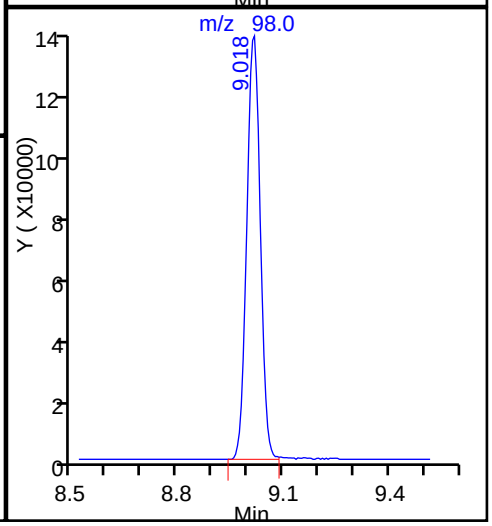


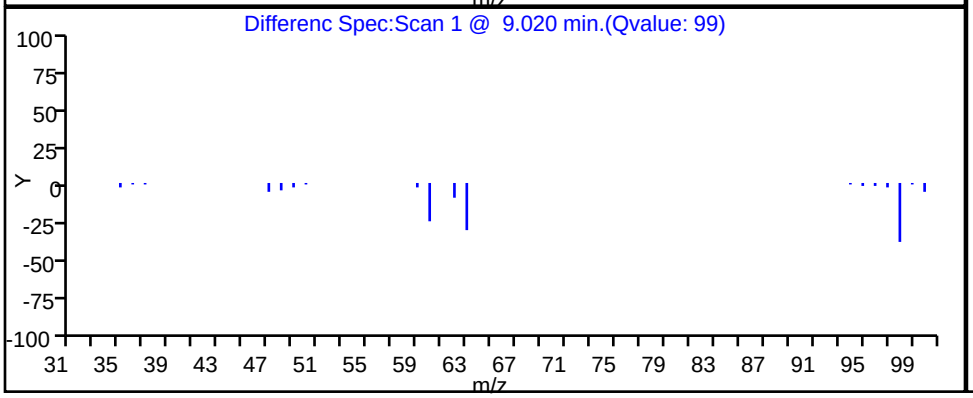






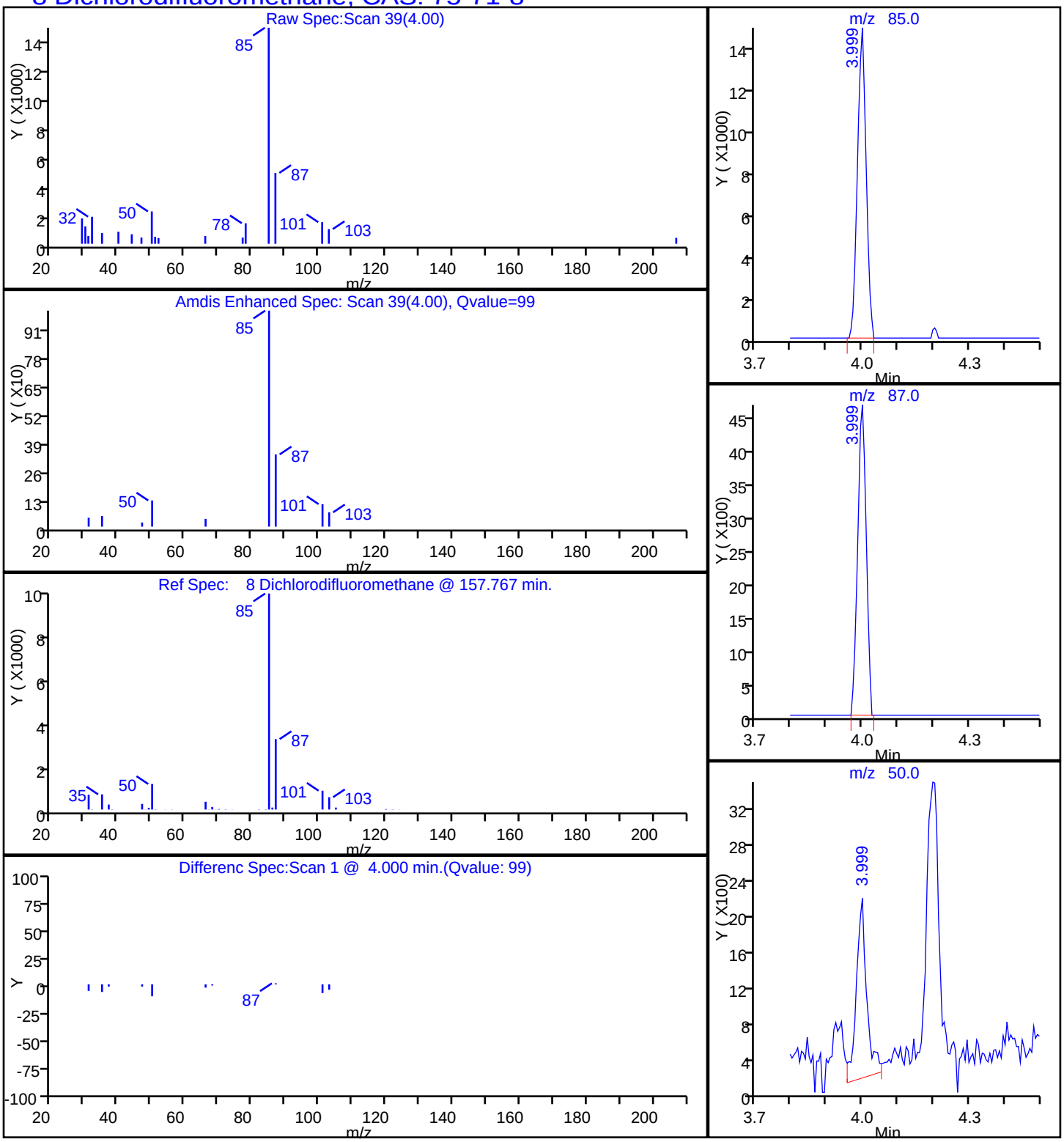






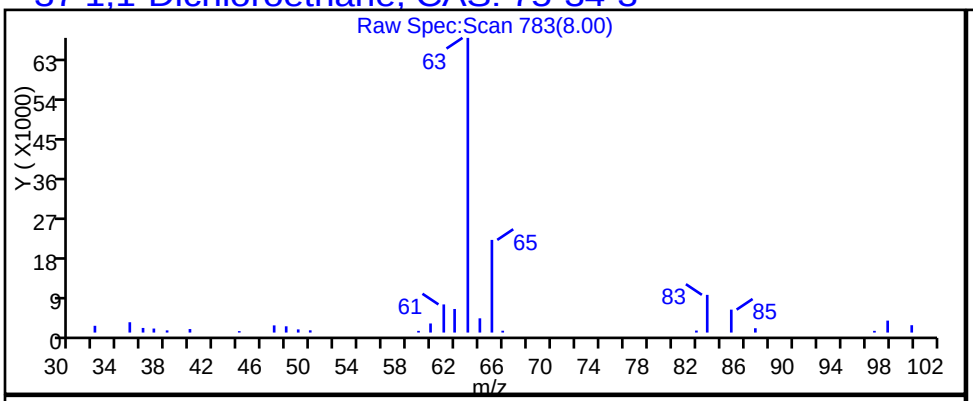
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

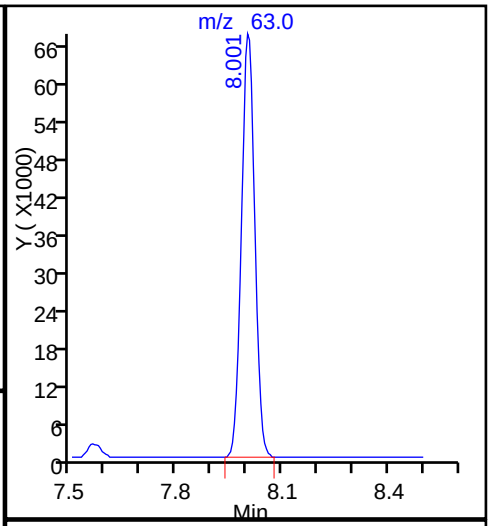
8 Dichlorodifluoromethane, CAS: 75-71-8

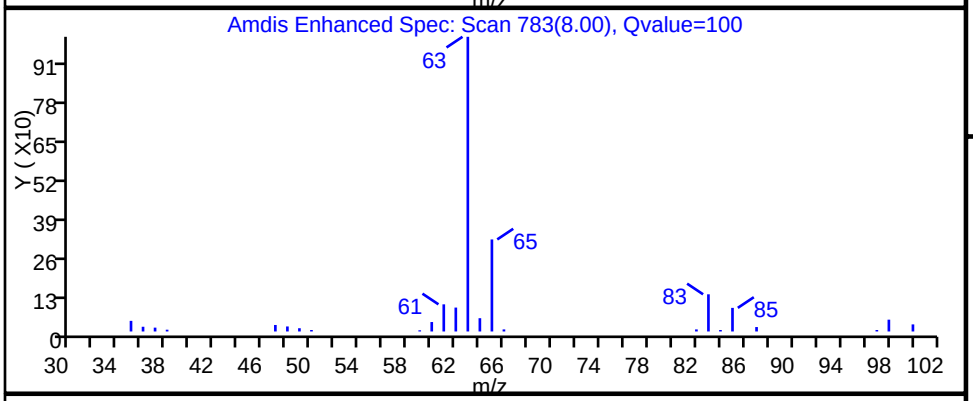


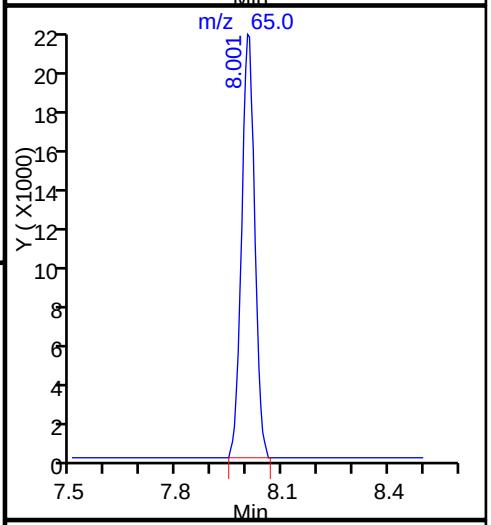
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

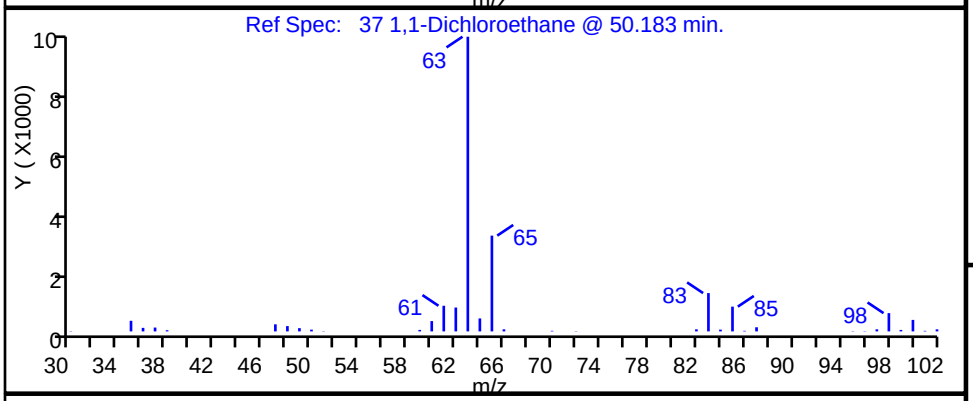
37 1,1-Dichloroethane, CAS: 75-34-3

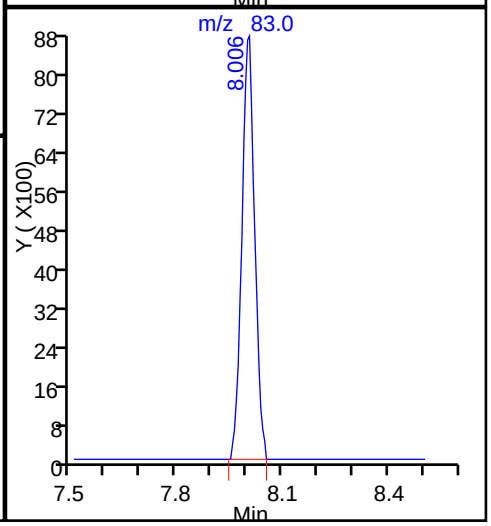


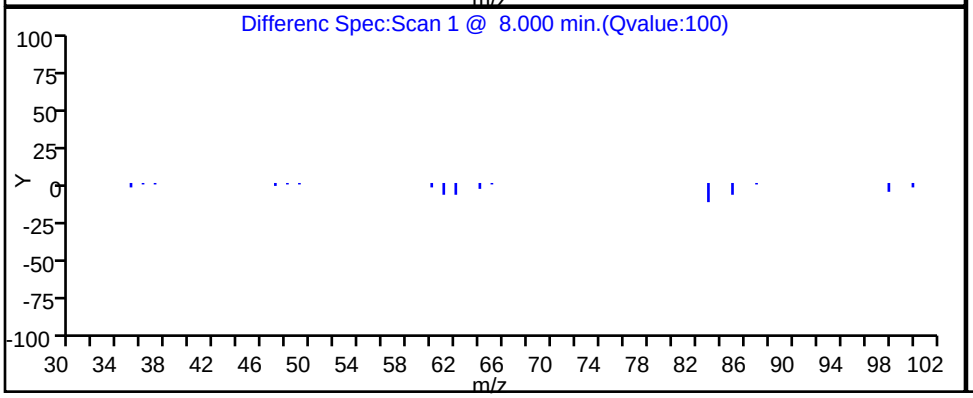






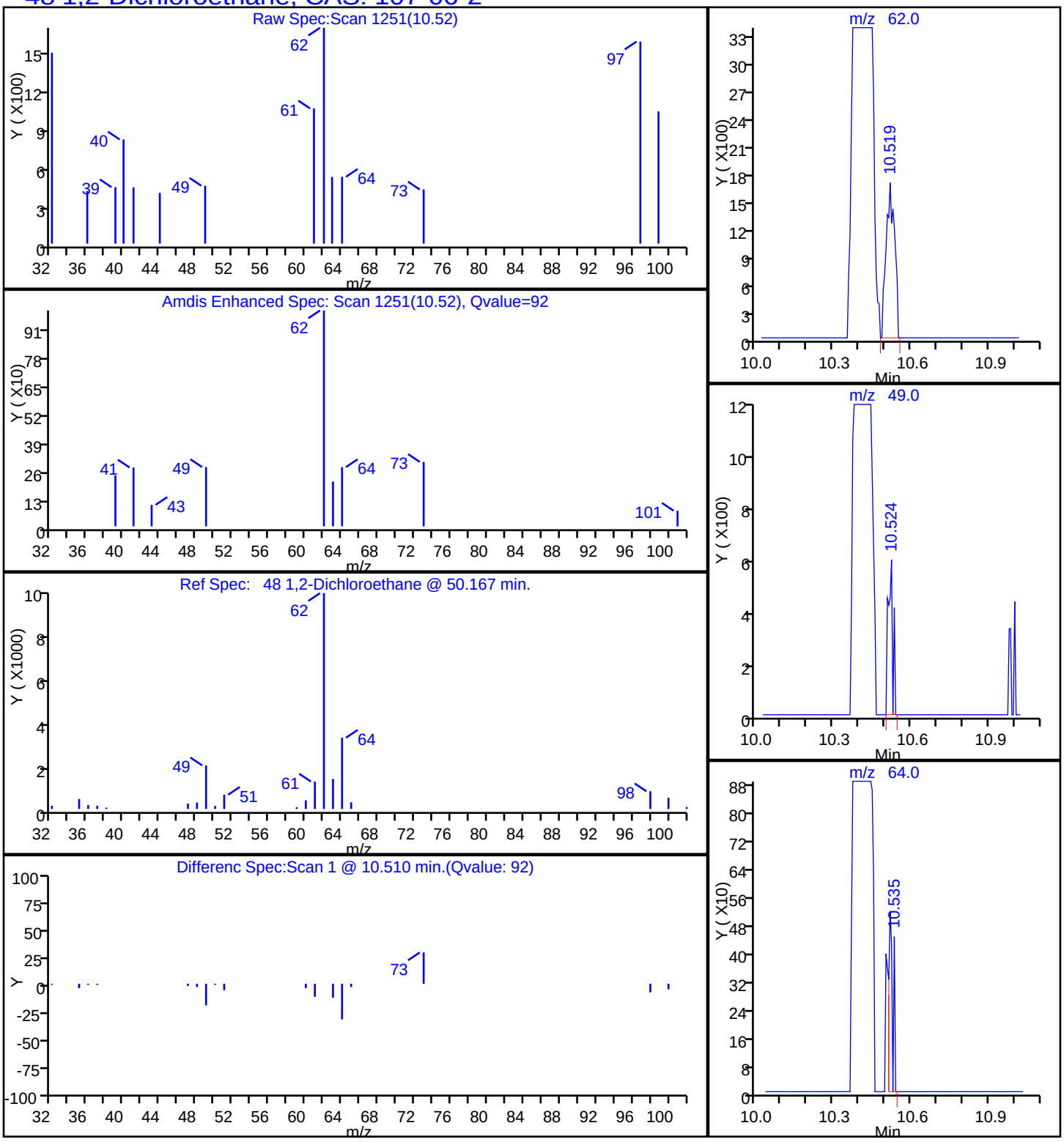






Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

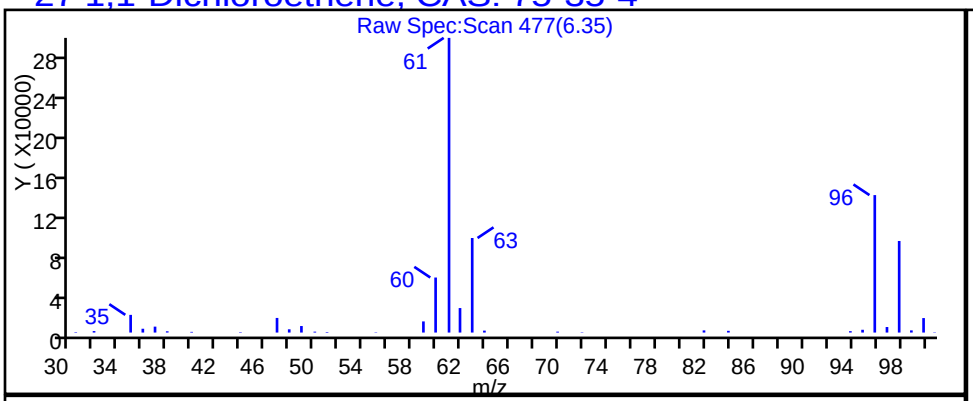
48 1,2-Dichloroethane, CAS: 107-06-2

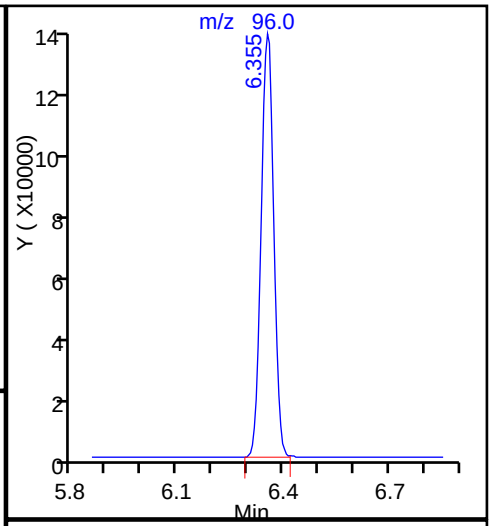


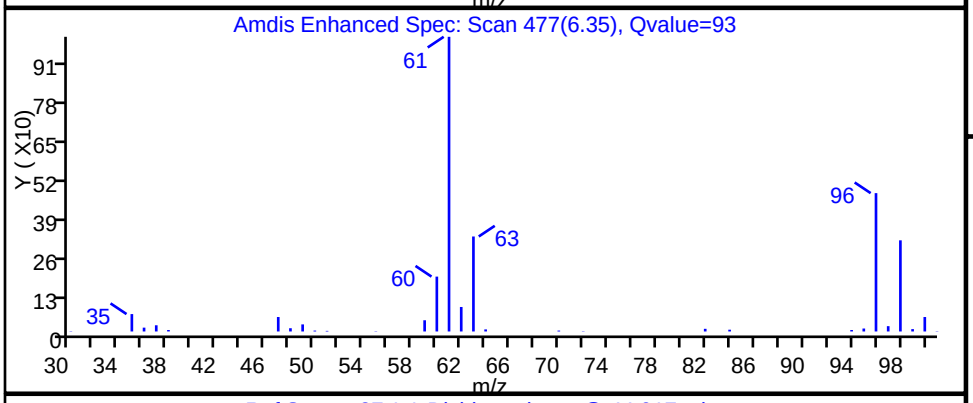
TestAmerica Knoxville

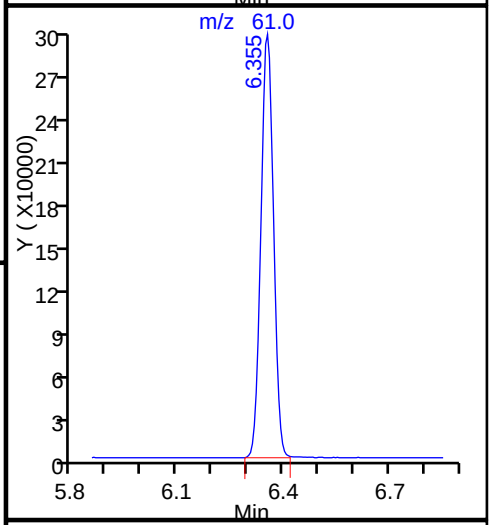
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D				
Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2		
Client ID:	BUILDING-A-MIDGAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

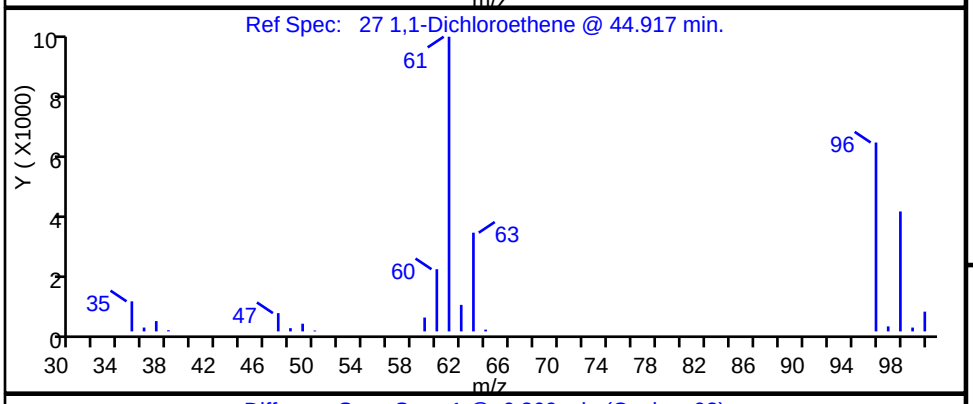
27 1,1-Dichloroethene, CAS: 75-35-4

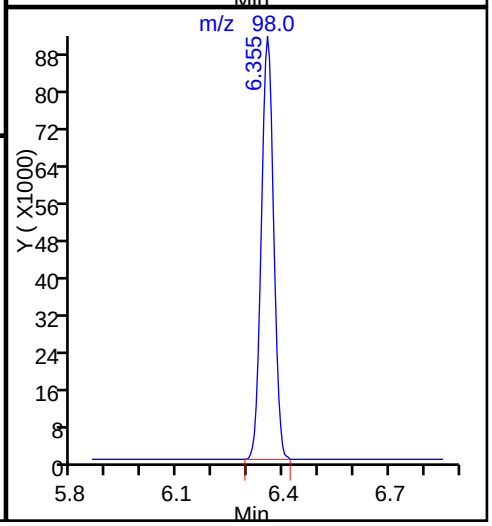


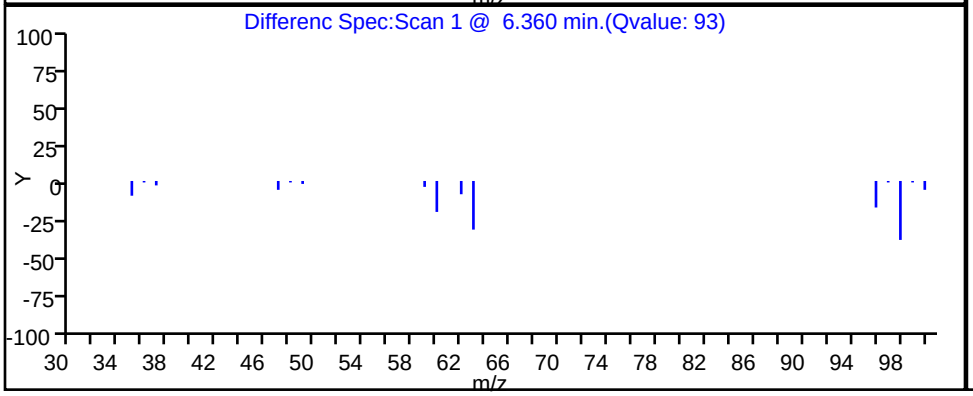






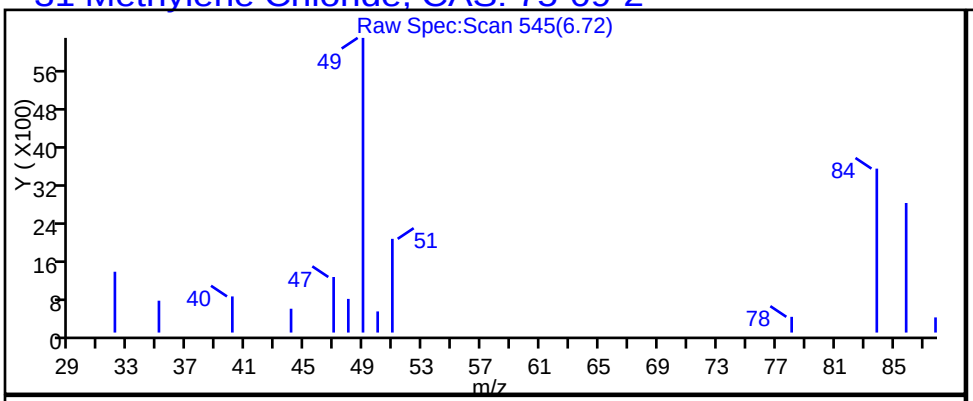


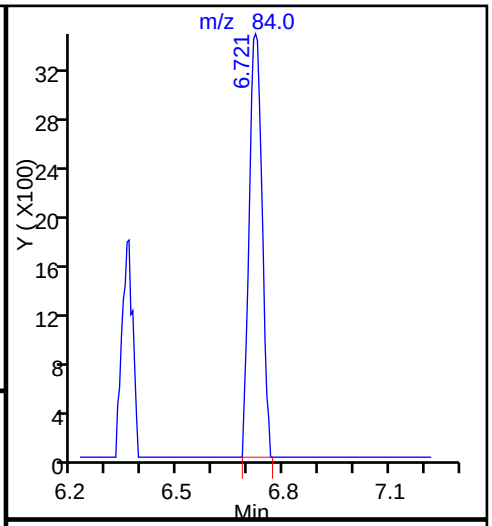


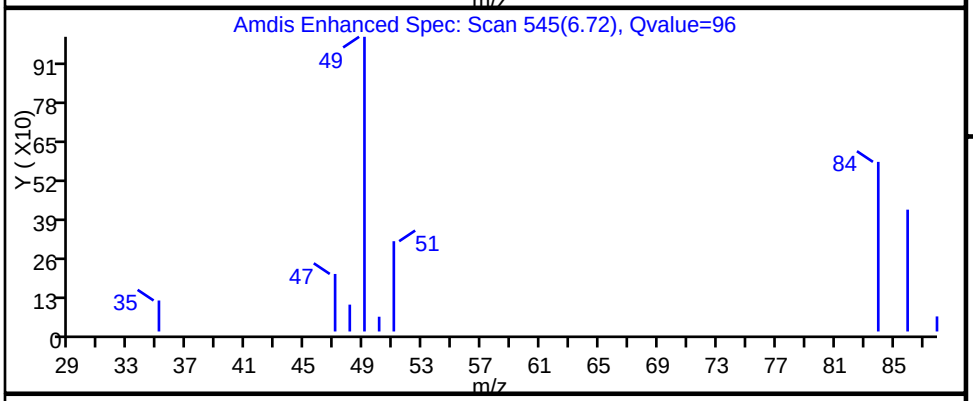


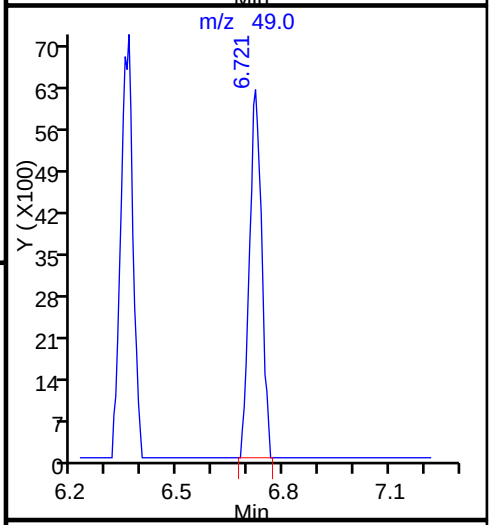
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

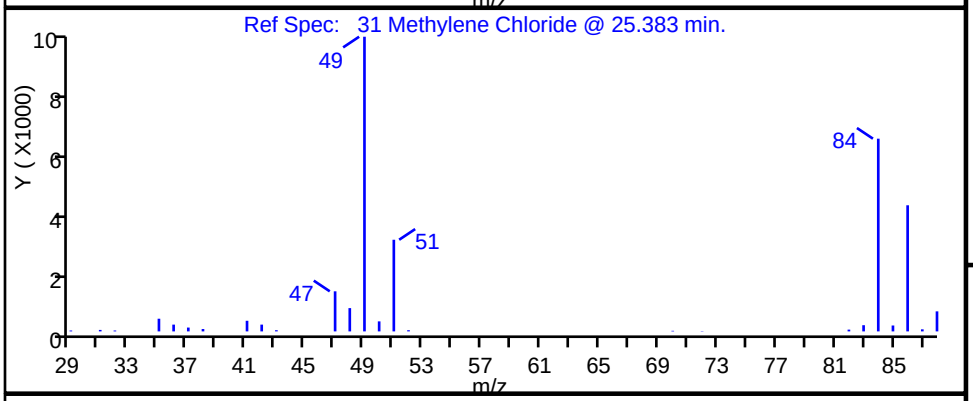
31 Methylene Chloride, CAS: 75-09-2

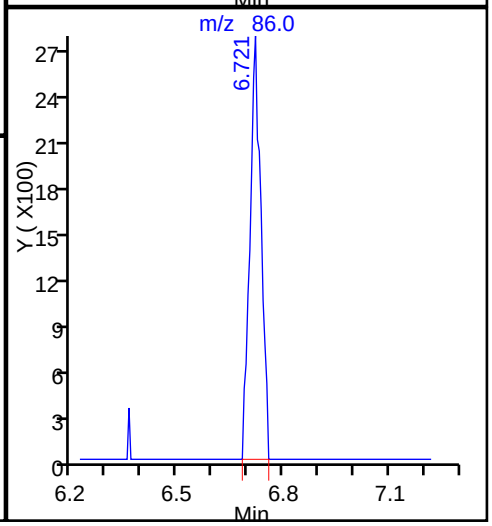


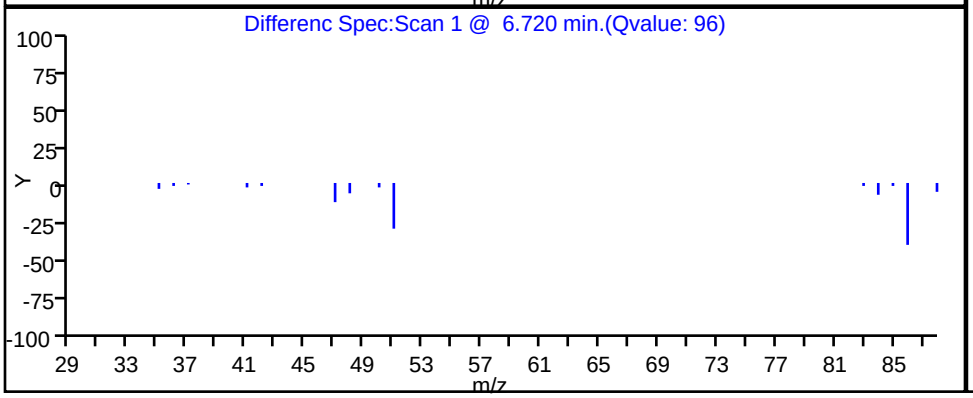












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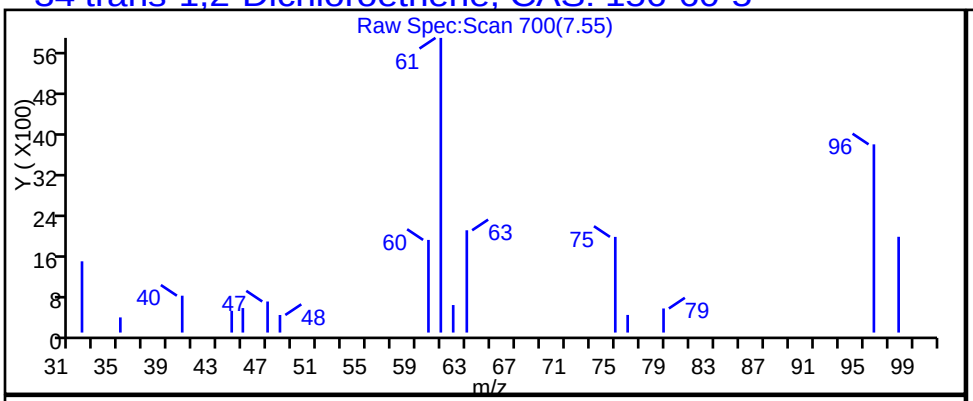
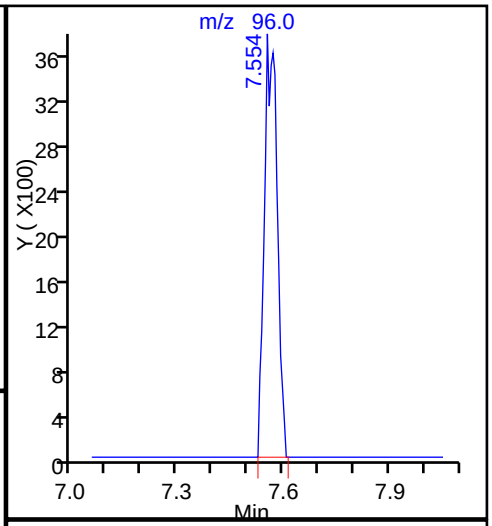
TestAmerica Knoxville

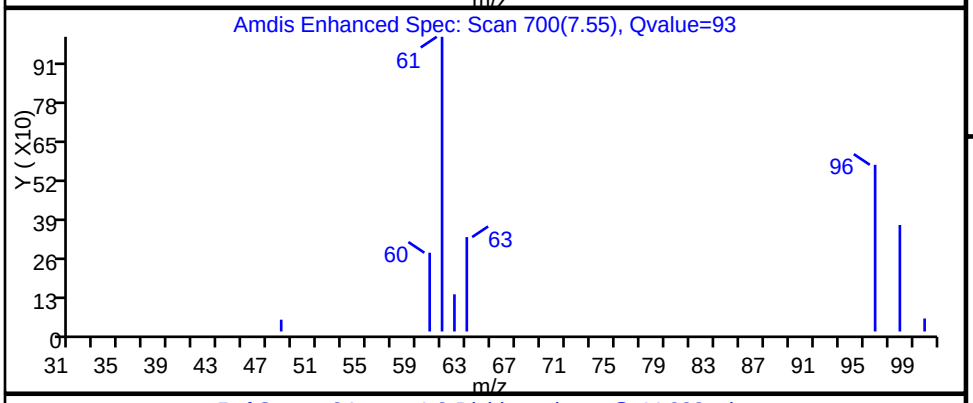
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D

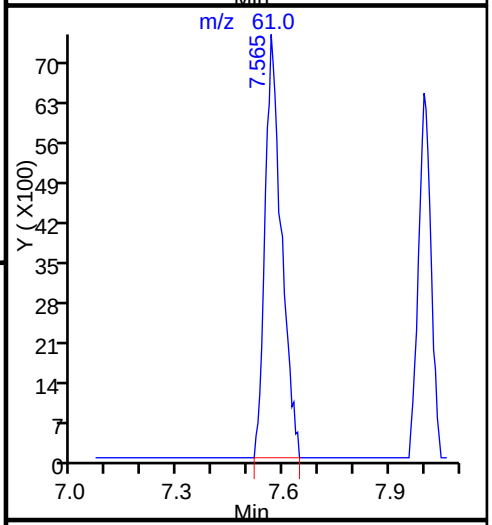
Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2		
Client ID:	BUILDING-A-MIDGAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

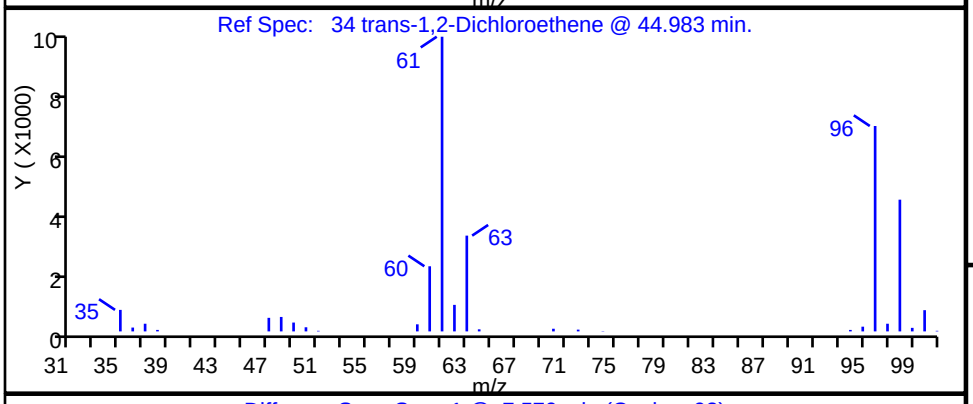
34 trans-1,2-Dichloroethene, CAS: 156-60-5

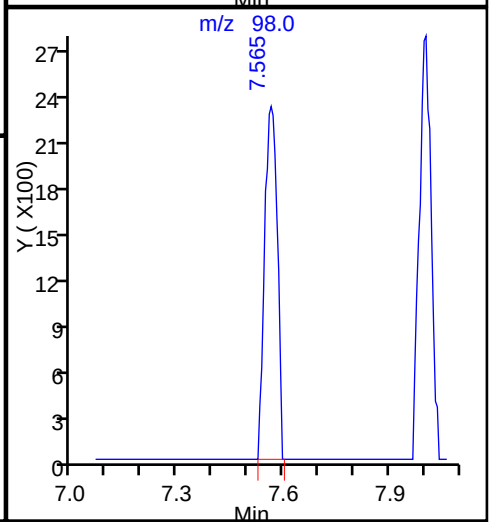


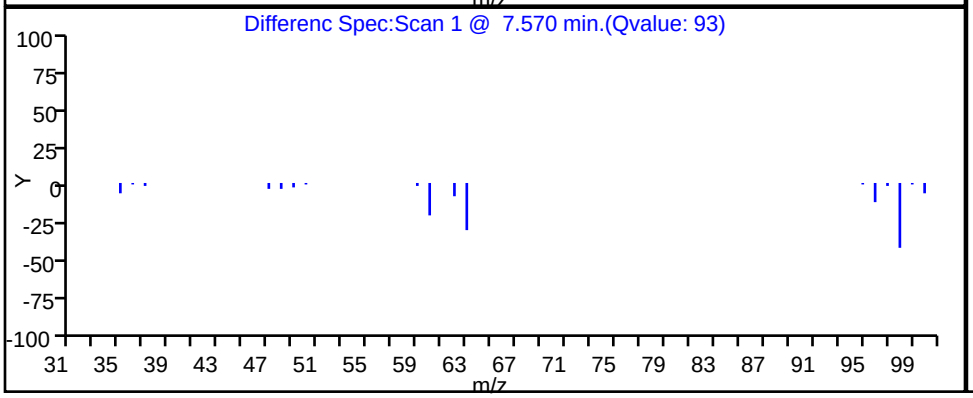












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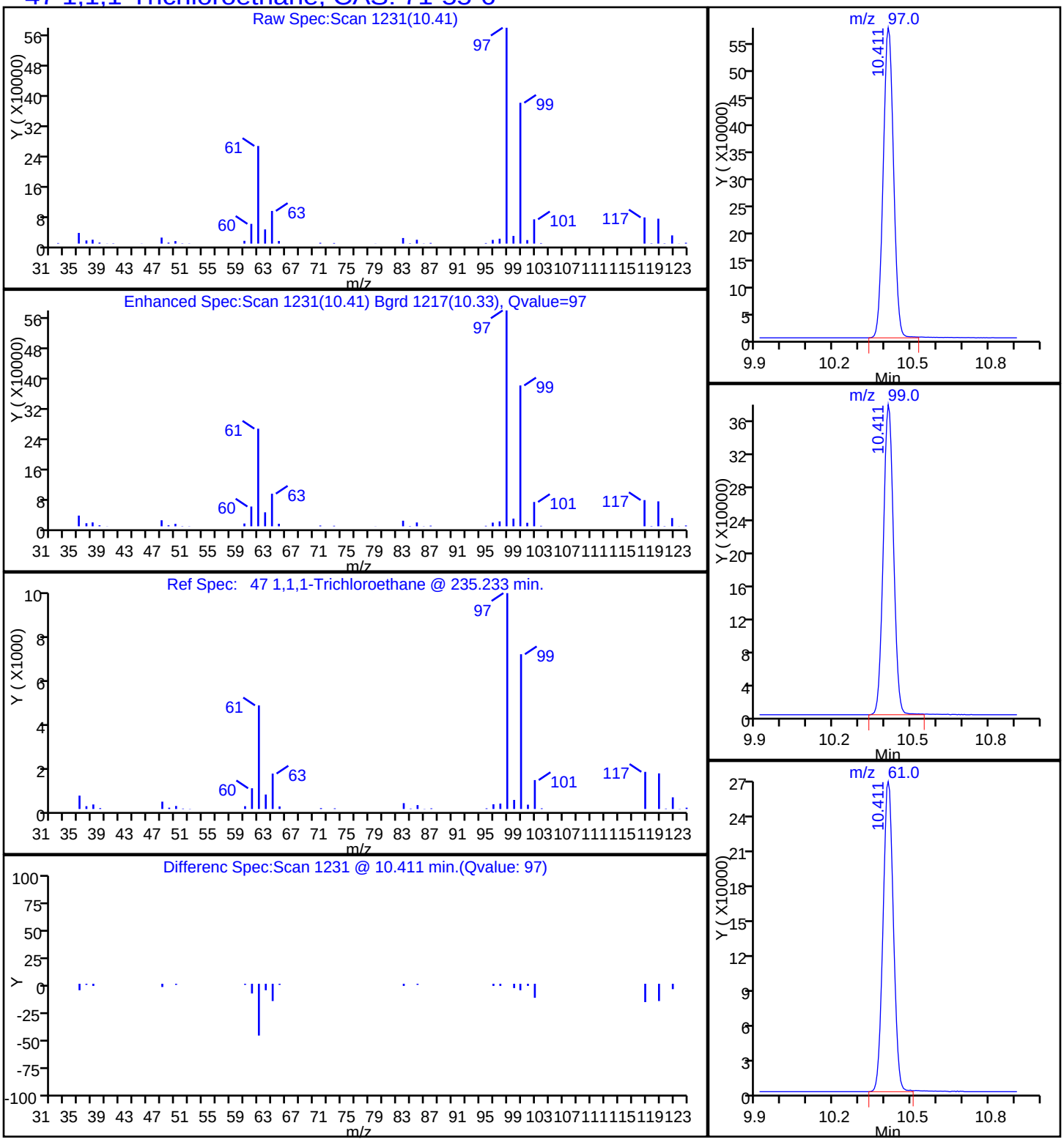
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

47 1,1,1-Trichloroethane, CAS: 71-55-6



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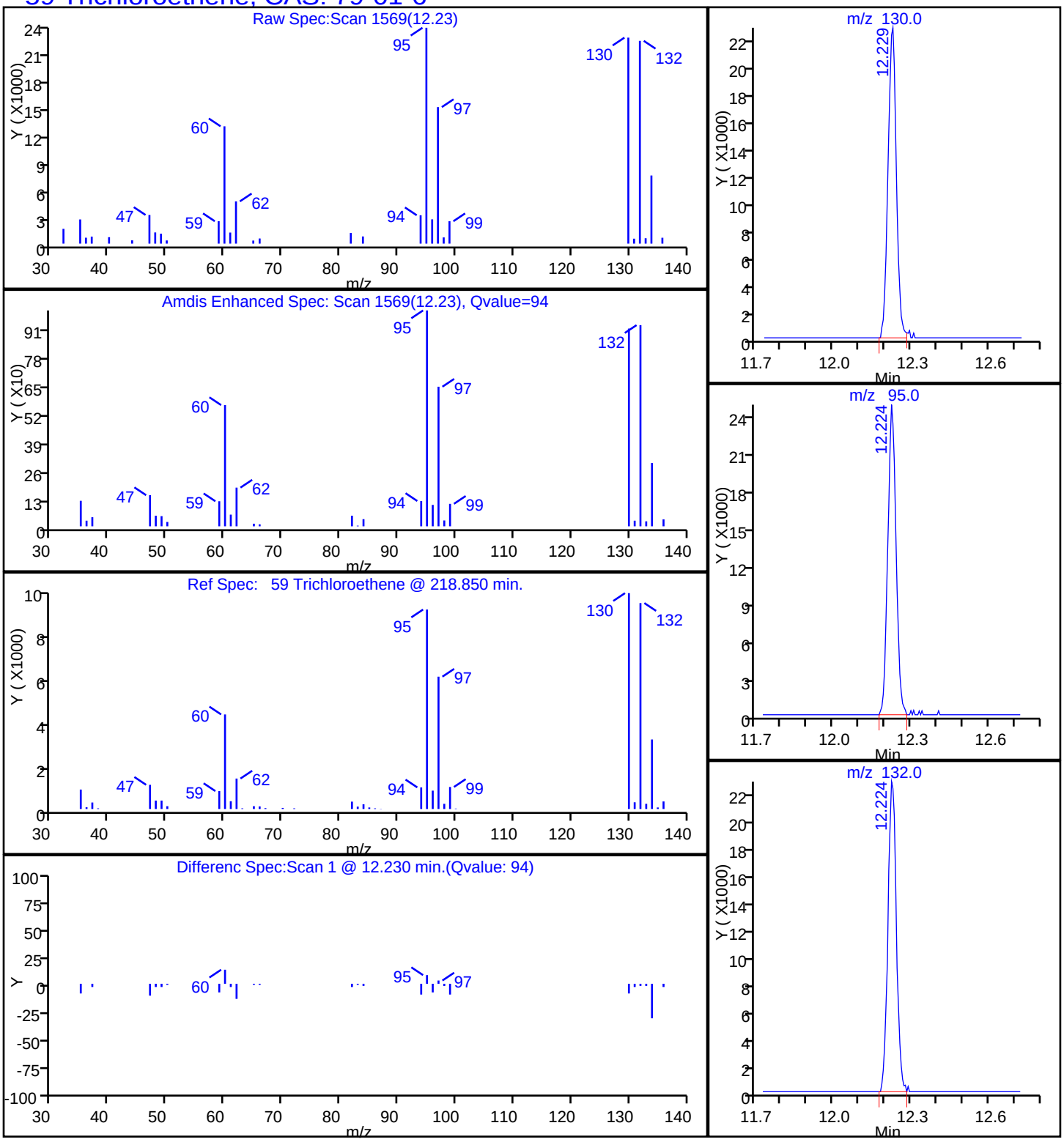
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

59 Trichloroethene, CAS: 79-01-6



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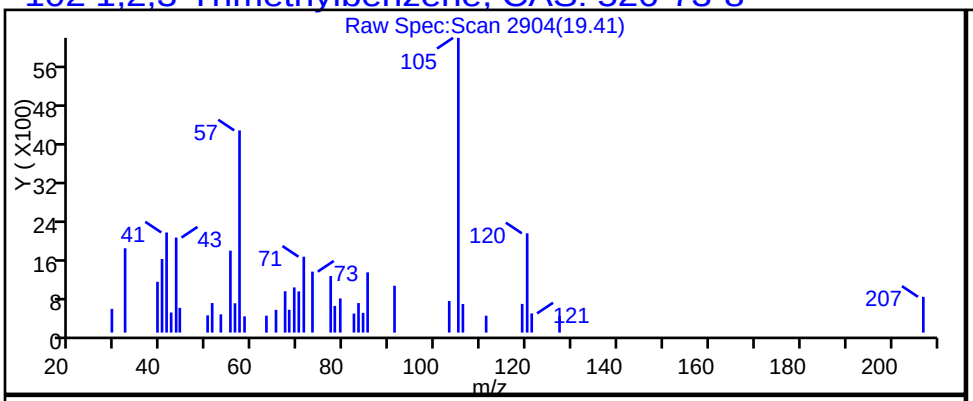
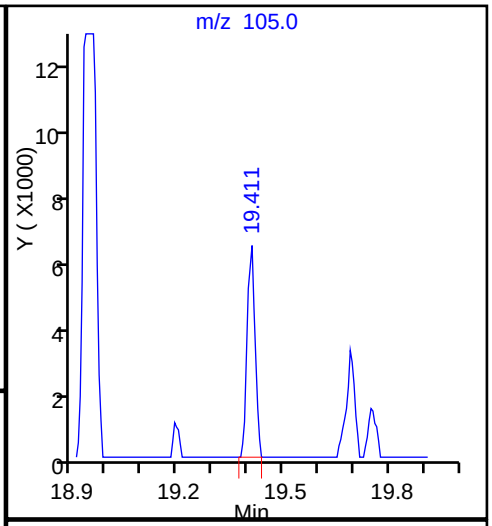
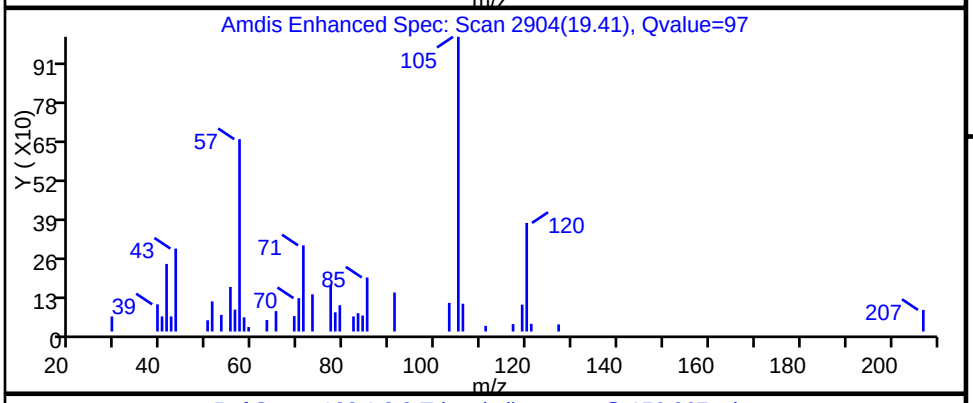
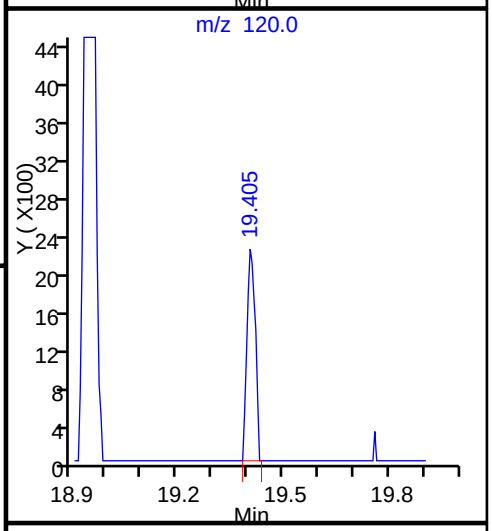
Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2		
Client ID:	BUILDING-A-MIDGAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

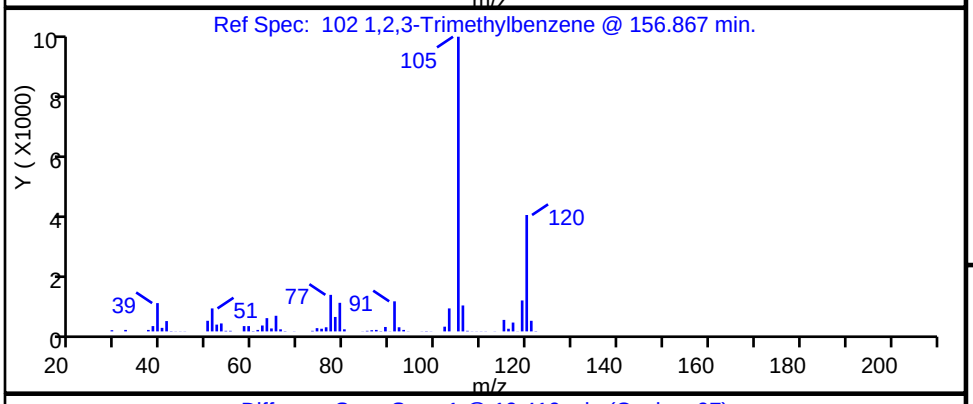
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

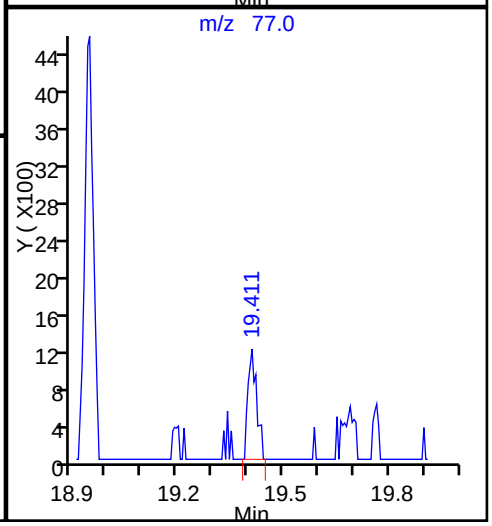


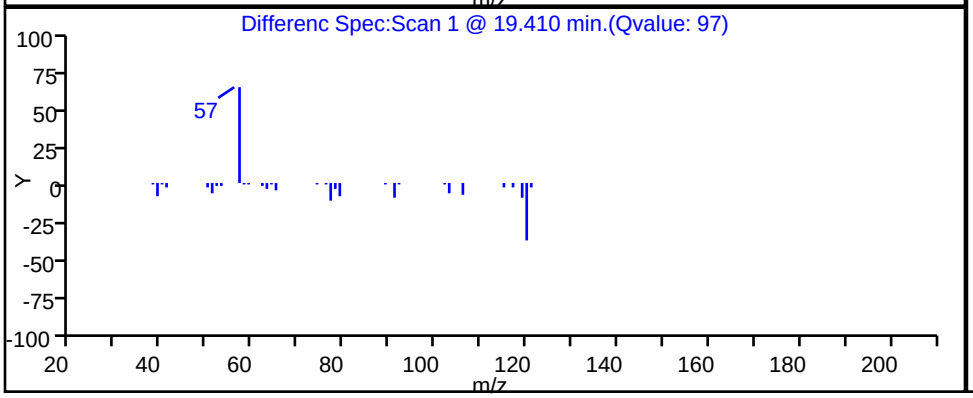






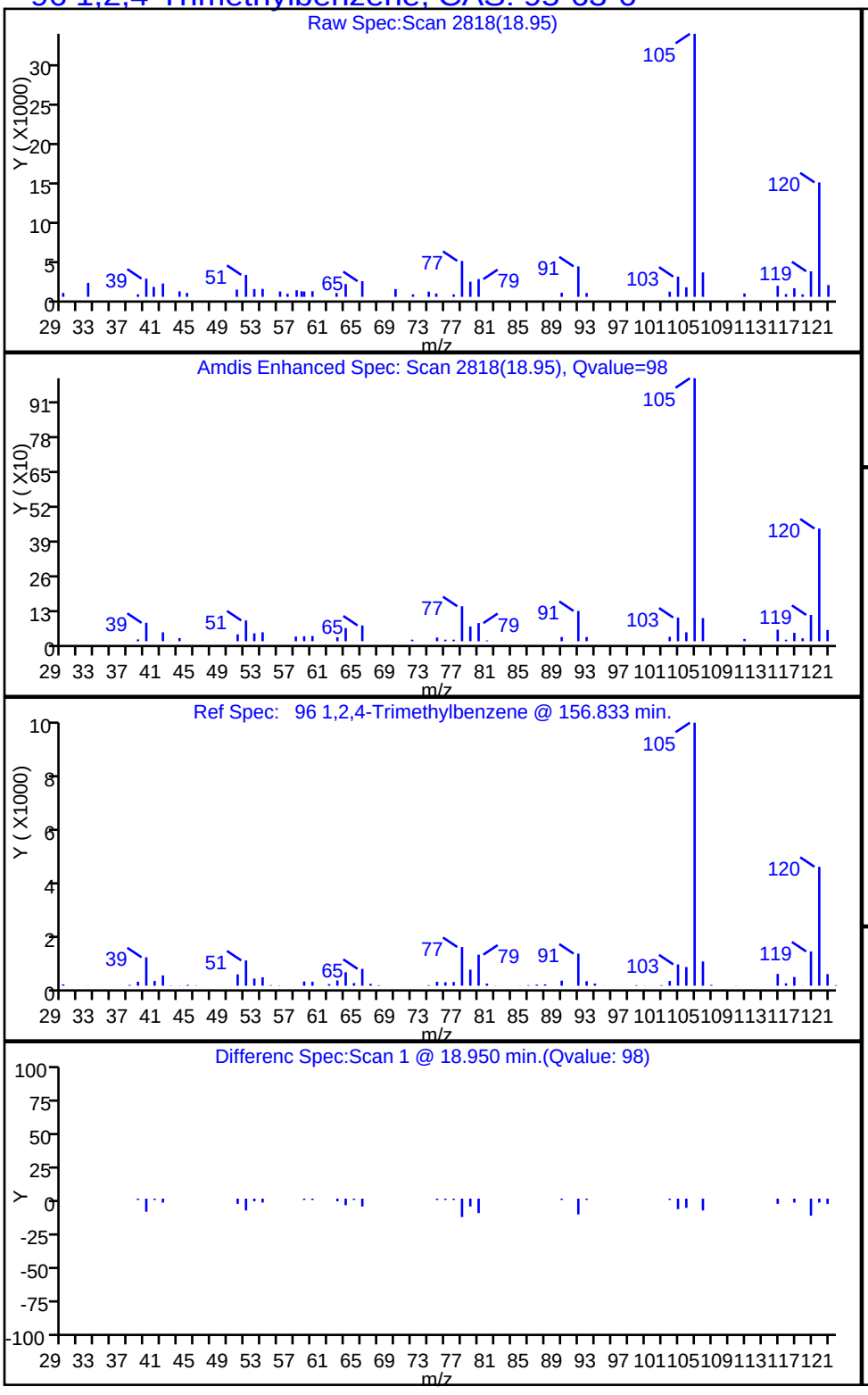


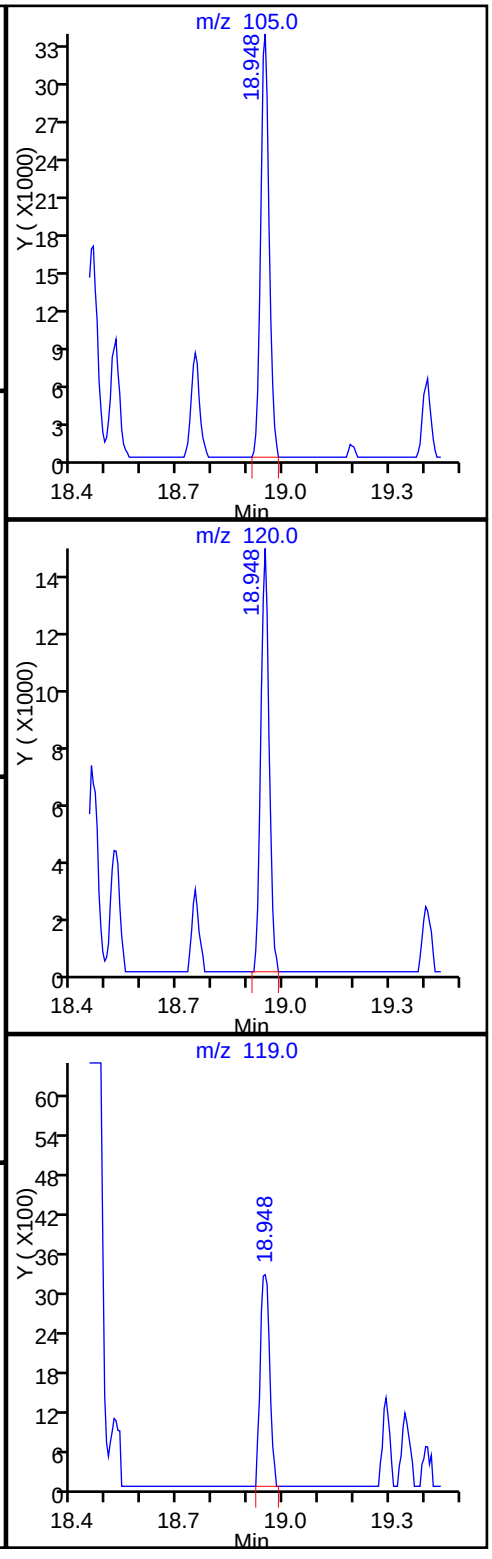




Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

96 1,2,4-Trimethylbenzene, CAS: 95-63-6

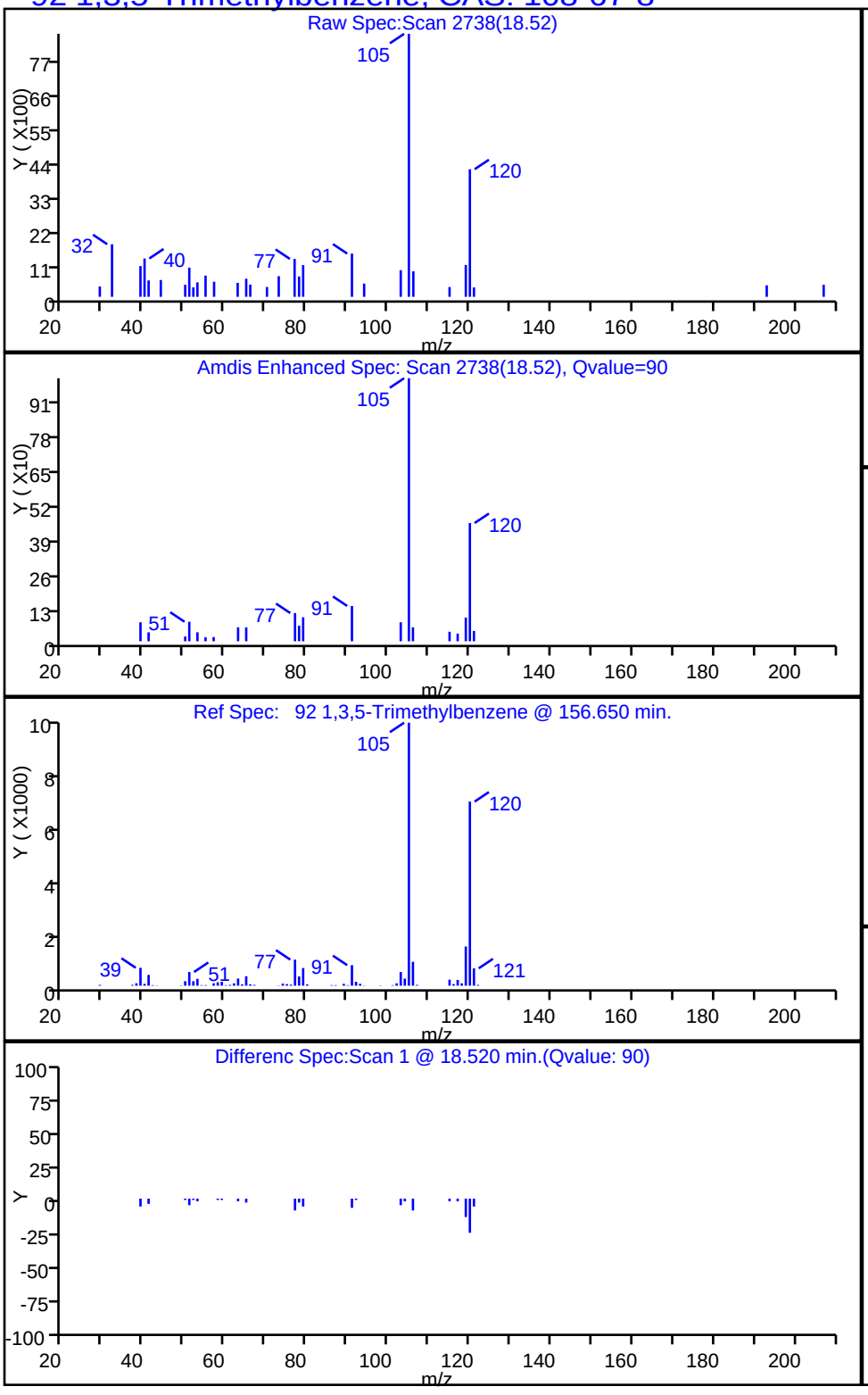


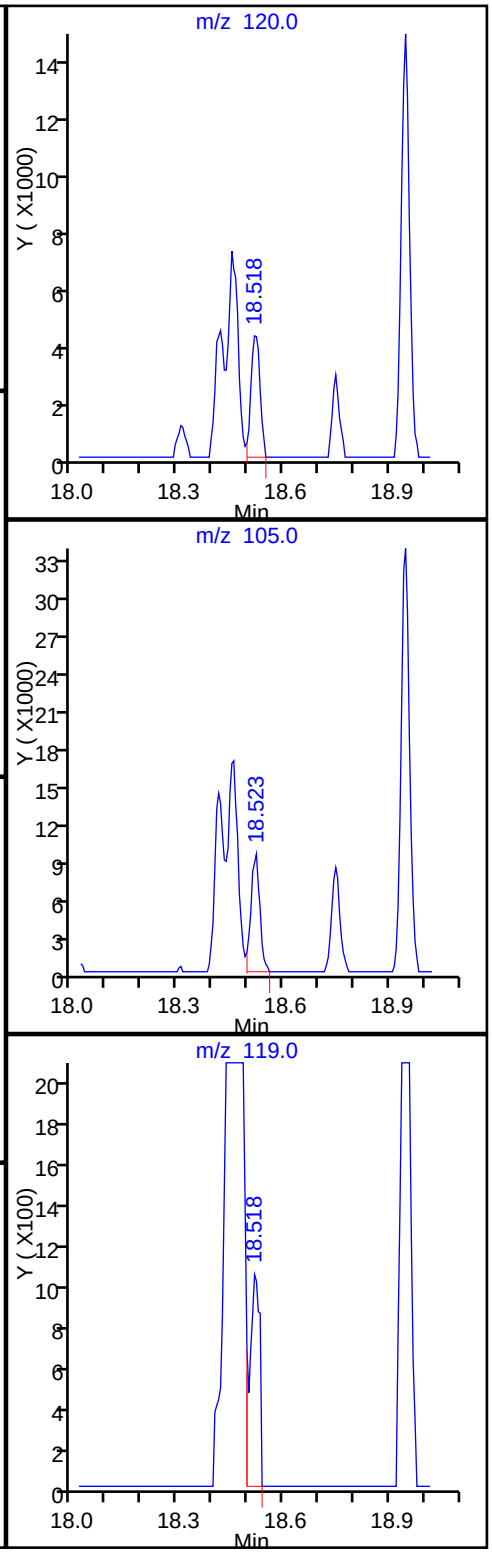


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D				
Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2		
Client ID:	BUILDING-A-MIDGAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

92 1,3,5-Trimethylbenzene, CAS: 108-67-8

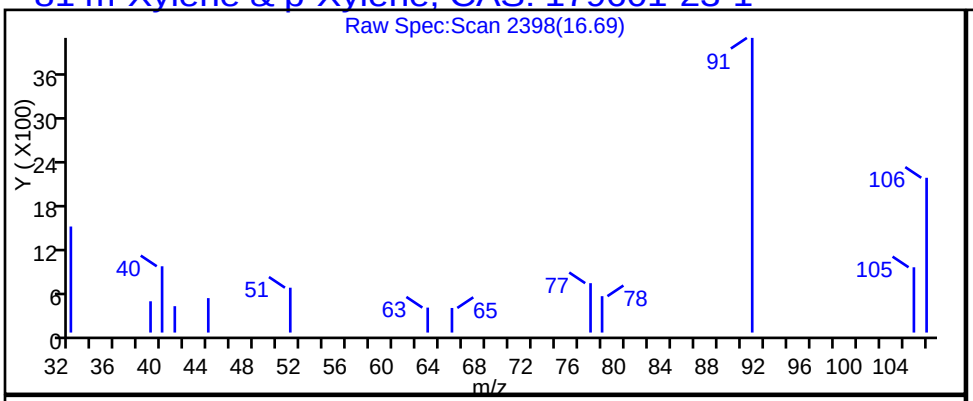


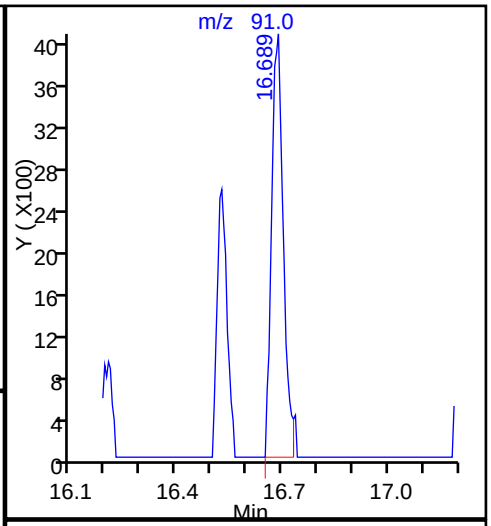


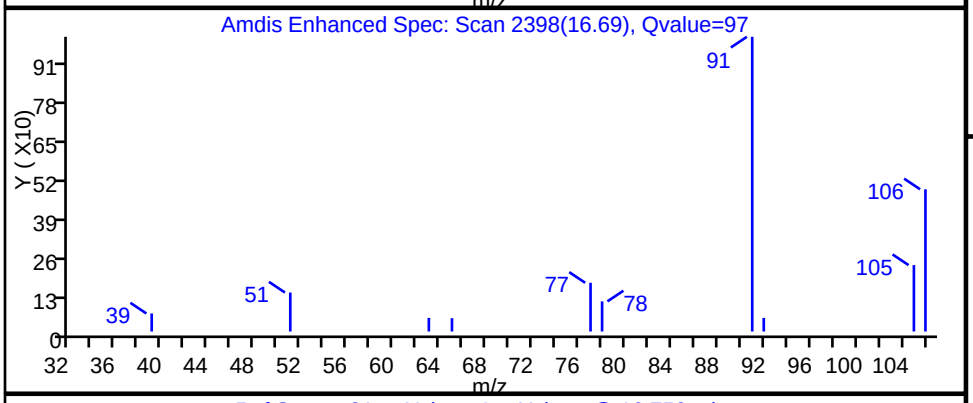
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D

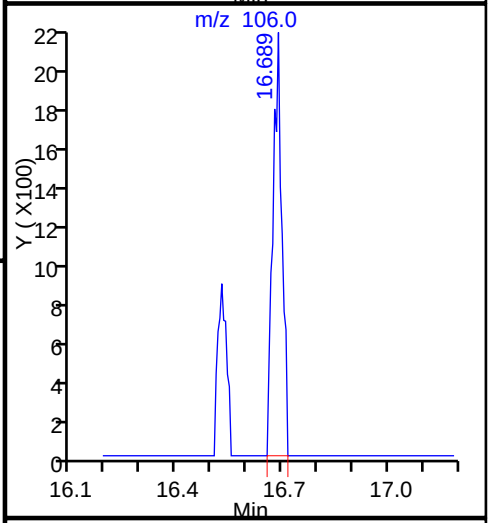
Injection Date:	05-Aug-2016 20:53:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-2	Lab Sample ID:	140-5545-2		
Client ID:	BUILDING-A-MIDGAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

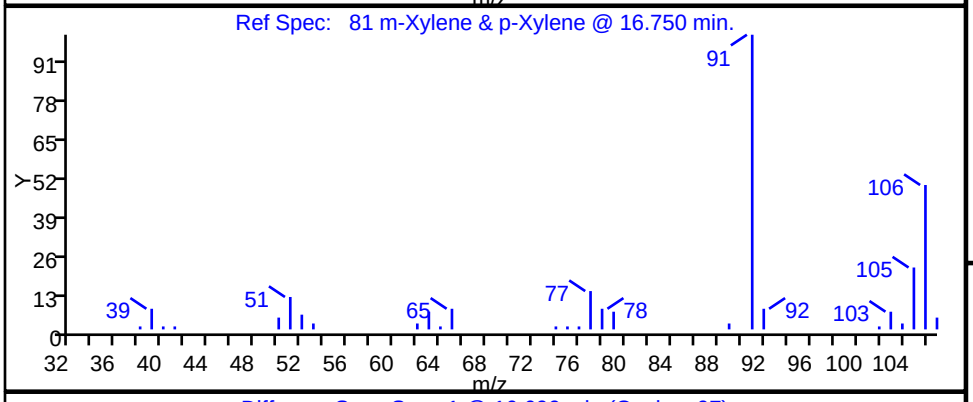
81 m-Xylene & p-Xylene, CAS: 179601-23-1

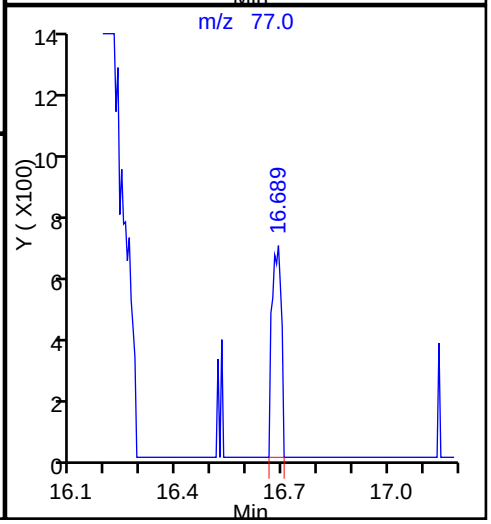


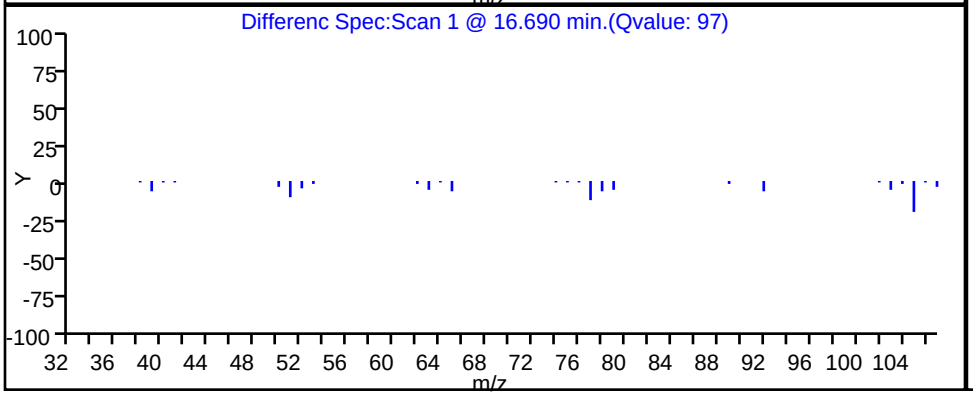






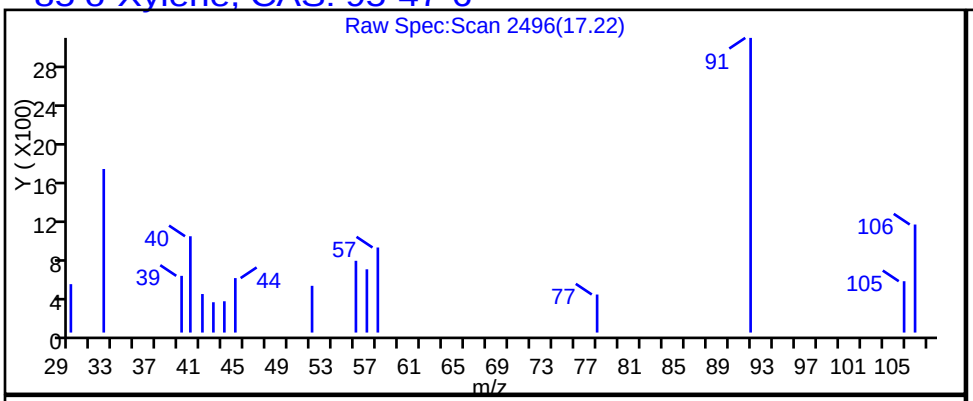


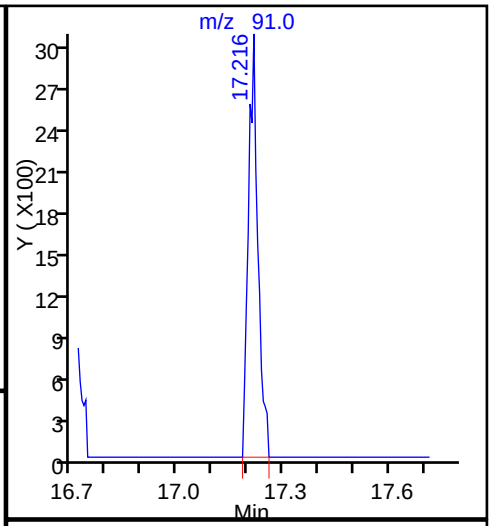


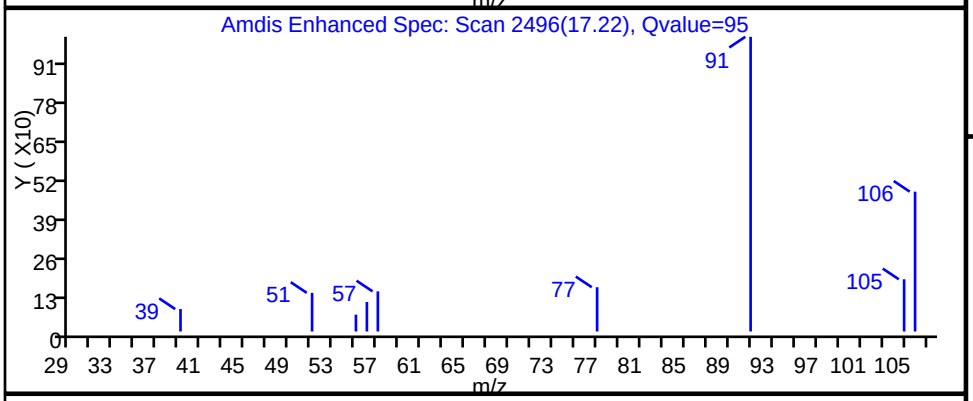


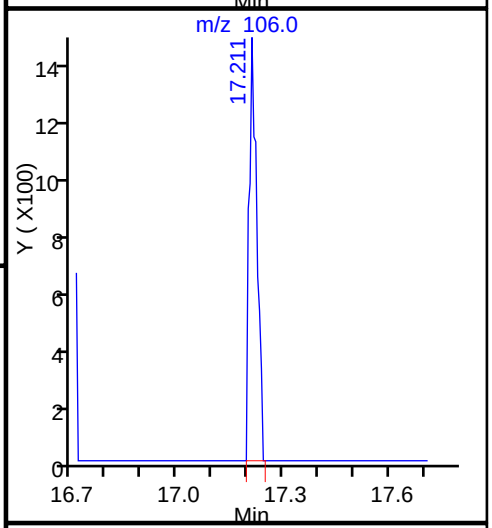
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JF05P102.D
Injection Date: 05-Aug-2016 20:53:30 Instrument ID: MJ
Lims ID: 140-5545-A-2 Lab Sample ID: 140-5545-2
Client ID: BUILDING-A-MIDGAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

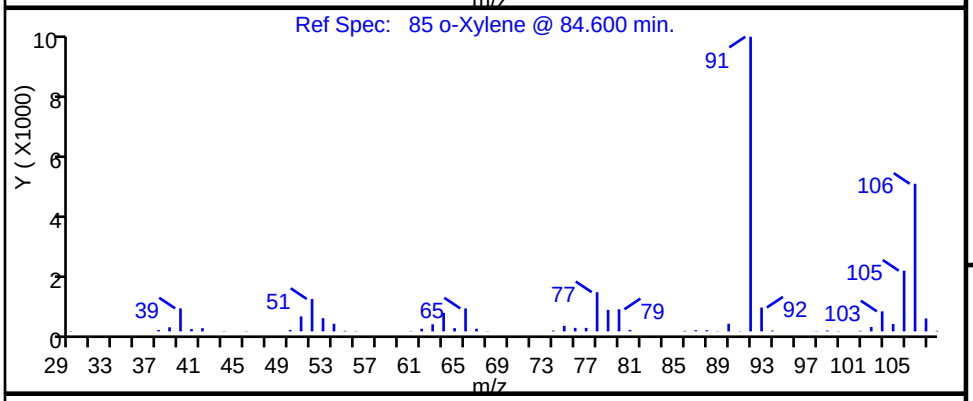
85 o-Xylene, CAS: 95-47-6

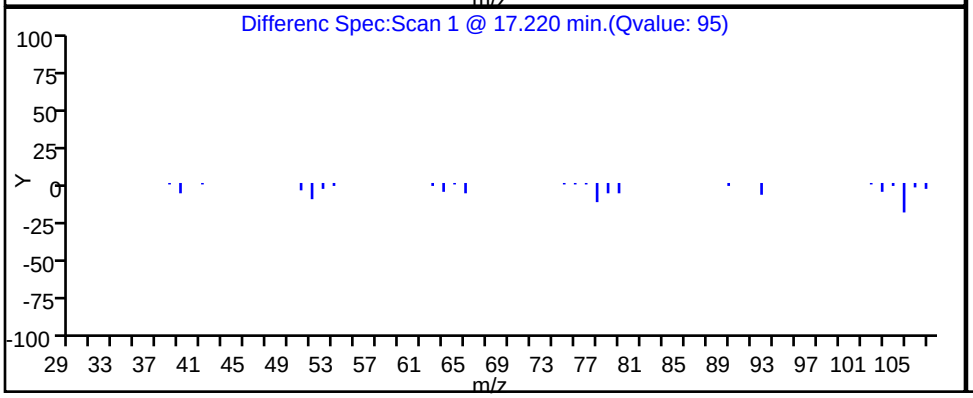


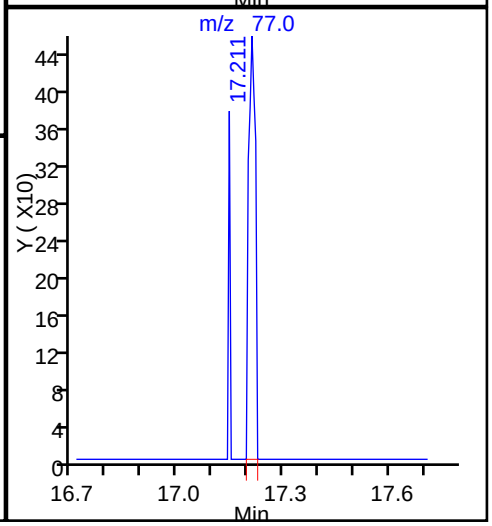












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: BUILDING-A-EFFLUENT Lab Sample ID: 140-5545-3

Matrix: Air Lab File ID: JG08P109.D

Analysis Method: TO 15 LL Date Collected: 08/04/2016 14:12

Sample wt/vol: 100(mL) Date Analyzed: 08/08/2016 23:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6126 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.24	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.51		0.40	0.075
67-66-3	Chloroform	119.38	0.47		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	37		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.69		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.7		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	29		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.20	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	0.96	J	1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.46		0.40	0.080
108-88-3	Toluene	92.14	0.76		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.69		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	17		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	4.1		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.84		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	3.7		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.77		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.69	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: BUILDING-A-EFFLUENT Lab Sample ID: 140-5545-3

Matrix: Air Lab File ID: JG08P109.D

Analysis Method: TO 15 LL Date Collected: 08/04/2016 14:12

Sample wt/vol: 100(mL) Date Analyzed: 08/08/2016 23:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6126 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.77	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.8		1.4	0.27
67-66-3	Chloroform	119.38	2.3		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	150		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	3.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	23		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	120		1.6	0.28
100-41-4	Ethylbenzene	106.17	0.85	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	3.3	J	3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	3.2		2.7	0.54
108-88-3	Toluene	92.14	2.9		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.7		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	95		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	22		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	4.1		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	18		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	3.8		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	3.0	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D
Lims ID: 140-5545-A-3
Client ID: BUILDING-A-EFFLUENT
Sample Type: Client
Inject. Date: 08-Aug-2016 23:47:30 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003264-020
Misc. Info.: 140-5545-a-3
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Aug-2016 10:23:58 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 09-Aug-2016 10:23:58

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.351	9.356	-0.005	93	186751	4.00	
* 2 1,4-Difluorobenzene	114	11.514	11.519	-0.005	96	827291	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.199	16.199	0.000	89	785268	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.824	17.824	0.000	88	471194	4.06	
6 Chlorodifluoromethane	67	3.923	3.918	0.005	93	2356	0.1016	
8 Dichlorodifluoromethane	85	3.988	3.988	0.000	99	28321	0.1380	
27 1,1-Dichloroethene	96	6.344	6.344	0.000	92	321164	5.81	
31 Methylene Chloride	84	6.715	6.715	0.000	96	9838	0.1917	
34 trans-1,2-Dichloroethene	96	7.554	7.560	-0.006	91	7642	0.1378	
37 1,1-Dichloroethane	63	7.996	7.995	0.001	100	128299	1.14	
42 cis-1,2-Dichloroethene	96	9.007	9.012	-0.005	98	406920	7.37	
44 Chloroform	83	9.357	9.362	-0.005	29	11762	0.0941	
47 1,1,1-Trichloroethane	97	10.406	10.411	-0.005	96	502517	3.48	
51 Benzene	78	10.992	10.997	-0.005	93	6940	0.0481	
59 Trichloroethene	130	12.218	12.224	-0.006	94	59594	0.8177	
68 Toluene	91	14.247	14.246	0.001	91	25384	0.1518	
76 Tetrachloroethene	129	15.376	15.376	0.000	93	7287	0.0930	
79 Ethylbenzene	91	16.527	16.527	0.000	96	7470	0.0392	
81 m-Xylene & p-Xylene	91	16.683	16.683	0.000	98	12921	0.0873	
85 o-Xylene	91	17.205	17.210	-0.005	94	7823	0.0492	
92 1,3,5-Trimethylbenzene	120	18.518	18.518	0.000	91	13927	0.1547	
96 1,2,4-Trimethylbenzene	105	18.948	18.948	0.000	98	112155	0.7360	
102 1,2,3-Trimethylbenzene	105	19.405	19.405	0.000	99	20270	0.1674	
S 126 Xylenes, Total	100				0		0.1365	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

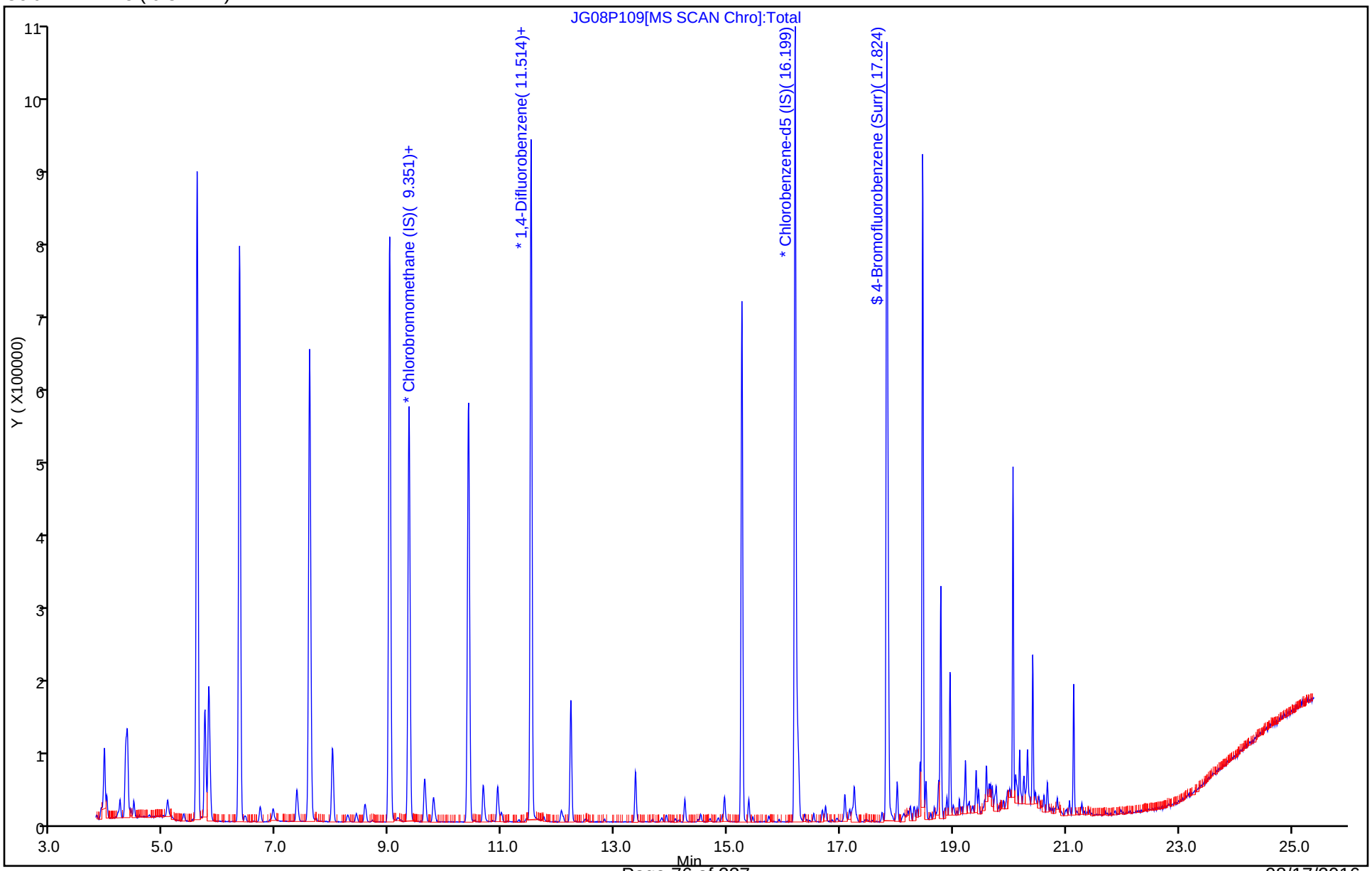
Report Date: 09-Aug-2016 10:23:59 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3	Worklist Smp#:	20
Client ID:	BUILDING-A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D				
Lims ID:	140-5545-A-3				
Client ID:	BUILDING-A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	08-Aug-2016 23:47:30	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003264-020				
Misc. Info.:	140-5545-a-3				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Aug-2016 10:23:58	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK027				

First Level Reviewer: tajh Date: 09-Aug-2016 10:23:58

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.06	101.60

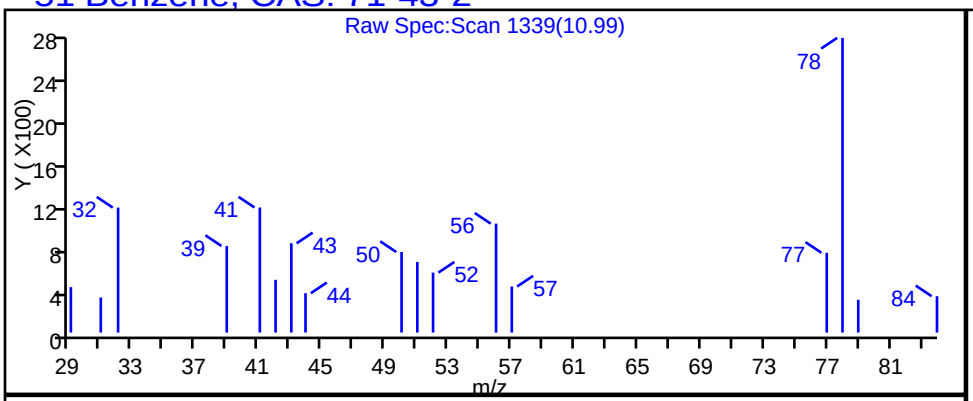
Report Date: 09-Aug-2016 10:23:59 Chrom Revision: 2.2 18-Jul-2016 15:30:42

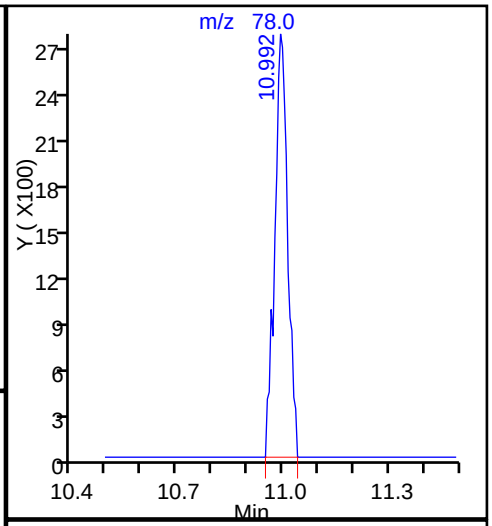
TestAmerica Knoxville

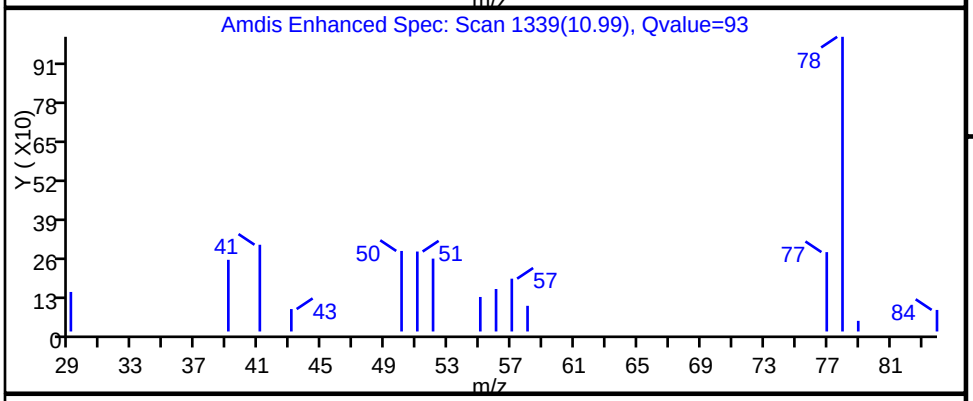
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

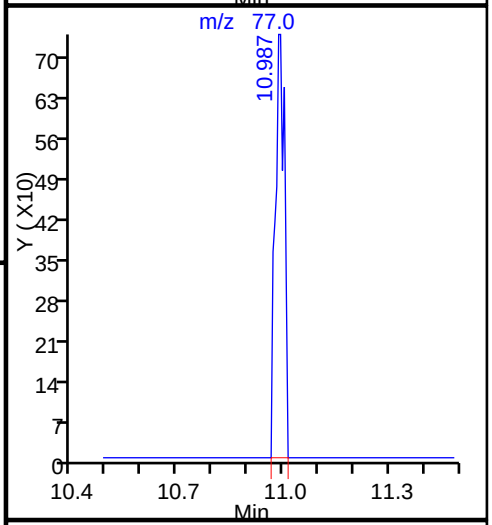
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

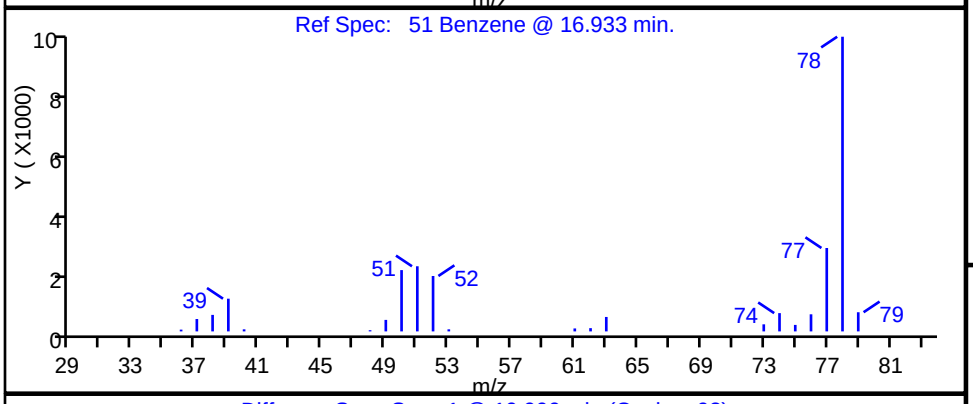
51 Benzene, CAS: 71-43-2

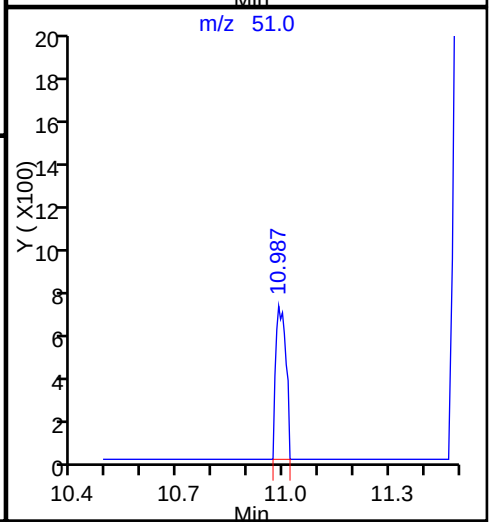


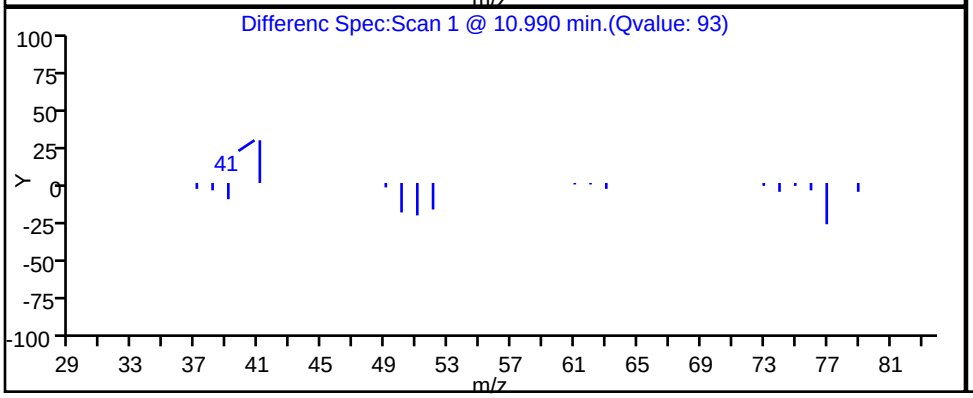












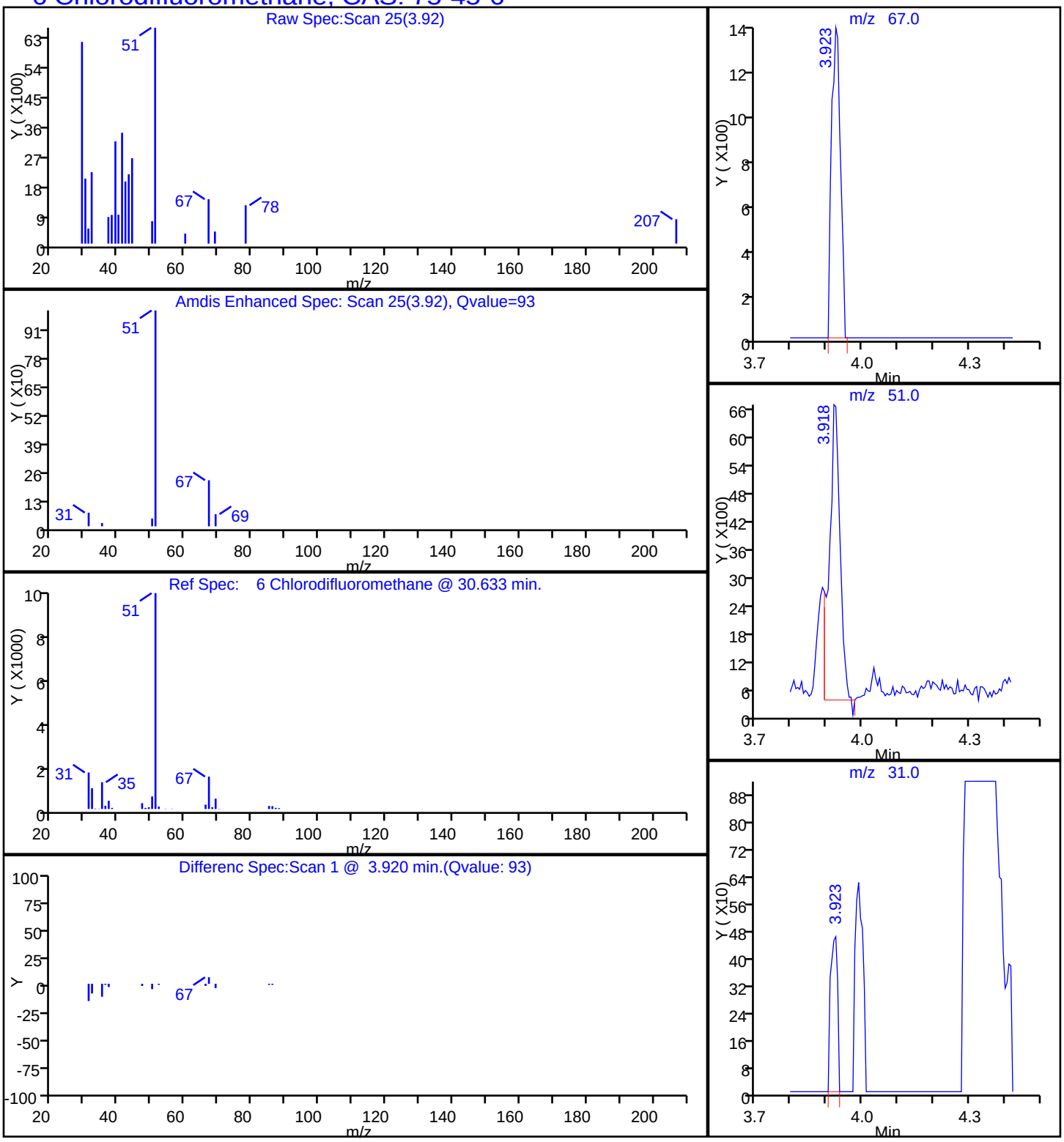
Report Date: 09-Aug-2016 10:23:59 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



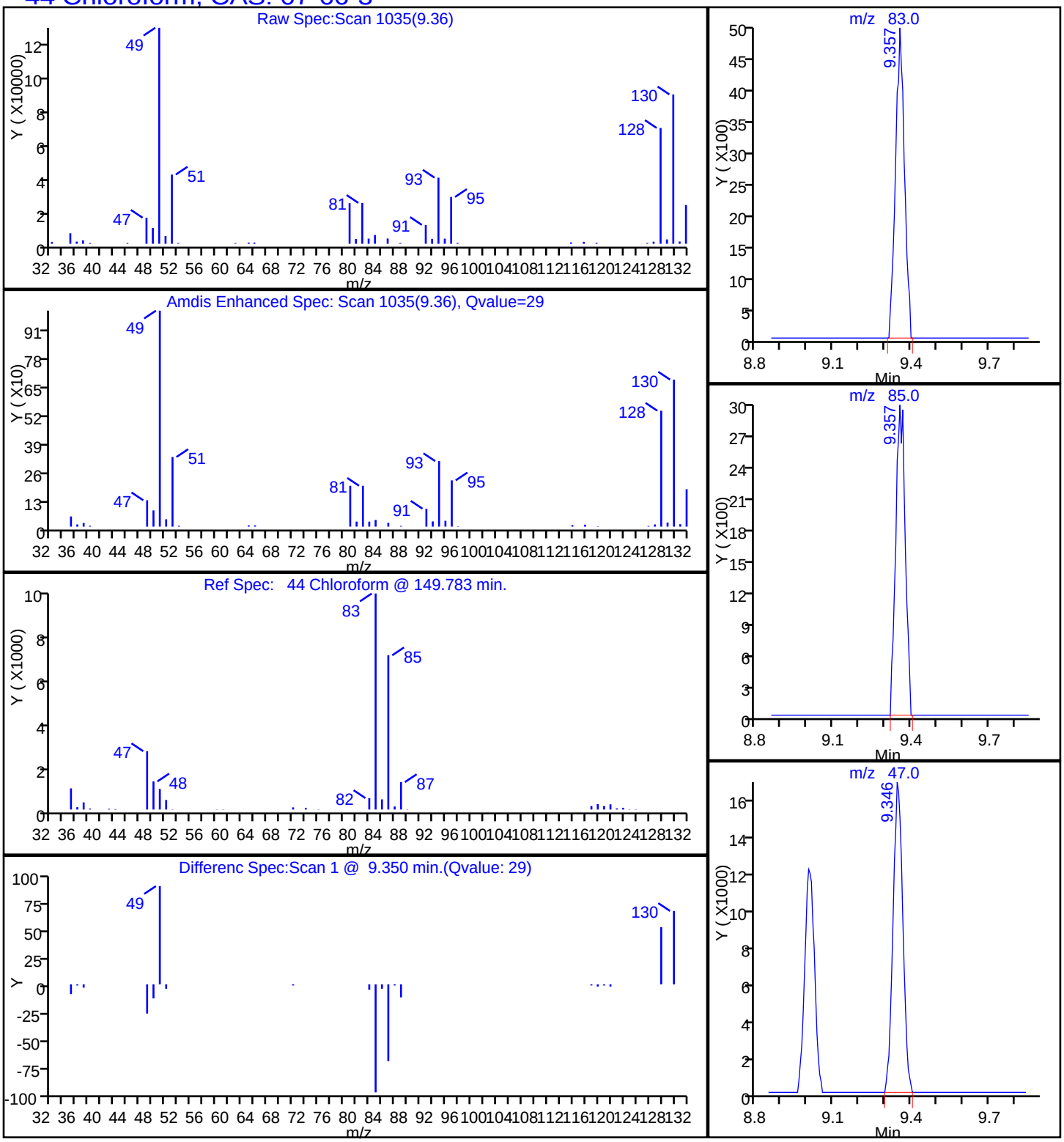
Report Date: 09-Aug-2016 10:23:59 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

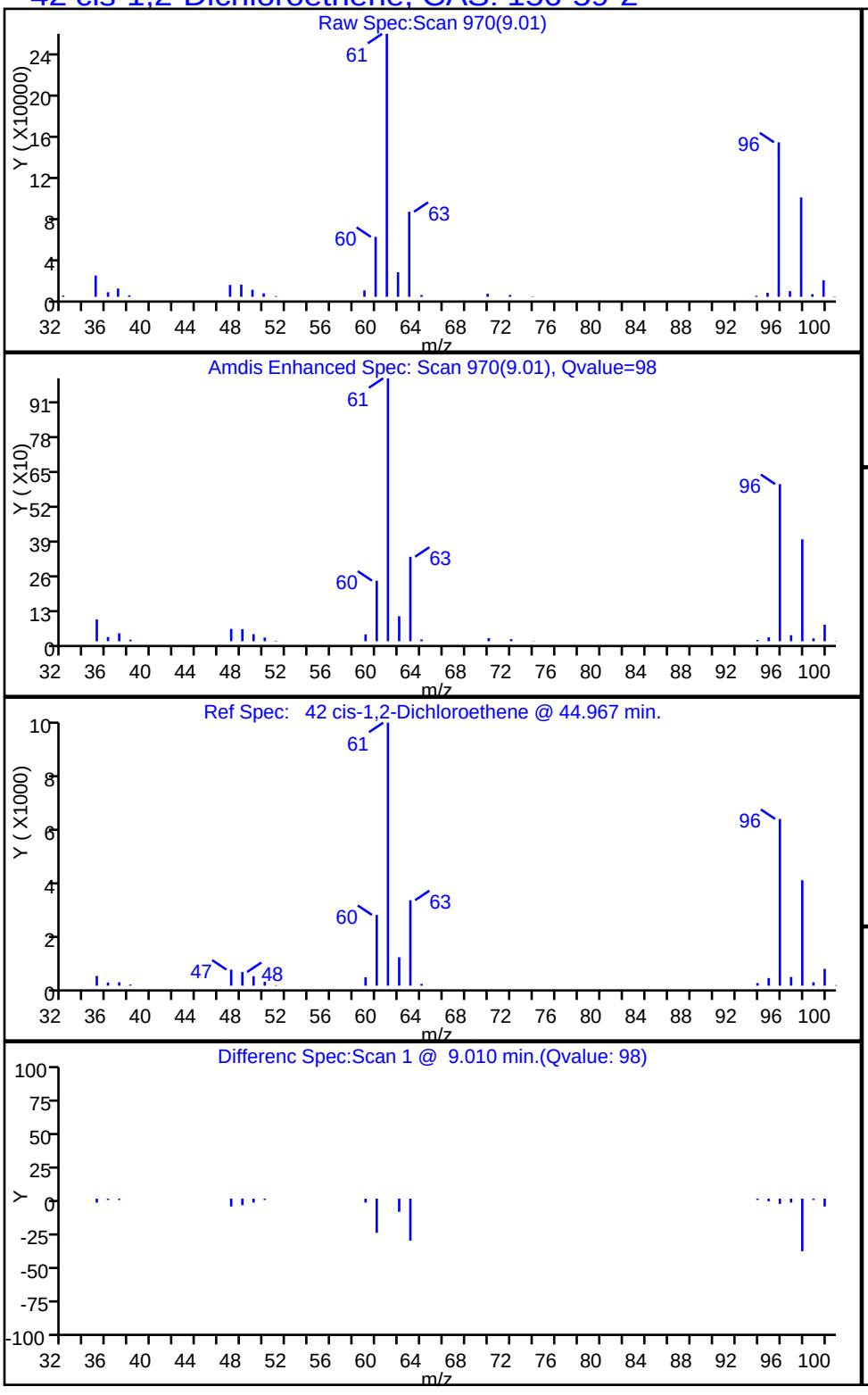
44 Chloroform, CAS: 67-66-3

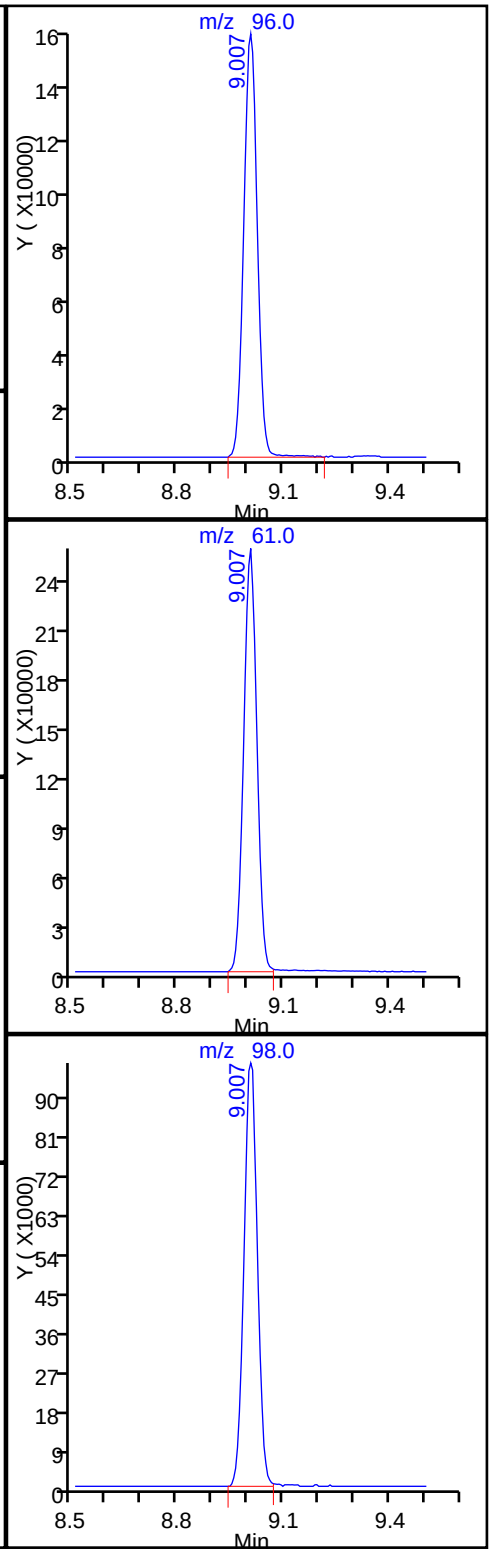


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D				
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

42 cis-1,2-Dichloroethene, CAS: 156-59-2





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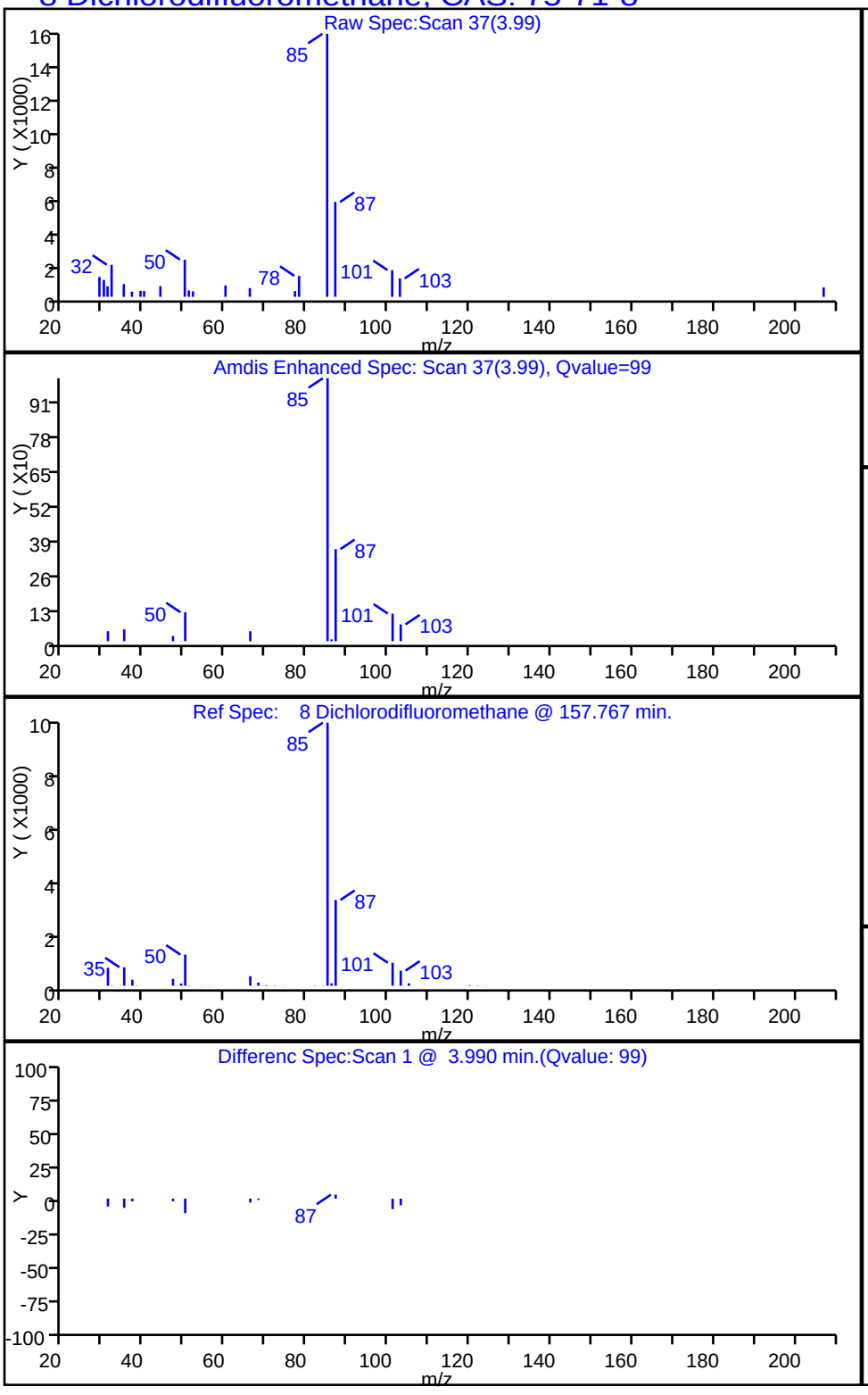
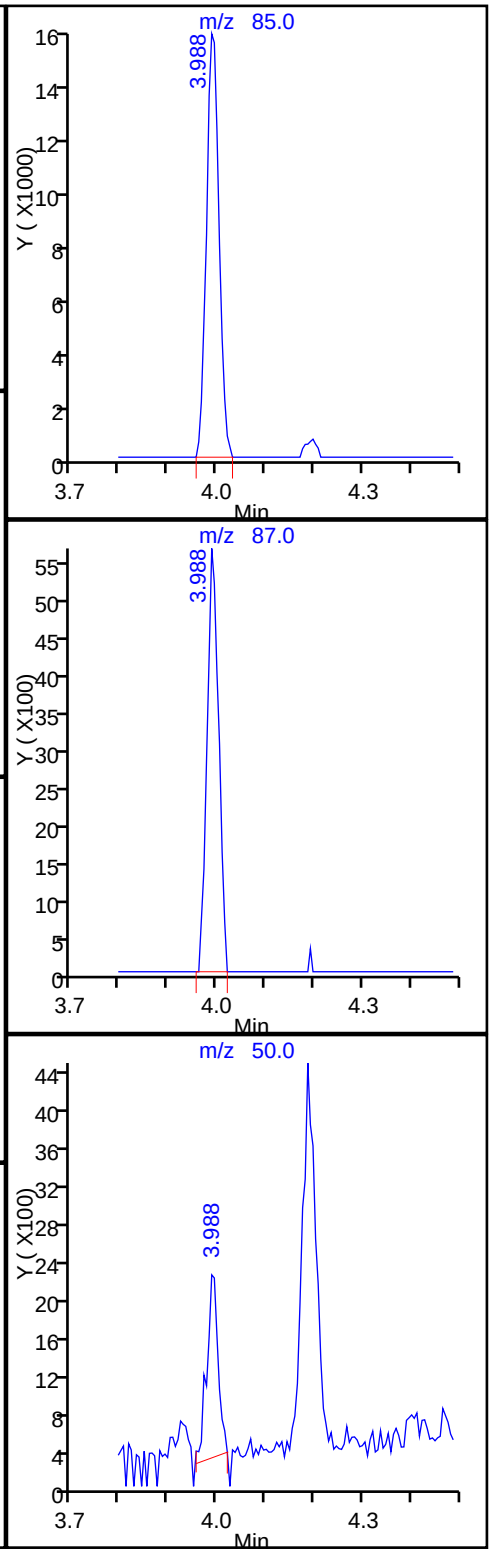
Injection Date: 08-Aug-2016 23:47:30 Instrument ID: MJ
Lims ID: 140-5545-A-3 Lab Sample ID: 140-5545-3
Client ID: BUILDING-A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8





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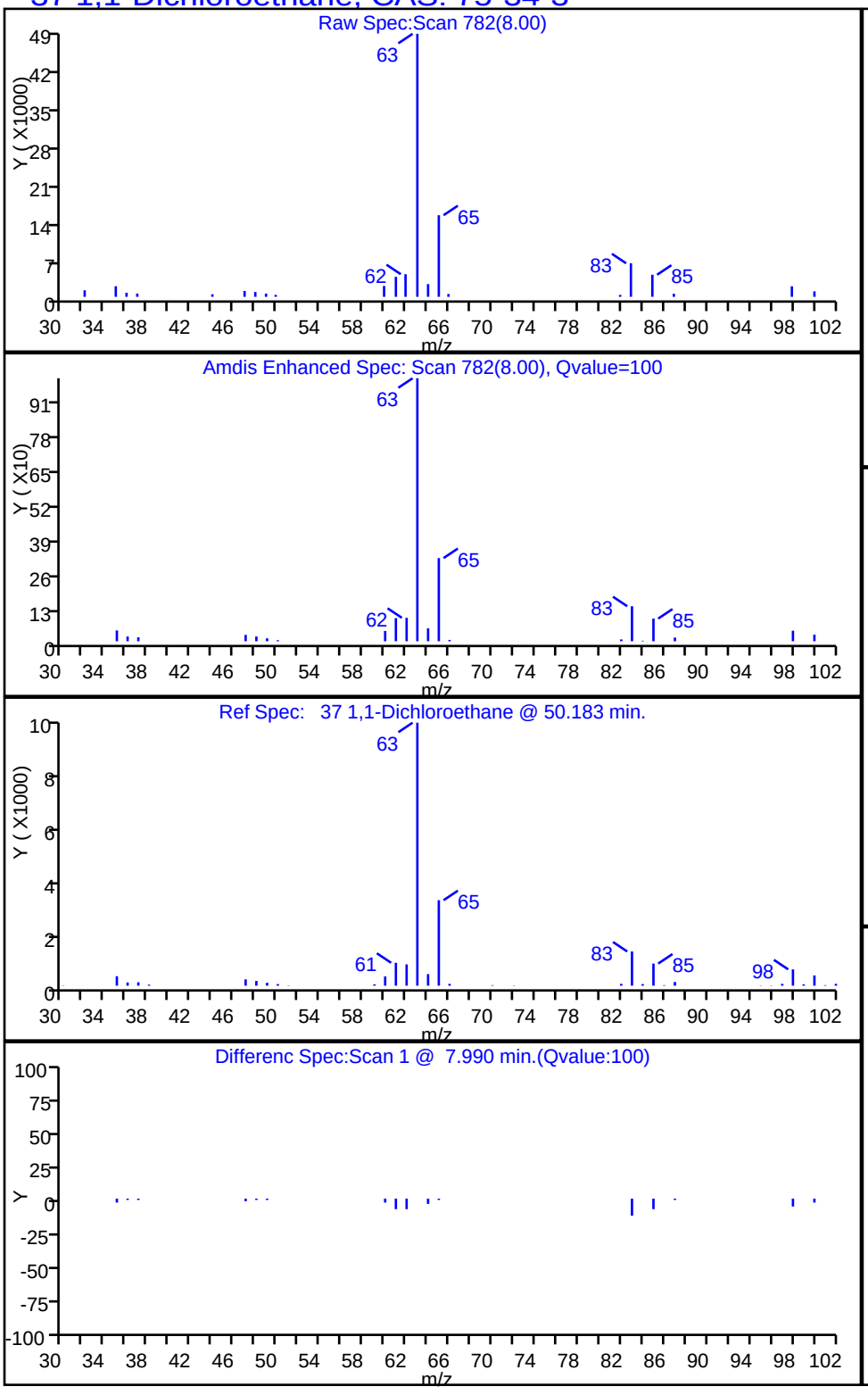
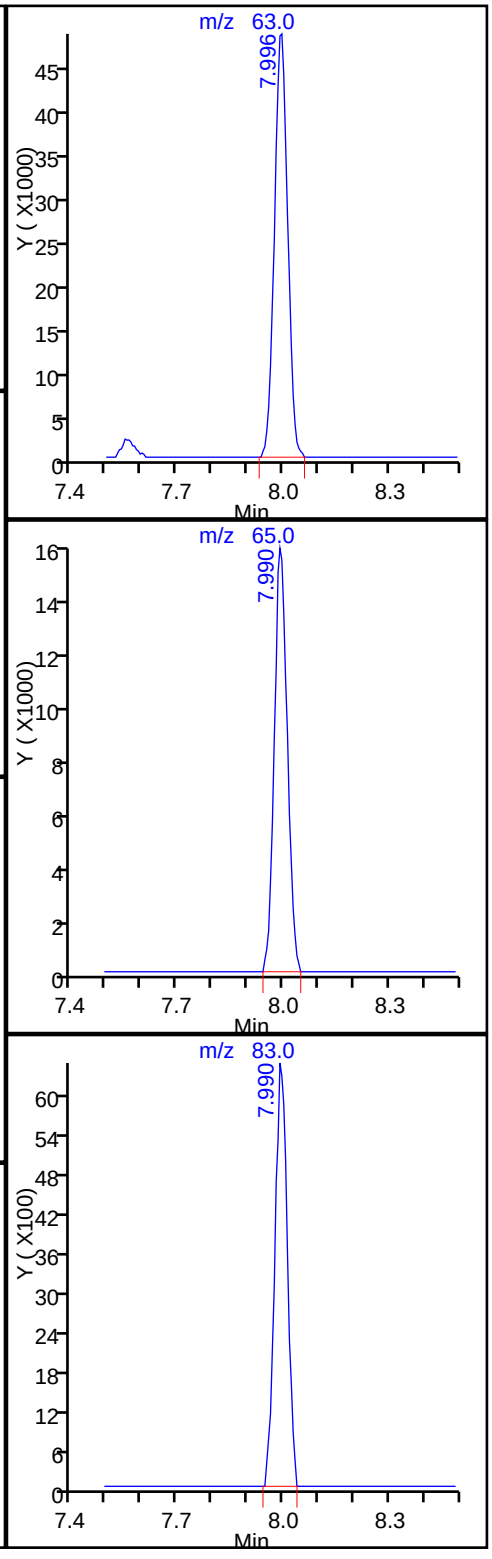
Injection Date: 08-Aug-2016 23:47:30 Instrument ID: MJ
Lims ID: 140-5545-A-3 Lab Sample ID: 140-5545-3
Client ID: BUILDING-A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

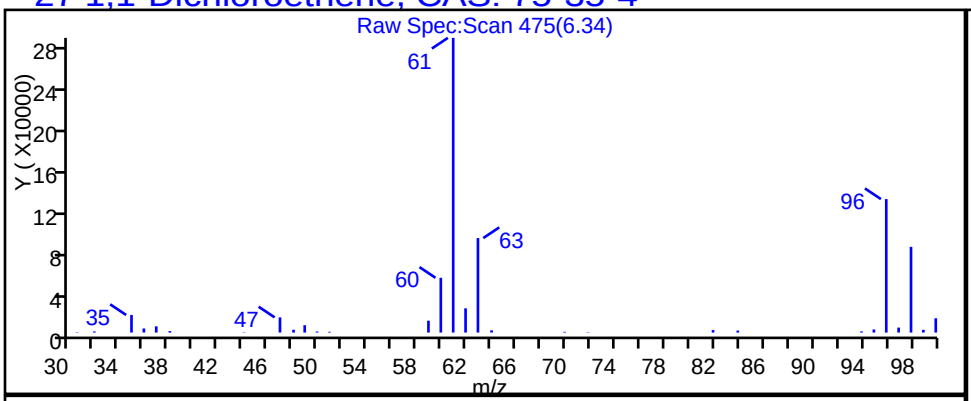


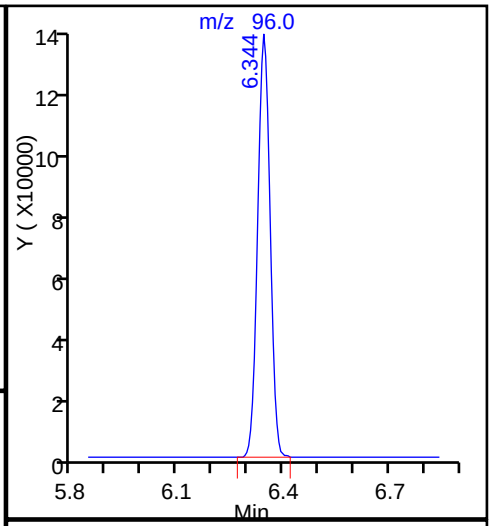


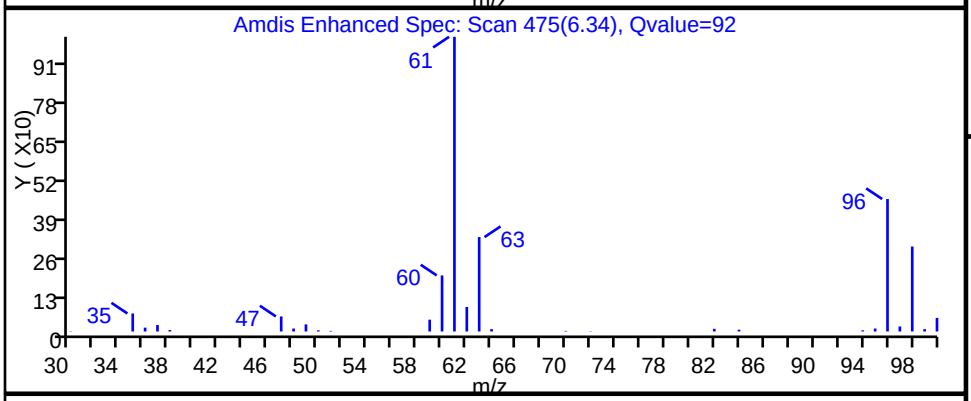
TestAmerica Knoxville

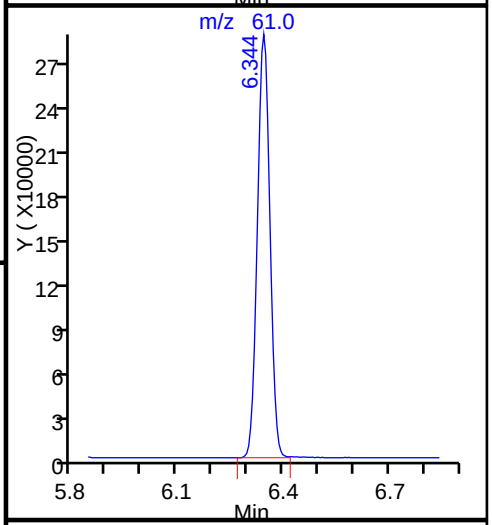
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D				
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

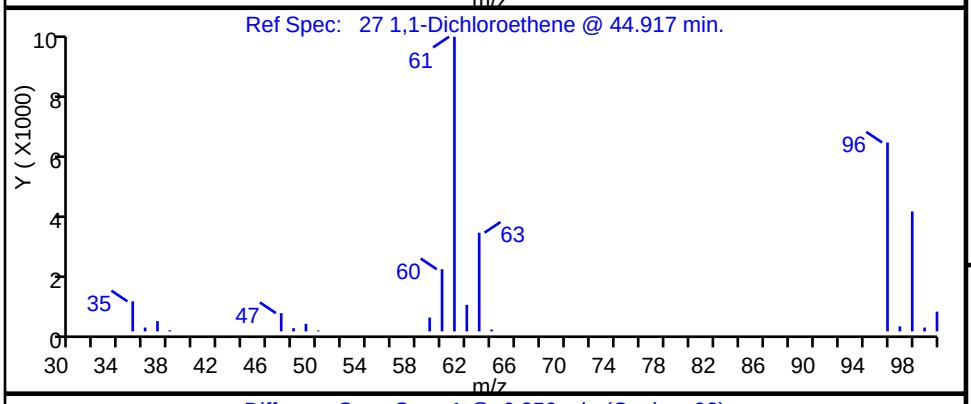
27 1,1-Dichloroethene, CAS: 75-35-4

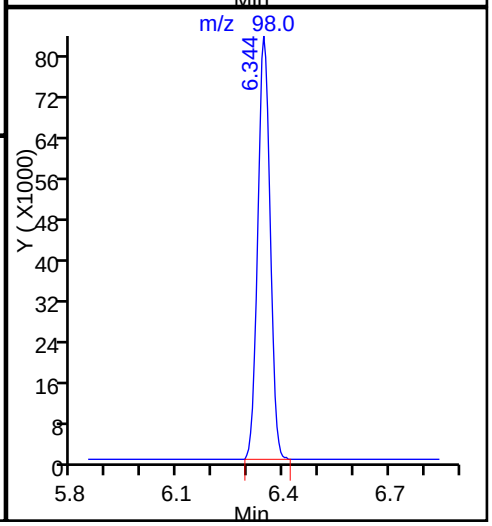


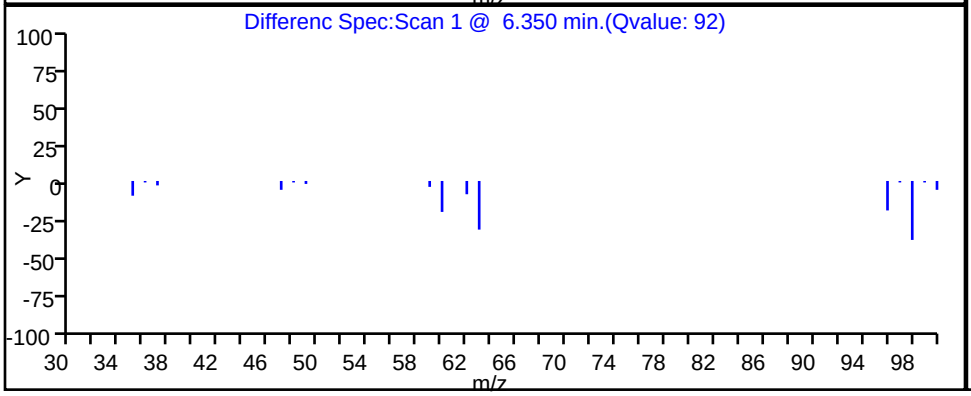








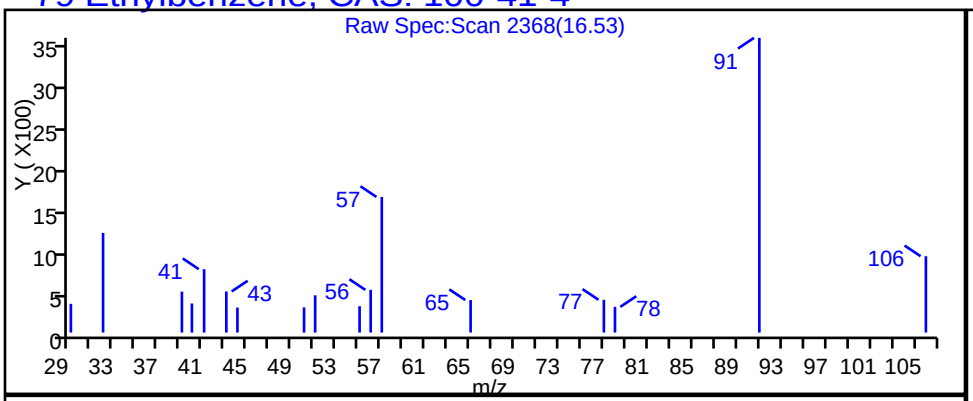


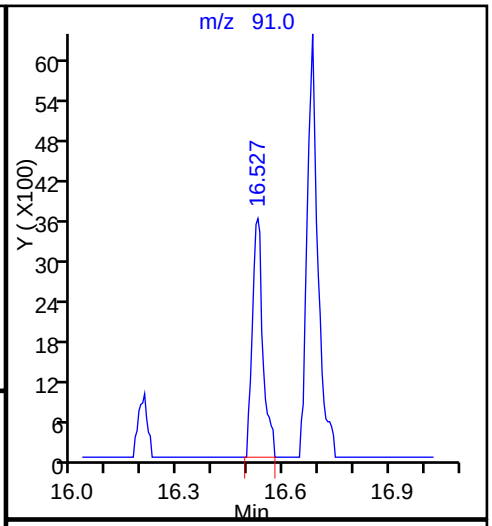


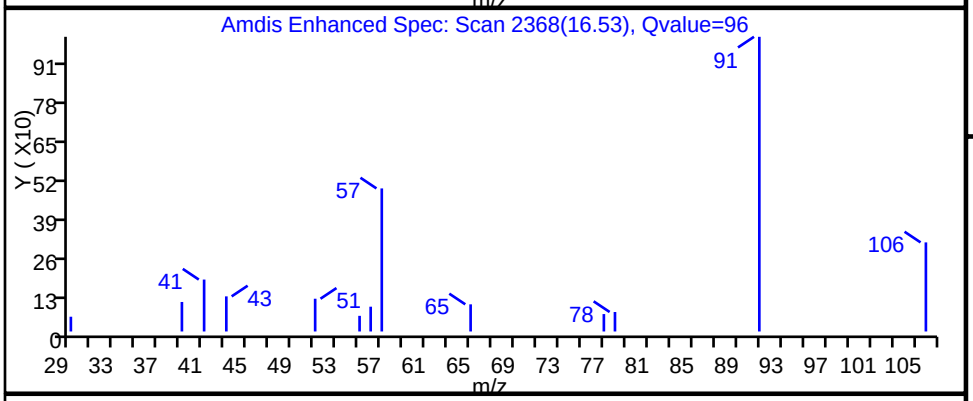
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

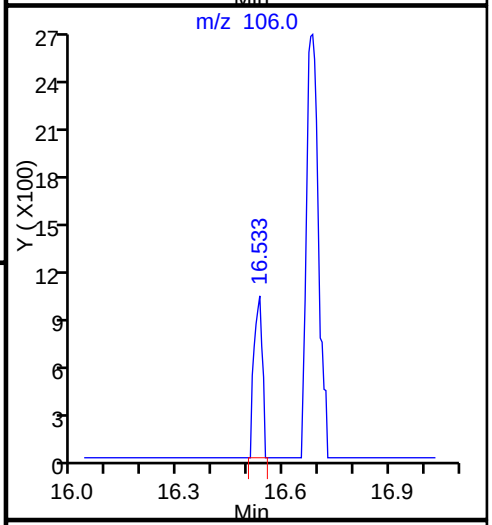
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

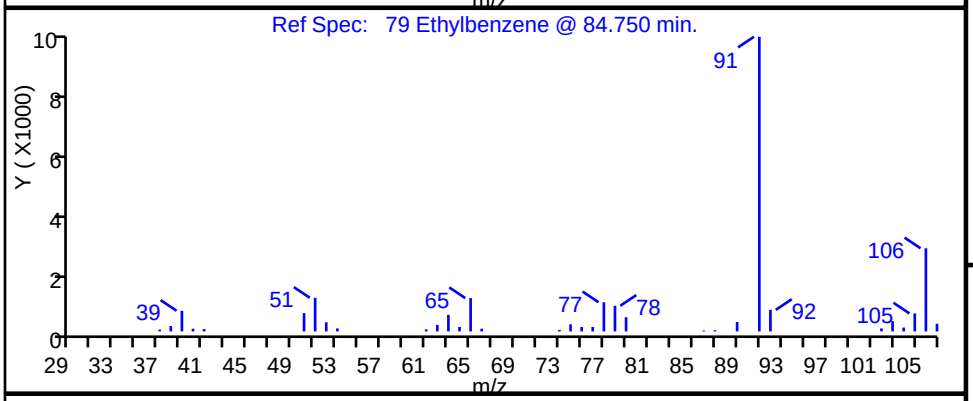
79 Ethylbenzene, CAS: 100-41-4

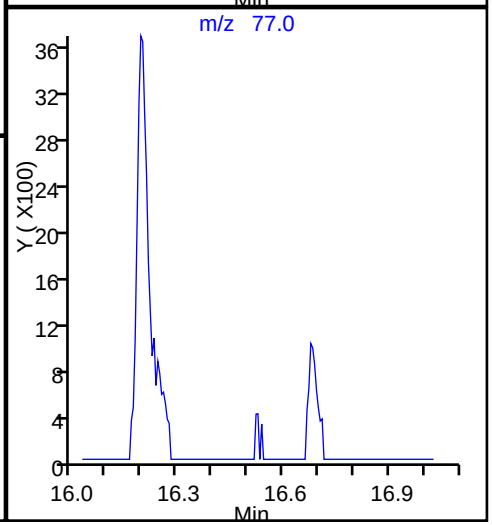


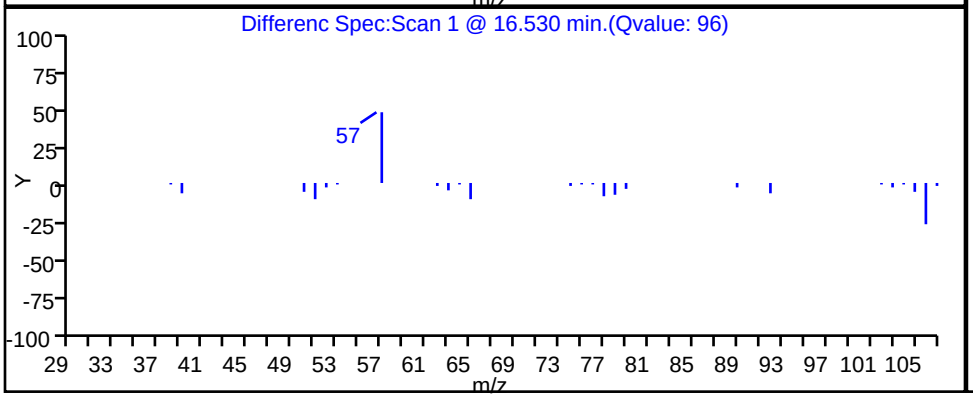








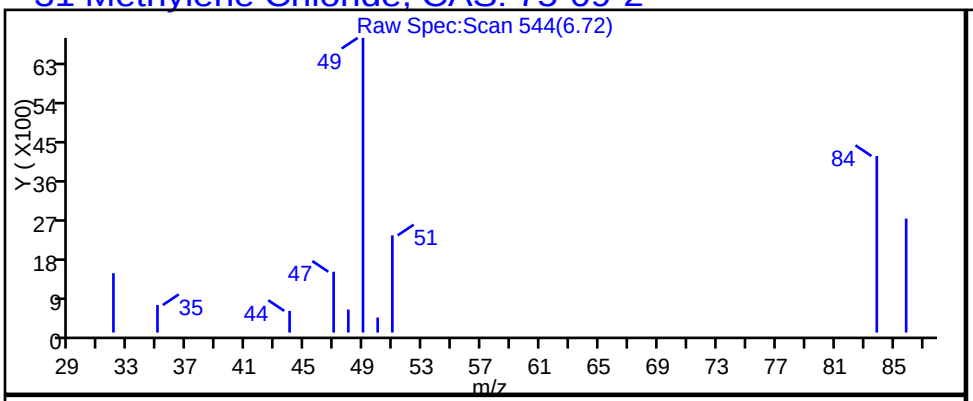


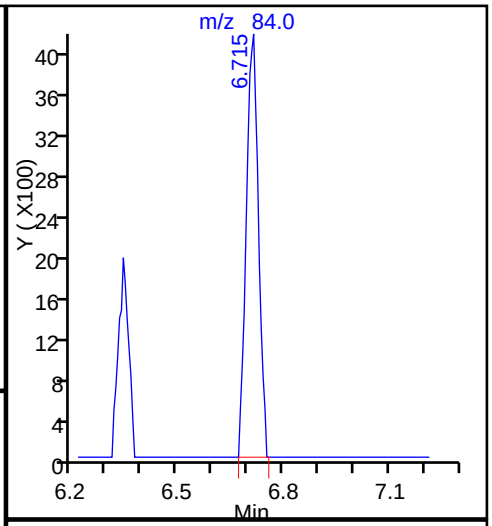


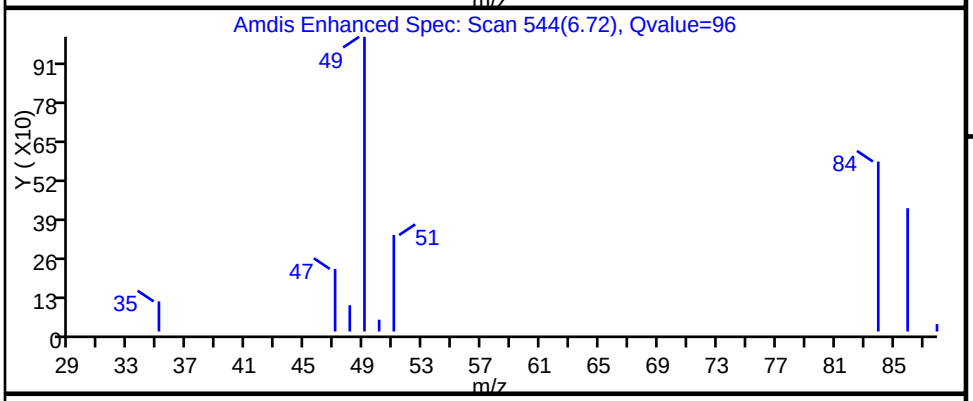
TestAmerica Knoxville

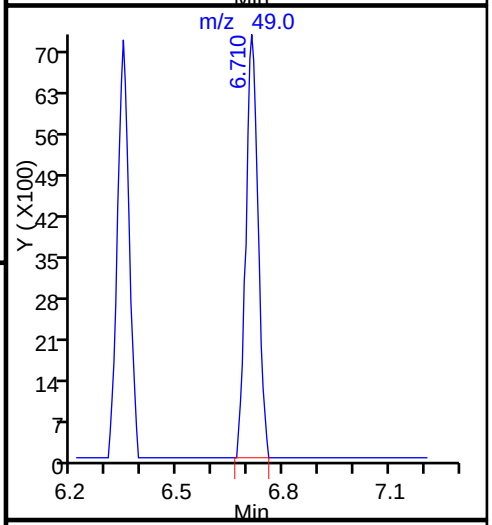
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D				
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

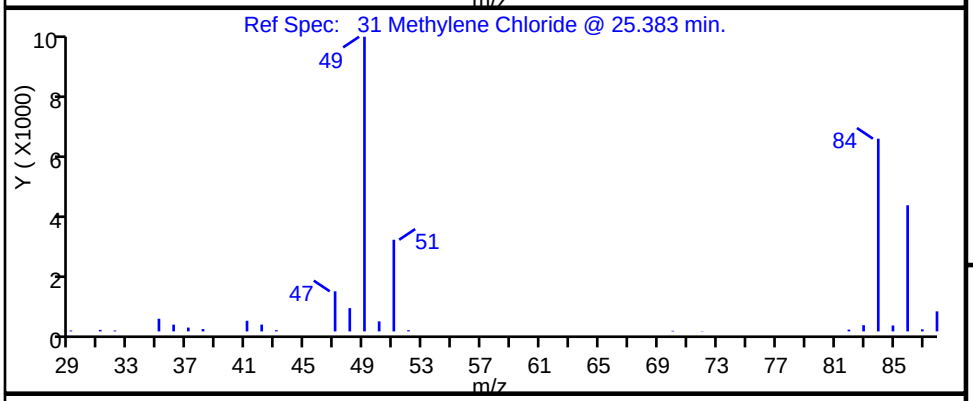
31 Methylene Chloride, CAS: 75-09-2

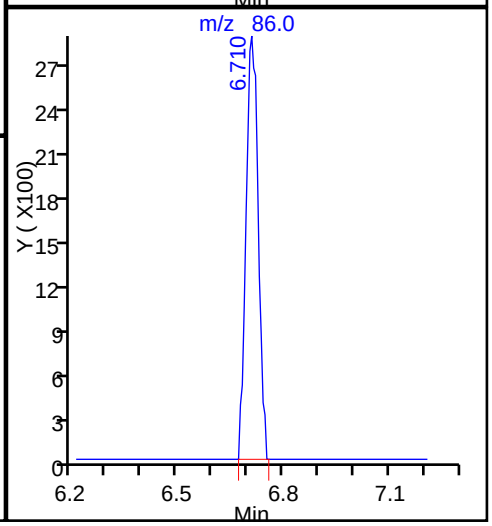


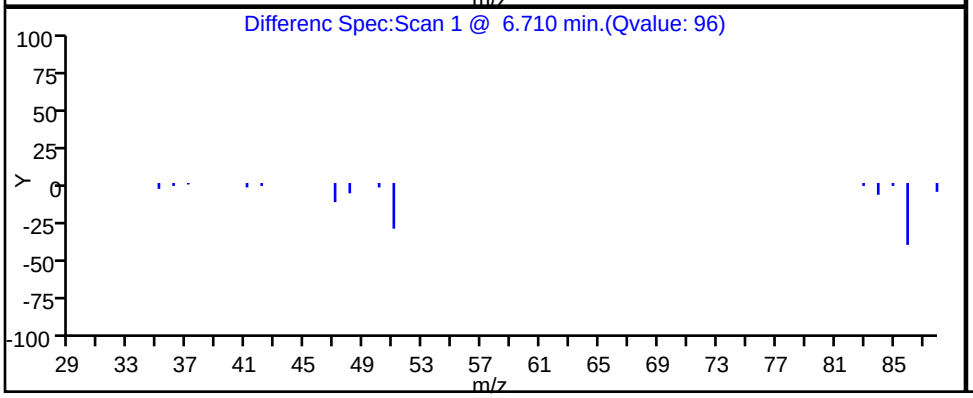












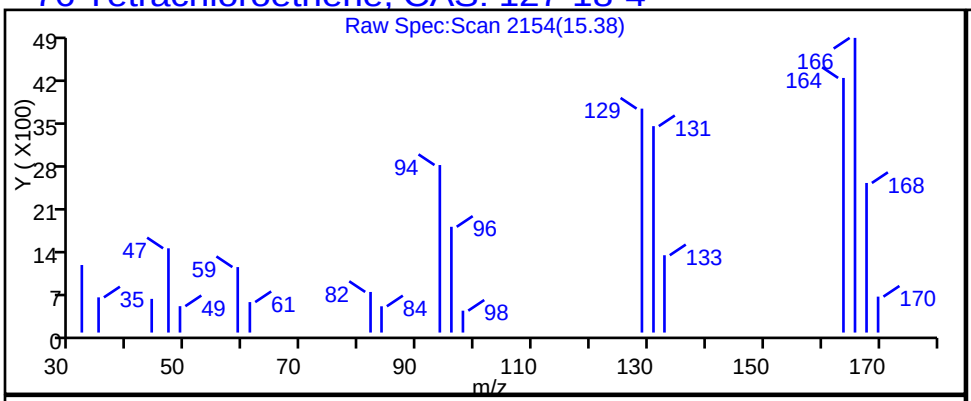
Report Date: 09-Aug-2016 10:23:59 Chrom Revision: 2.2 18-Jul-2016 15:30:42

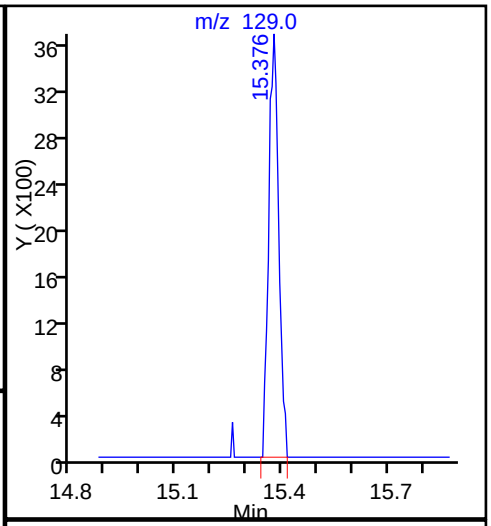
TestAmerica Knoxville

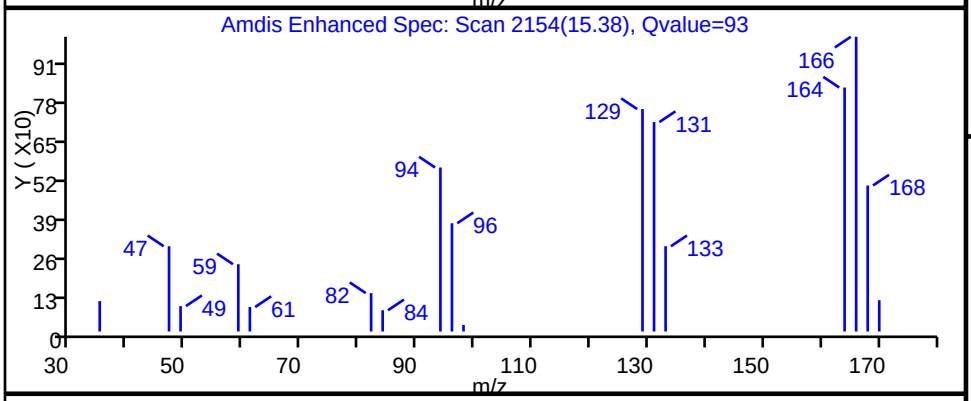
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

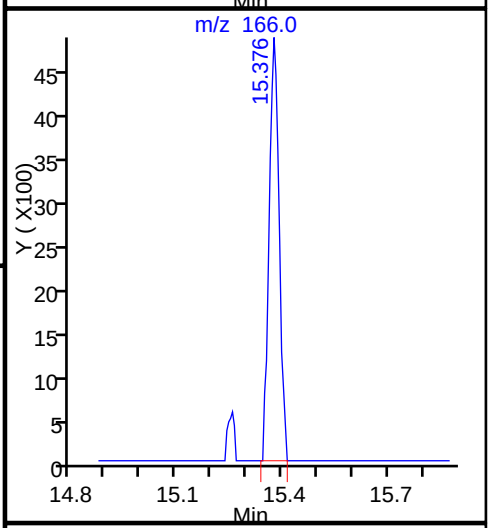
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

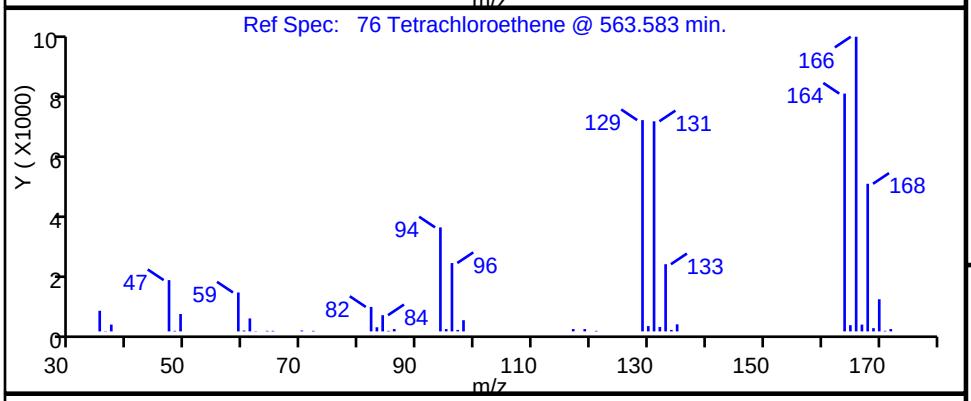
76 Tetrachloroethene, CAS: 127-18-4

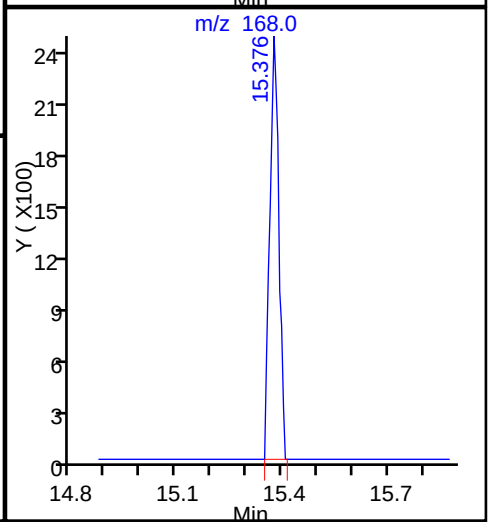


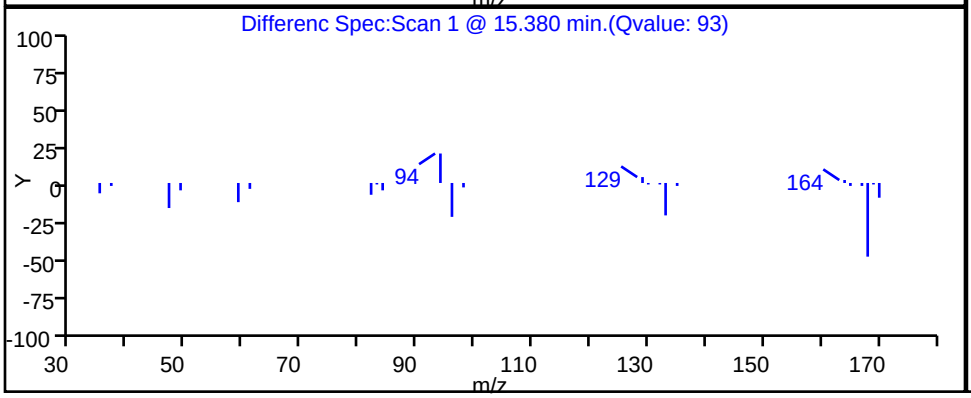








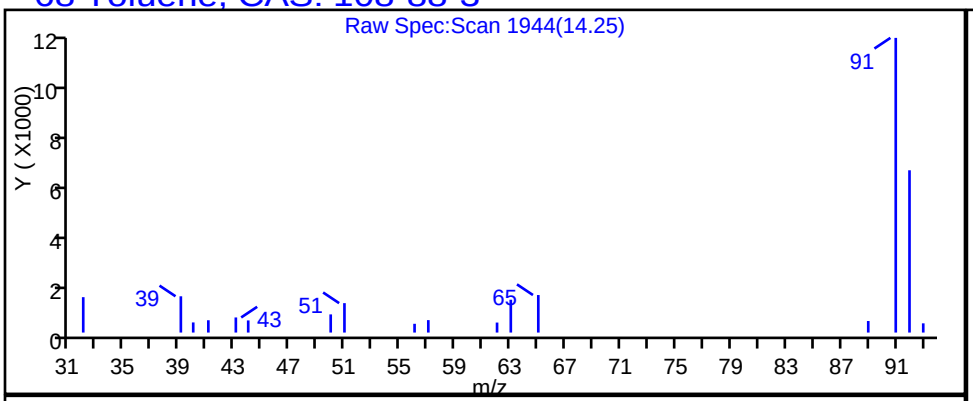


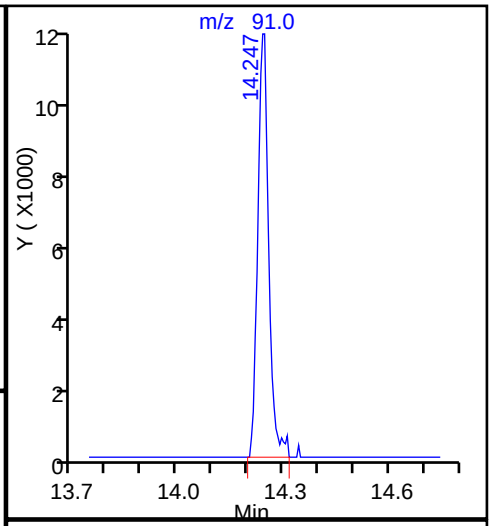


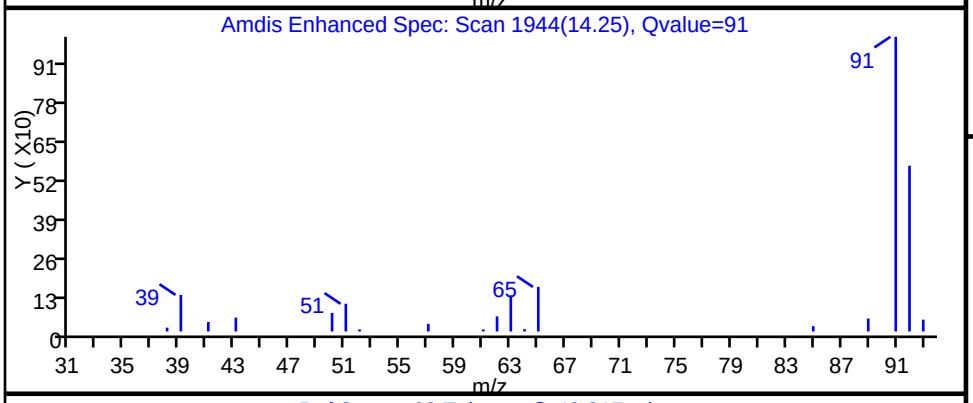
TestAmerica Knoxville

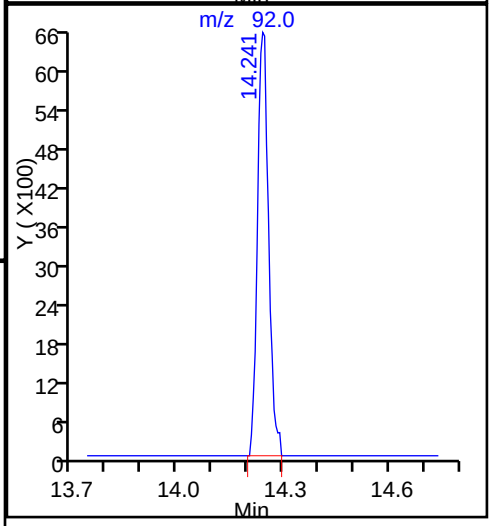
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D				
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

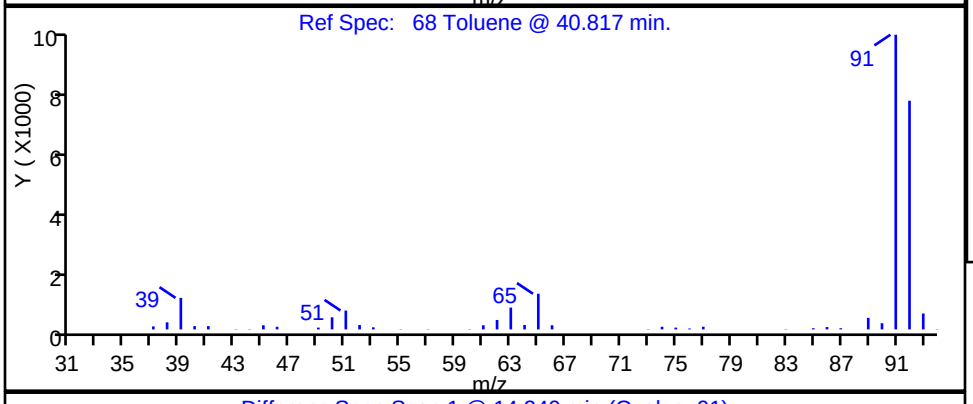
68 Toluene, CAS: 108-88-3

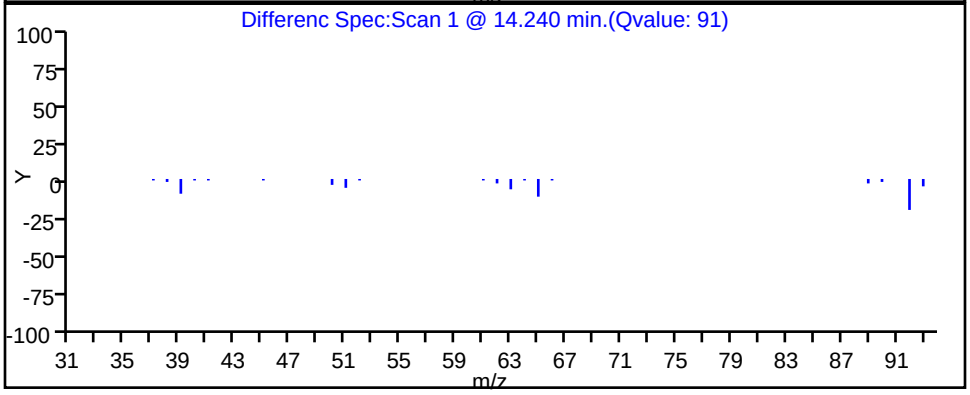






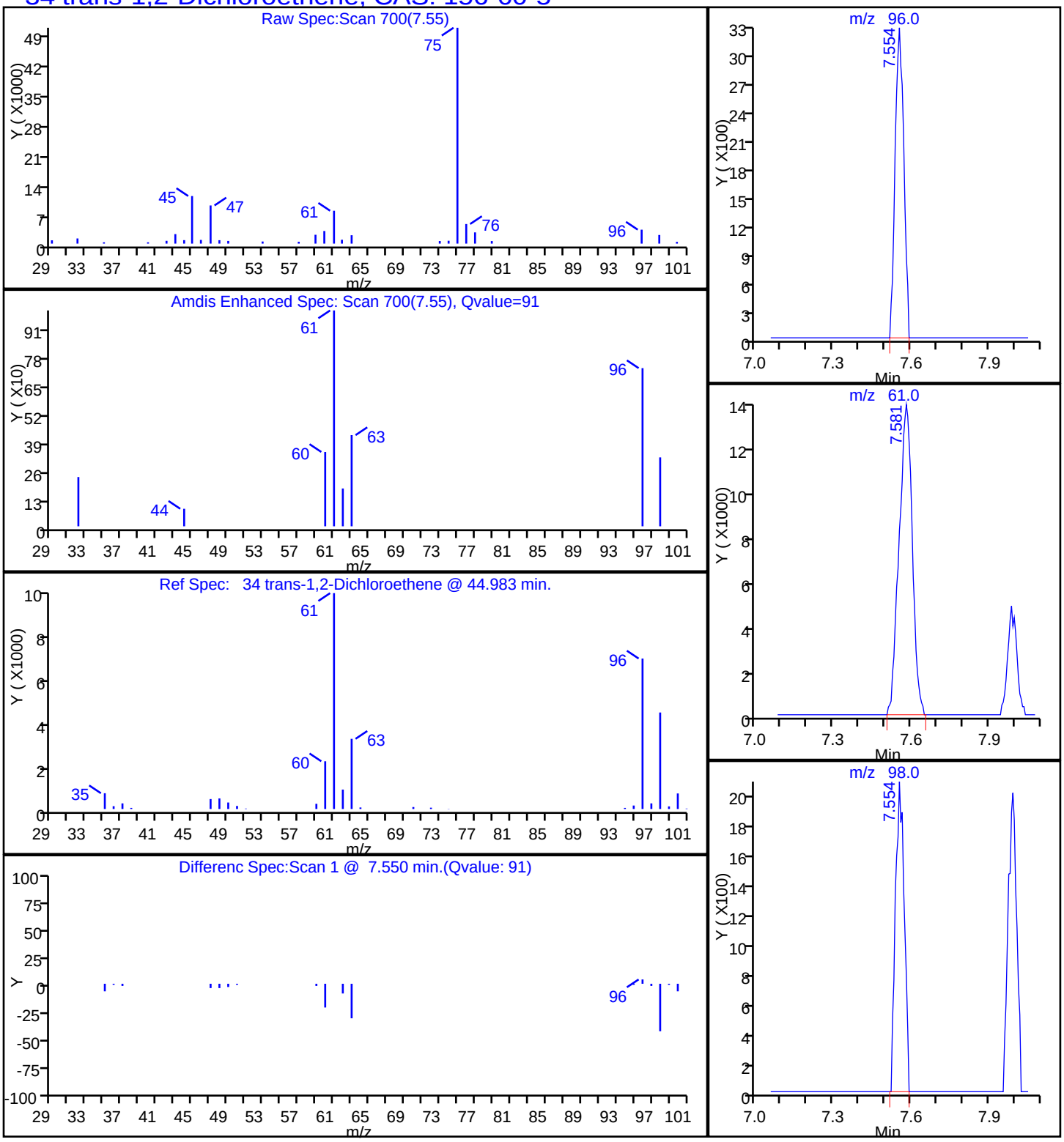






Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D
Injection Date: 08-Aug-2016 23:47:30 Instrument ID: MJ
Lims ID: 140-5545-A-3 Lab Sample ID: 140-5545-3
Client ID: BUILDING-A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

34 trans-1,2-Dichloroethene, CAS: 156-60-5



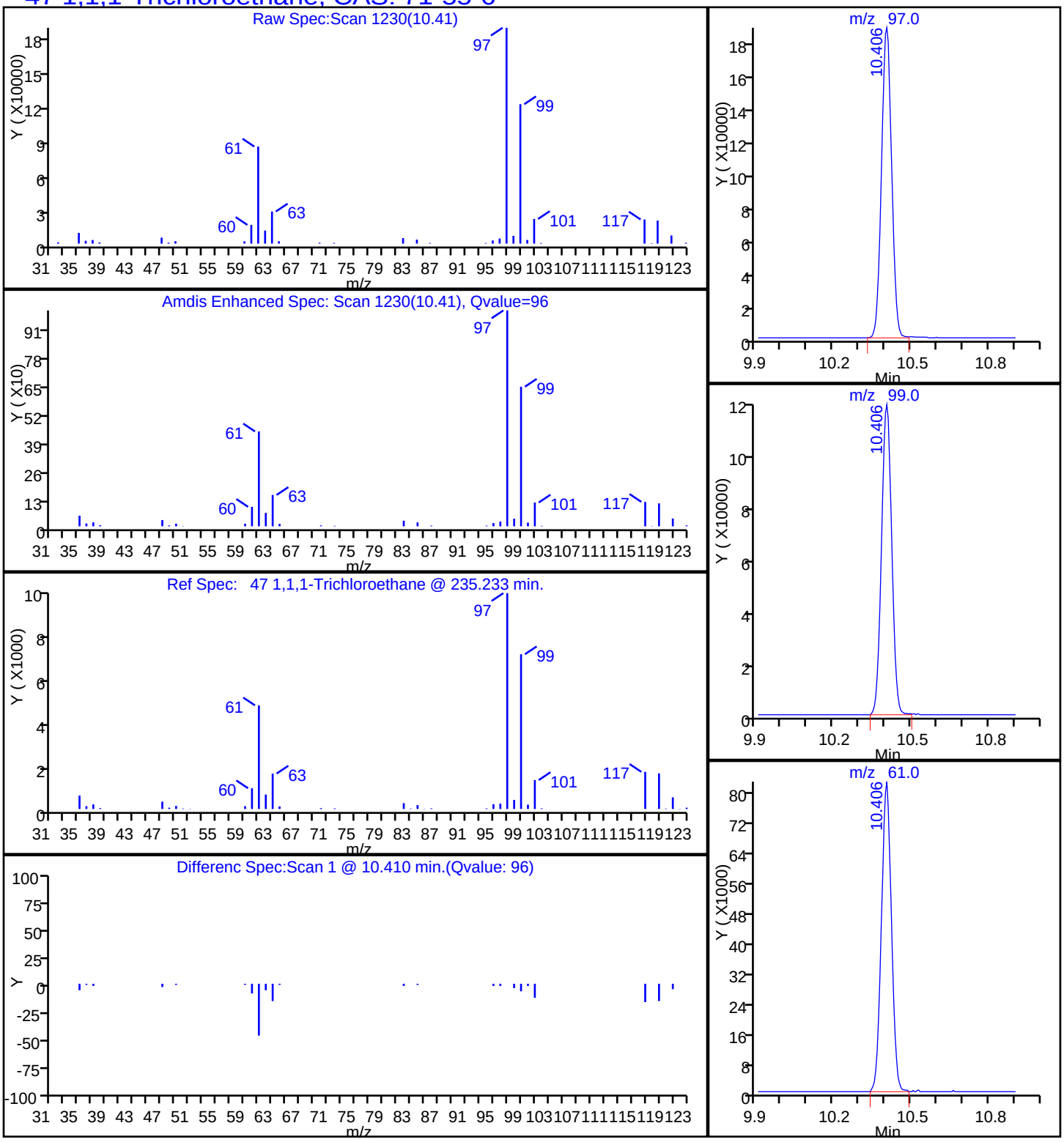
Report Date: 09-Aug-2016 10:23:59 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



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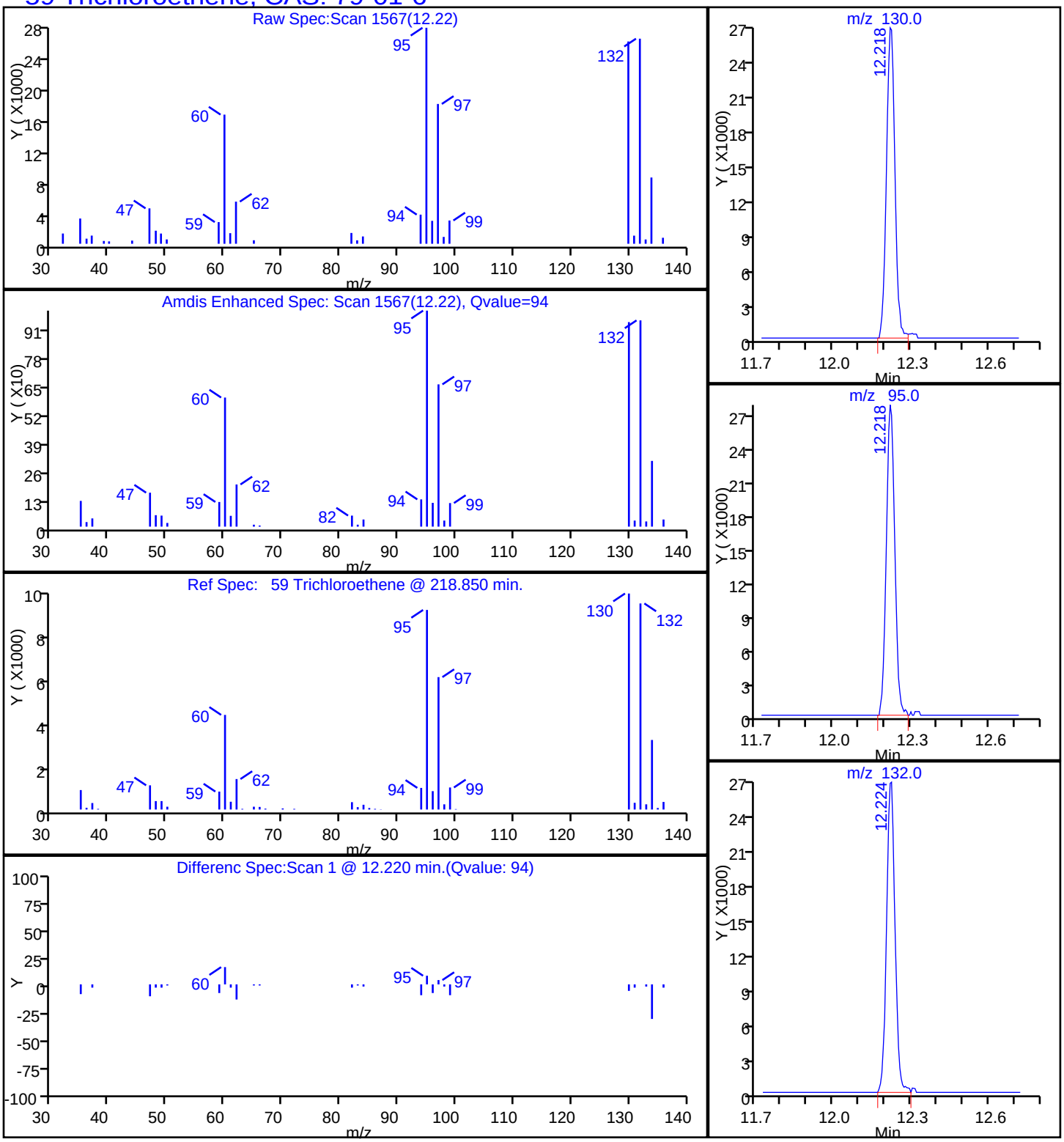
Injection Date: 08-Aug-2016 23:47:30 Instrument ID: MJ
Lims ID: 140-5545-A-3 Lab Sample ID: 140-5545-3
Client ID: BUILDING-A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

59 Trichloroethene, CAS: 79-01-6



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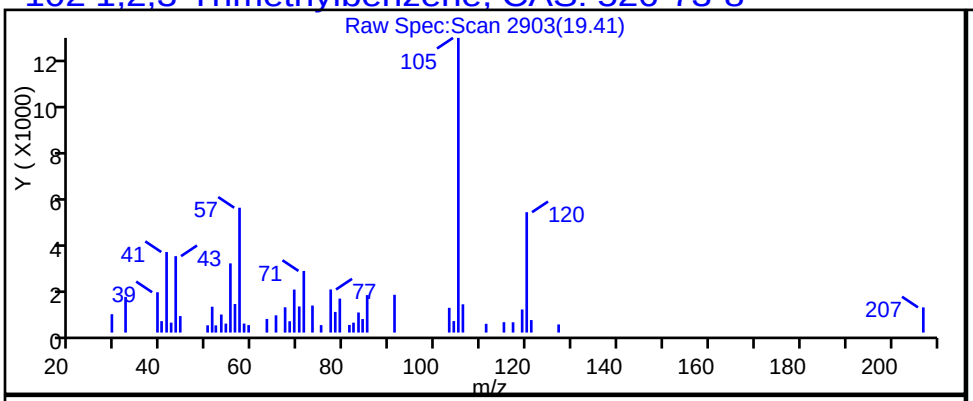
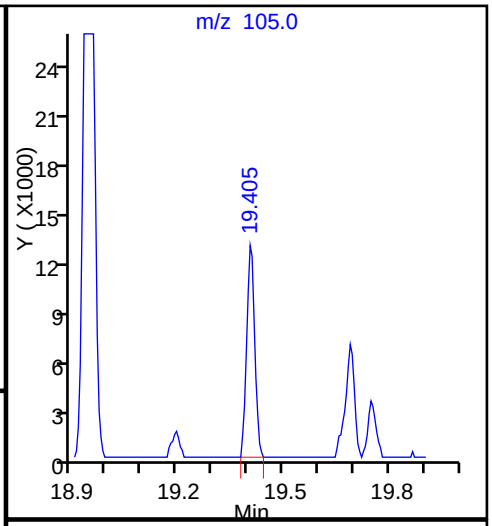
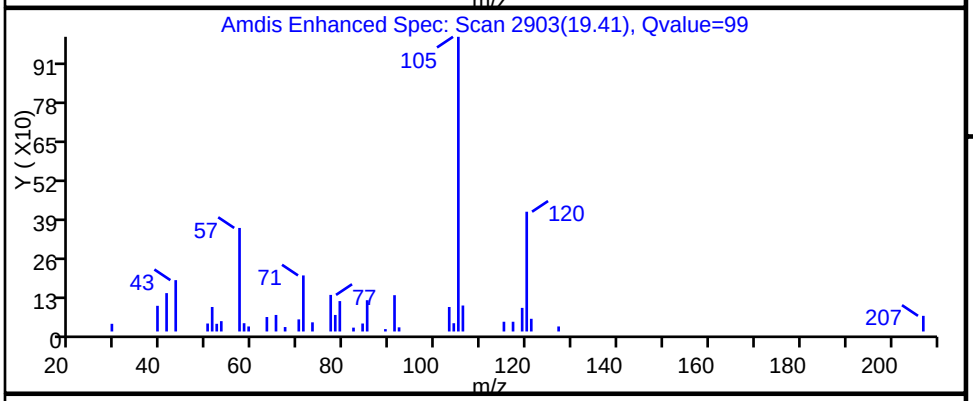
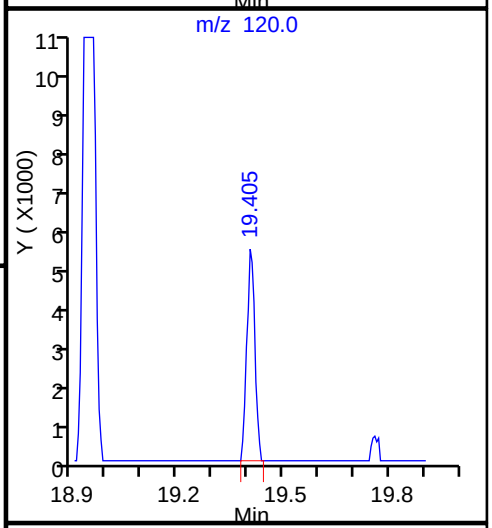
Injection Date: 08-Aug-2016 23:47:30 Instrument ID: MJ
Lims ID: 140-5545-A-3 Lab Sample ID: 140-5545-3
Client ID: BUILDING-A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

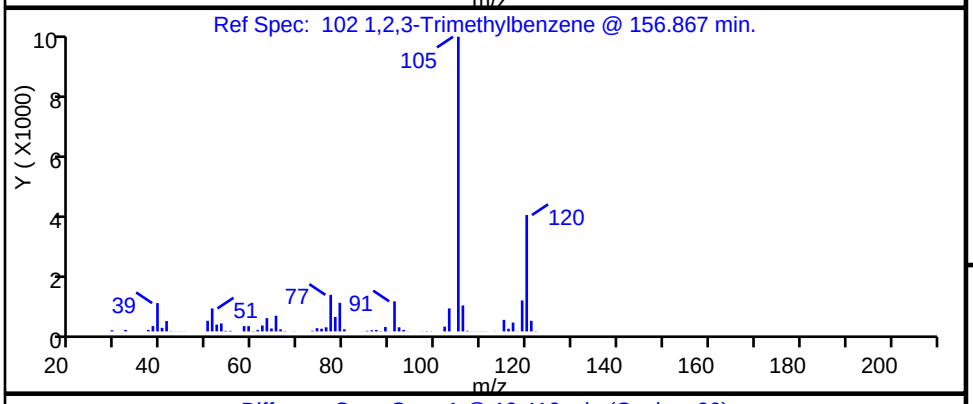
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

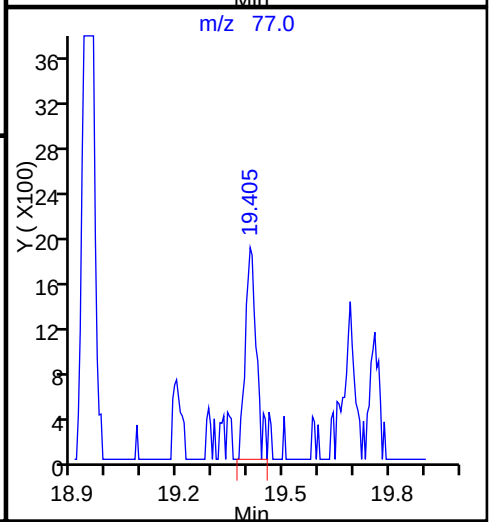


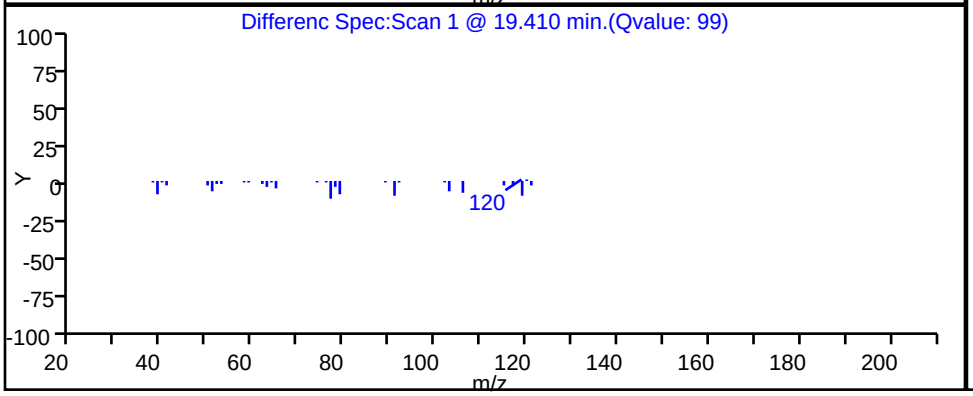








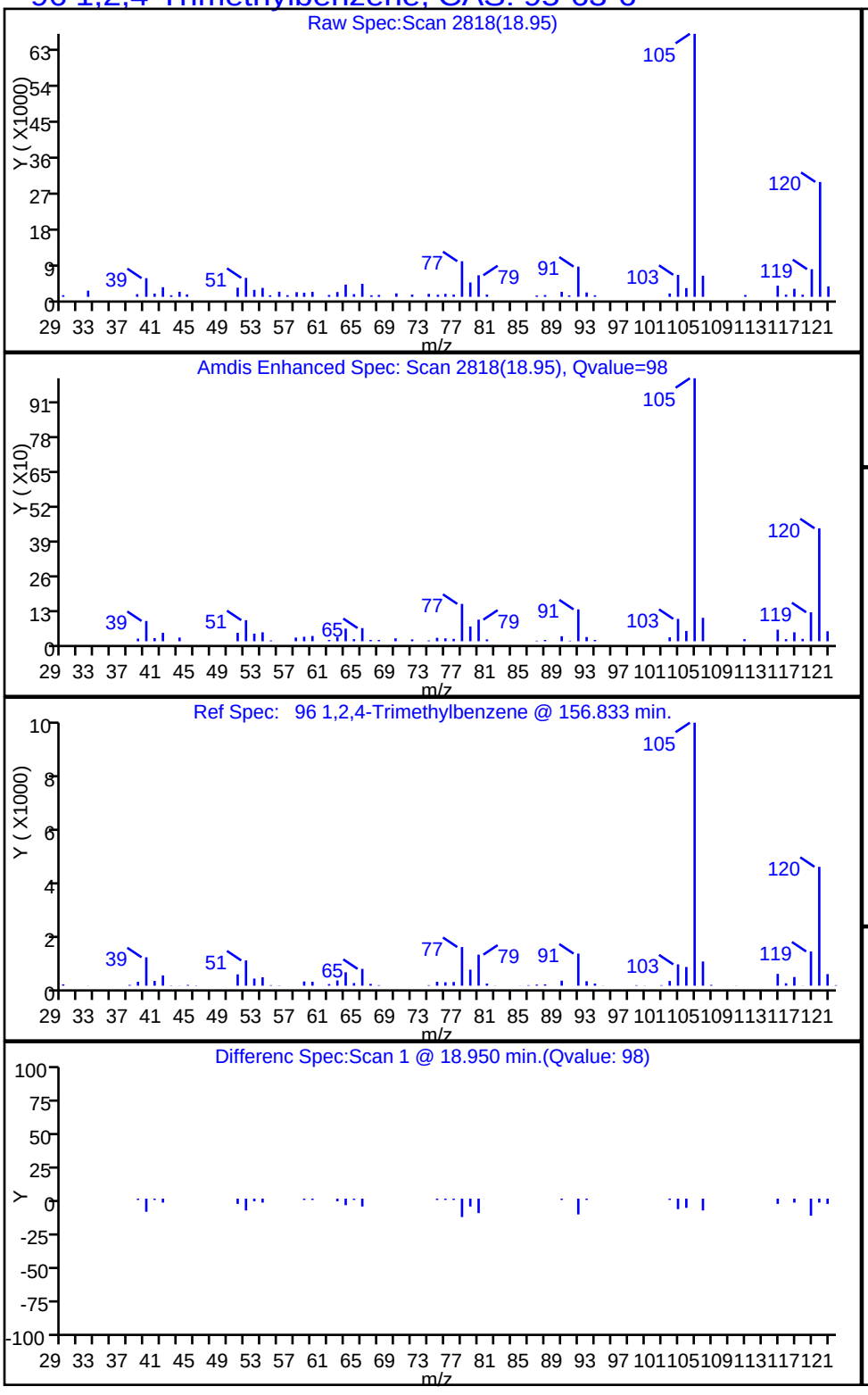


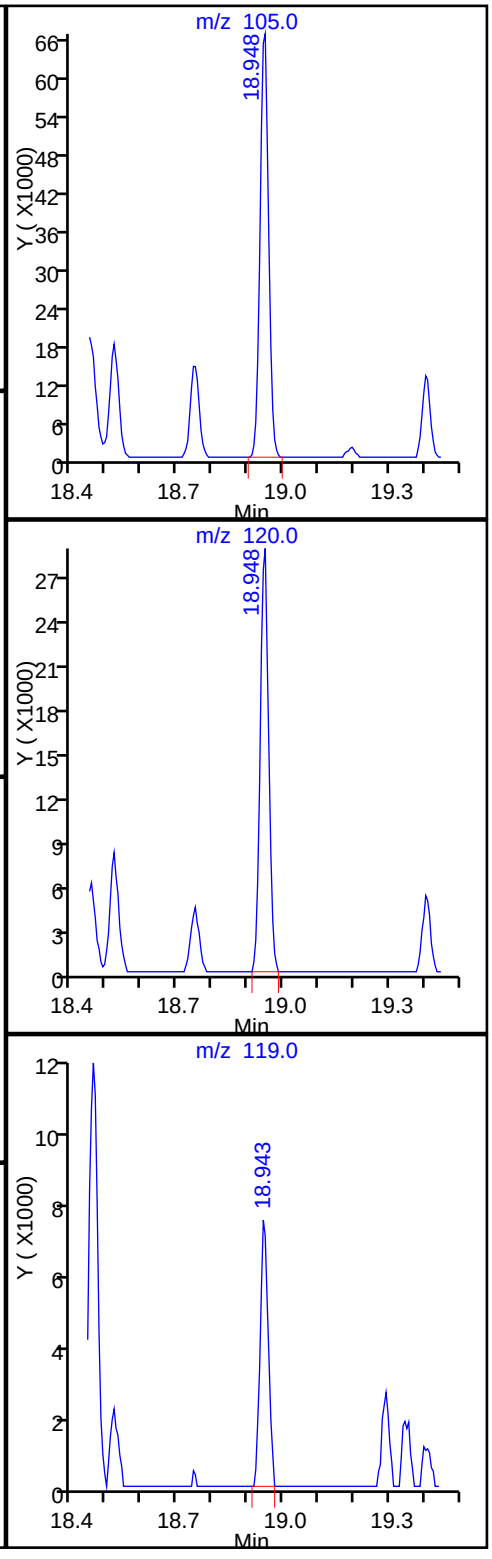


Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6

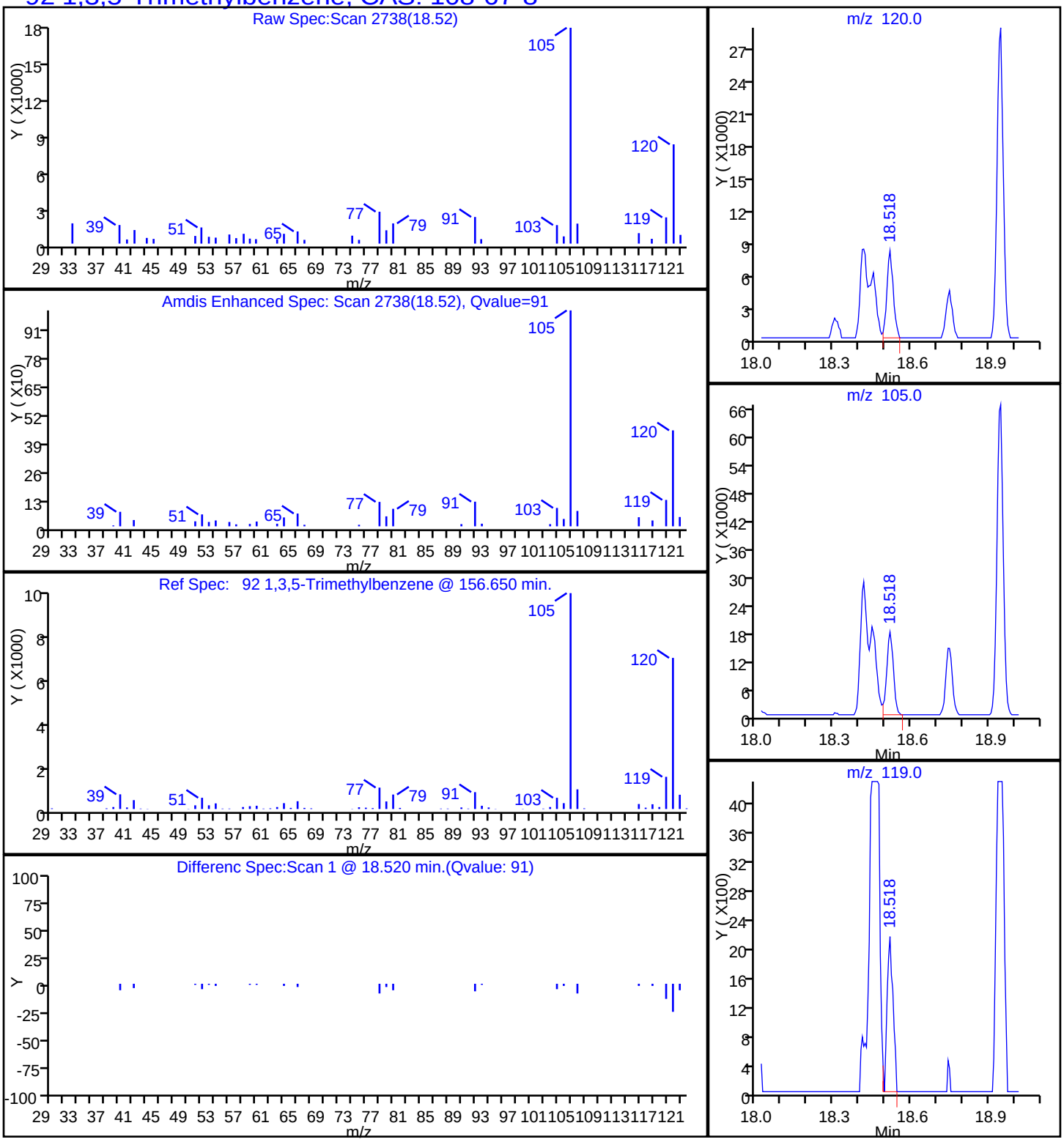




TestAmerica Knoxville

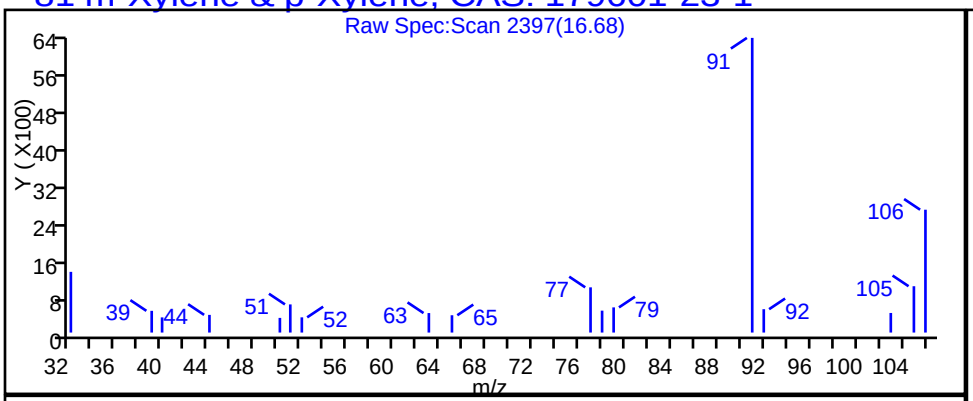
Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D				
Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

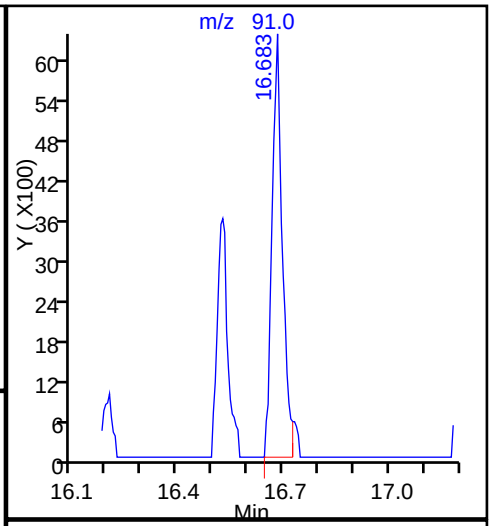
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

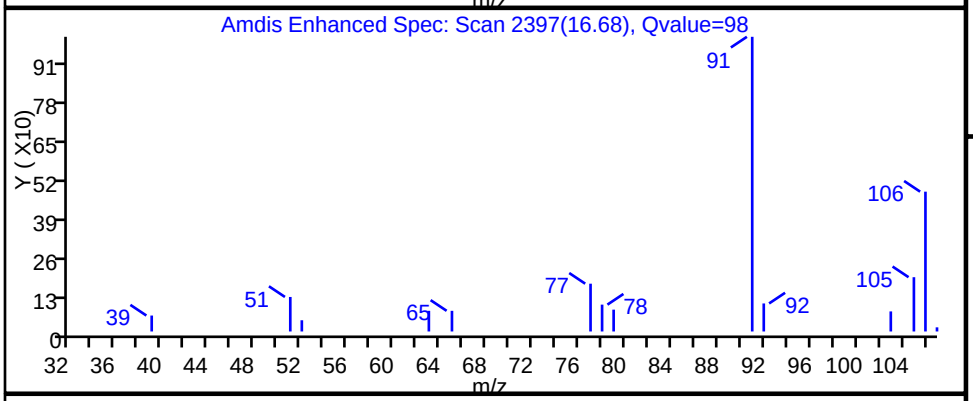


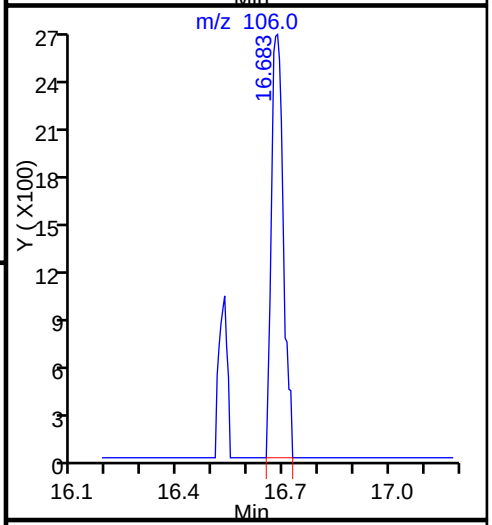
Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D
Injection Date: 08-Aug-2016 23:47:30 Instrument ID: MJ
Lims ID: 140-5545-A-3 Lab Sample ID: 140-5545-3
Client ID: BUILDING-A-EFFLUENT
Operator ID: 7126 ALS Bottle#: 9 Worklist Smp#: 20
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

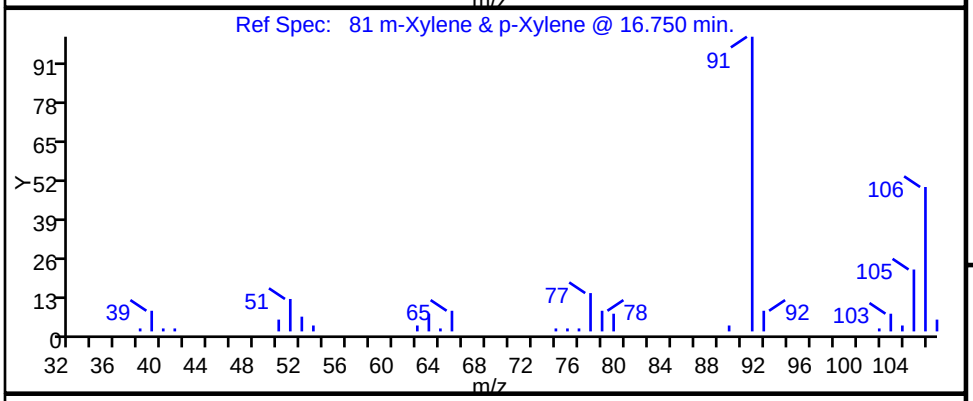
81 m-Xylene & p-Xylene, CAS: 179601-23-1

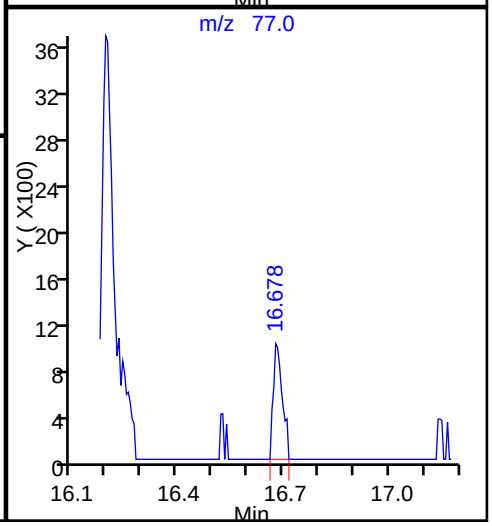


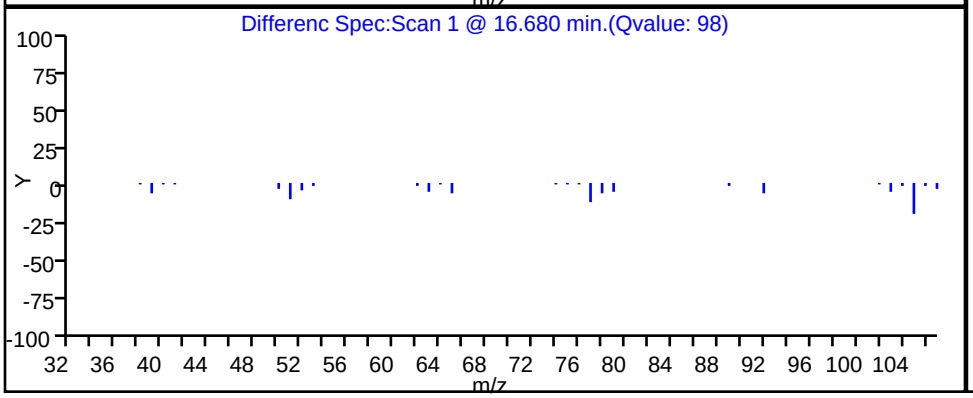












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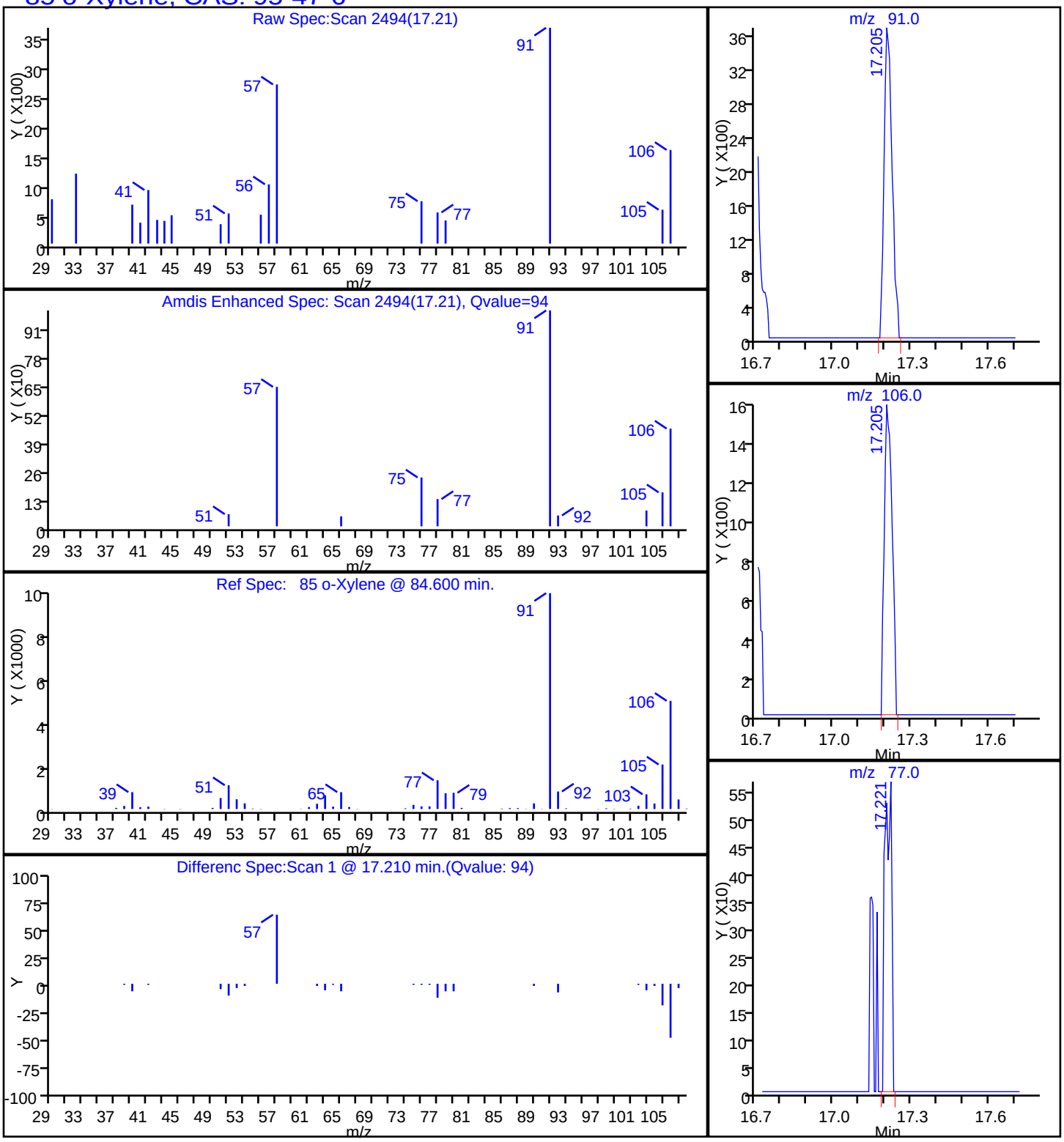
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JG08P109.D

Injection Date:	08-Aug-2016 23:47:30	Instrument ID:	MJ		
Lims ID:	140-5545-A-3	Lab Sample ID:	140-5545-3		
Client ID:	BUILDING-A-EFFLUENT				
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	20
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

85 o-Xylene, CAS: 95-47-6



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.5042	0.5590 0.4610	0.5175 0.4813	0.4967 0.4379	0.5141	Ave		0.4965				7.5		30.0			
Propene	+++++ 1.1654	+++++ 1.0702	1.3313 1.0844	1.2623 0.8964	1.2696	Ave		1.1542				13.0		30.0			
Dichlorodifluoromethane	+++++ 4.4166	4.8390 4.2049	4.6794 4.1701	4.5997 3.4026	4.8596	Ave		4.3965				10.9		30.0			
Chloromethane	+++++ 0.3110	+++++ 0.2838	0.3981 0.2566	0.3567 0.2332	0.3351	Ave		0.3106				18.6		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	+++++ 2.5211	2.7057 2.3404	2.5717 2.3442	2.5081 1.8650	2.6621	Ave		2.4398				10.9		30.0			
Acetaldehyde	+++++ 0.2760	+++++ 0.2256	+++++ 0.2022	0.3974 0.2058	0.3104	Ave		0.2696				28.1		30.0			
Vinyl chloride	1.3247 1.0033	1.1693 0.9547	1.1093 0.8894	1.1001 0.8297	1.0972	Ave		1.0531				14.4		30.0			
1,3-Butadiene	+++++ 0.7042	+++++ 0.6593	0.7516 0.6084	0.7719 0.5749	0.7683	Ave		0.6912				11.5		30.0			
Butane	+++++ 1.1108	+++++ 1.0854	1.3903 0.9510	1.3397 0.8927	1.2784	Ave		1.1498				16.7		30.0			
Bromomethane	+++++ 0.9572	1.2135 0.9001	1.0838 0.8839	1.0122 0.8550	1.0221	Ave		0.9910				12.0		30.0			
Chloroethane	+++++ 0.3713	0.4395 0.3551	0.4065 0.3441	0.3781 0.3371	0.3895	Ave		0.3777				9.0		30.0			
Ethanol	+++++ 0.1580	+++++ 0.1433	0.1952 0.1267	0.1606 0.1294	0.1687	Ave		0.1546				15.5		30.0			
Vinyl bromide	+++++ 1.2066	1.2166 1.1251	1.2066 1.1391	1.1666 1.0824	1.2299	Ave		1.1716				4.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	+++++ 1.4563	+++++ 1.3127	1.5024 1.2679	1.4848 1.0960	1.5352	Ave		1.3793				11.6		30.0			
Trichlorofluoromethane	+++++ 4.2191	4.3771 3.8766	4.2739 3.8302	4.1645 3.4211	4.3784	Ave		4.0676				8.2		30.0			
Acrolein	+++++ 0.3452	+++++ 0.3014	0.4460 0.2782	0.3277 0.2999	0.3533	Ave		0.3360				16.5		30.0			
Acetonitrile	+++++ 0.3905	+++++ 0.3504	0.4332 0.3275	0.3310 0.3740	0.3713	Ave		0.3683				10.0		30.0			
Acetone	+++++ 0.4995	+++++ 0.3749	+++++ 0.3337	0.6209 0.3831	0.5374	Ave		0.4583				24.4		30.0			
Isopropyl alcohol	+++++ 1.6846	+++++ 1.4120	1.7563 1.3941	1.5917 1.1233	1.7285	Ave		1.5272				15.0		30.0			
Pentane	+++++ 0.1768	+++++ 0.1611	0.1866 0.1627	0.1887 0.1441	0.1856	Ave		0.1722				9.7		30.0			
Ethyl ether	+++++ 0.8543	+++++ 0.7808	0.8344 0.6842	0.7323 0.7660	0.8240	Ave		0.7823				7.7		30.0			
1,1-Dichloroethene	+++++ 1.2103	1.2889 1.1318	1.1478 1.1609	1.1752 1.1003	1.2527	Ave		1.1835				5.3		30.0			
tert-Butyl alcohol	+++++ 2.1544	2.3633 1.8642	2.1846 2.0640	2.0389 1.8350	2.1692	Ave		2.0842				8.4		30.0			
Acrylonitrile	+++++ 0.7316	0.8425 0.6684	0.7037 0.6289	0.6206 0.7025	0.7106	Ave		0.7011				9.9		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	+++++ 2.8940	3.0400 2.6051	2.8530 2.5798	2.8273 2.3385	2.9837	Ave		2.7652				8.6		30.0			
Methylene Chloride	+++++ 1.1059	+++++ 0.9818	1.3956 0.9738	1.1804 0.9093	1.1484	Ave		1.0993				15.0		30.0			
3-Chloropropene	+++++ 1.1096	1.3296 0.9480	1.0951 0.9570	1.0768 0.8054	1.1176	Ave		1.0549				14.7		30.0			
Carbon disulfide	+++++ 3.4879	3.7064 3.1922	3.4140 3.2589	3.3188 2.9260	3.5637	Ave		3.3585				7.2		30.0			
trans-1,2-Dichloroethene	+++++ 1.2345	1.2722 1.1378	1.2480 1.1094	1.1895 1.0359	1.2737	Ave		1.1876				7.3		30.0			
2-Methylpentane	+++++ 2.5988	2.7409 2.2724	2.6201 2.1287	2.5383 1.7920	2.7029	Ave		2.4243				13.7		30.0			
Methyl tert-butyl ether	+++++ 2.6733	+++++ 2.4385	2.4636 2.2127	2.2707 2.4681	2.5559	Ave		2.4404				6.5		30.0			
1,1-Dichloroethane	+++++ 2.5611	2.6814 2.2112	2.5084 2.1727	2.4933 2.1386	2.5672	Ave		2.4168				8.7		30.0			
Vinyl acetate	+++++ 2.2123	+++++ 2.0875	1.9035 1.8409	1.7361 2.1276	2.0974	Ave		2.0007				8.7		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.3871	+++++ 0.3312	0.5093 0.3229	0.3971 0.3467	0.3930	Ave		0.3839				16.4		30.0			
Hexane	+++++ 1.1210	1.0912 0.9657	1.1007 0.9551	1.0917 0.8804	1.1344	Ave		1.0425				9.1		30.0			
Isopropyl ether	+++++ 3.2904	3.6307 2.9115	3.0105 2.6766	2.8081 2.7075	3.1314	Ave		3.0208				10.7		30.0			
cis-1,2-Dichloroethene	+++++ 1.2327	1.3301 1.0874	1.2146 1.0707	1.1880 1.1014	1.2398	Ave		1.1831				7.6		30.0			
Ethyl acetate	+++++ 1.7615	+++++ 1.5655	1.5737 1.5009	1.5300 1.5623	1.7015	Ave		1.5994				6.0		30.0			
Chloroform	+++++ 2.8139	2.9572 2.4353	2.8805 2.3198	2.7803 2.3852	2.8515	Ave		2.6780				9.5		30.0			
Tert-butyl ethyl ether	+++++ 3.2339	3.5685 2.8582	2.9393 2.7149	2.6805 2.8523	3.0716	Ave		2.9899				9.9		30.0			
Tetrahydrofuran	+++++ 0.9293	+++++ 0.8424	0.8383 0.7823	0.7949 0.8926	0.8890	Ave		0.8527				6.3		30.0			
1,1,1-Trichloroethane	+++++ 3.3351	3.2168 2.9132	3.2372 2.7334	3.2140 2.7851	3.3406	Ave		3.0969				8.0		30.0			
1,2-Dichloroethane	+++++ 0.4569	0.4832 0.3864	0.4749 0.3701	0.4633 0.3885	0.4718	Ave		0.4369				10.7		30.0			
1-Butanol	+++++ 0.0639	+++++ 0.0558	+++++ 0.0671	0.0551 0.0618	0.0622	Ave		0.0610				7.7		30.0			
Cyclohexane	+++++ 0.1302	0.1149 0.1101	0.1184 0.1040	0.1260 0.0955	0.1376	Ave		0.1171				11.9		30.0			
Benzene	+++++ 0.7322	0.8437 0.6046	0.7950 0.5722	0.7510 0.5312	0.7564	Ave		0.6983				16.3		30.0			
Carbon tetrachloride	0.7843 0.8287	0.7618 0.6999	0.7098 0.6615	0.8109 0.6518	0.7826	Ave		0.7435				8.7		30.0			
2,3-Dimethylpentane	+++++ 0.1712	0.1714 0.1427	0.1694 0.1404	0.1761 0.1395	0.1745	Ave		0.1606				10.3		30.0			
Thiophene	+++++ 0.4165	0.4347 0.3632	0.4135 0.3555	0.4081 0.3680	0.4313	Ave		0.3988				8.0		30.0			
Tert-amyl methyl ether	+++++ 0.6605	0.7406 0.5623	0.6416 0.5191	0.6024 0.5263	0.6679	Ave		0.6151				12.5		30.0			
2,2,4-Trimethylpentane	+++++ 1.3875	1.5390 1.1576	1.4751 1.0883	1.4432 0.9871	1.4449	Ave		1.3153				15.7		30.0			
Heptane	+++++ 0.2442	+++++ 0.2109	0.2503 0.2088	0.2439 0.2062	0.2496	Ave		0.2306				9.0		30.0			
1,2-Dichloropropane	+++++ 0.3010	0.3185 0.2604	0.2894 0.2489	0.2858 0.2435	0.3065	Ave		0.2817				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4078 0.3542	0.3744 0.3116	0.3733 0.3033	0.3548 0.3216	0.3704	Ave		0.3524				9.7		30.0			
Dibromomethane	+++++ 0.3291	0.3266 0.2856	0.3204 0.2795	0.3280 0.2908	0.3356	Ave		0.3120				7.3		30.0			
Bromodichloromethane	0.5980 0.6148	0.5486 0.5461	0.5576 0.5252	0.5596 0.5377	0.6308	Ave		0.5687				6.5		30.0			
1,4-Dioxane	+++++ 0.0907	+++++ 0.0795	0.0796 0.0853	0.0803 0.0765	0.0906	Ave		0.0832				6.8		30.0			
Methyl methacrylate	+++++ 0.2190	0.2024 0.1965	0.1813 0.1935	0.3185 0.2086	0.2018	Ave		0.2152				20.1		30.0			
Methylcyclohexane	+++++ 0.5679	0.5877 0.4747	0.5782 0.4633	0.5735 0.4476	0.5931	Ave		0.5358				11.6		30.0			
4-Methyl-2-pentanone (MIBK)	+++++ 0.4572	0.5094 0.3912	0.6711 0.4240	0.4244 0.3787	0.5230	Ave		0.4724				20.2		30.0			
cis-1,3-Dichloropropene	0.3836 0.4002	0.3632 0.3656	0.3419 0.3525	0.3346 0.3814	0.3874	Ave		0.3678				6.0		30.0			
trans-1,3-Dichloropropene	+++++ 0.3595	0.3152 0.3337	0.2950 0.3226	0.2686 0.3655	0.3573	Ave		0.3272				10.4		30.0			
Toluene	+++++ 0.9093	1.0070 0.7987	0.8963 0.6980	0.8459 0.7268	0.9326	Ave		0.8518				12.4		30.0			
Toluene Range	+++++ 2.0809	+++++ 1.9007	+++++ 1.6308	1.8813 1.7440	2.1031	Ave		1.8901				9.8		30.0			
1,1,2-Trichloroethane	+++++ 0.2634	0.2733 0.2315	0.2567 0.2104	0.2485 0.2212	0.2692	Ave		0.2468				9.4		30.0			
2-Methylthiophene	+++++ 0.7820	0.7234 0.6802	0.7793 0.6080	0.6860 0.6275	0.7941	Ave		0.7101				10.1		30.0			
3-Methylthiophene	+++++ 0.7359	0.7177 0.6520	0.7055 0.5863	0.6857 0.6160	0.7508	Ave		0.6812				8.6		30.0			
2-Hexanone	+++++ 0.2800	+++++ 0.2386	0.2217 0.2430	0.2392 0.2307	0.2834	Ave		0.2481				9.7		30.0			
Octane	+++++ 0.3030	0.3024 0.2605	0.2978 0.2316	0.2891 0.2326	0.3146	Ave		0.2789				11.8		30.0			
C8 Range	+++++ 2.8050	+++++ 2.3297	+++++ 2.0345	2.8095 1.9518	2.9926	Ave		2.4872				17.8		30.0			
Dibromochloromethane	0.5674 0.6659	0.5543 0.5923	0.5728 0.5443	0.5770 0.5832	0.6580	Ave		0.5906				7.3		30.0			
1,2-Dibromoethane (EDB)	0.4552 0.4797	0.4768 0.4280	0.4555 0.4034	0.4307 0.4503	0.4785	Ave		0.4509				5.8		30.0			
Tetrachloroethene	0.4875 0.4016	0.4396 0.3385	0.4357 0.3067	0.4287 0.3230	0.4309	Ave		0.3991				15.5		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2,3-Dimethylheptane	+++++ 0.8566	1.0104 0.6661	0.9749 0.5494	0.9109 0.4479	0.9375	Ave		0.7942				26.7		30.0			
Chlorobenzene	+++++ 0.6770	0.7480 0.5890	0.6968 0.5278	0.6430 0.5490	0.6927	Ave		0.6404				12.2		30.0			
Ethylbenzene	+++++ 1.0567	1.1550 0.9468	0.9801 0.8178	0.8973 0.8923	1.0251	Ave		0.9714				11.0		30.0			
2-Ethylthiophene	+++++ 0.8055	0.8105 0.7294	0.7199 0.6458	0.6669 0.7164	0.7795	Ave		0.7342				8.3		30.0			
m-Xylene & p-Xylene	0.9369 0.8068	0.8738 0.6978	0.7634 0.5911	0.6968 0.6181	0.8006	Ave		0.7539				15.1		30.0			
Nonane	+++++ 0.6451	0.5885 0.5662	0.5459 0.4907	0.5382 0.4585	0.6311	Ave		0.5580				11.5		30.0			
Bromoform	+++++ 0.5090	0.3393 0.4915	0.3617 0.4772	0.3571 0.5497	0.4679	Ave		0.4442				18.0		30.0			
Styrene	0.5013 0.5292	0.4332 0.4944	0.3824 0.4484	0.3826 0.5156	0.4866	Ave		0.4637				11.9		30.0			
o-Xylene	+++++ 0.8703	0.9793 0.7561	0.8386 0.6600	0.7655 0.7338	0.8759	Ave		0.8099				12.4		30.0			
1,1,2,2-Tetrachloroethane	0.5577 0.5616	0.5348 0.5019	0.4870 0.4665	0.4817 0.4930	0.5584	Ave		0.5159				7.2		30.0			
1,2,3-Trichloropropane	+++++ 0.1561	0.1432 0.1434	0.1415 0.1353	0.1349 0.1602	0.1554	Ave		0.1463				6.7		30.0			
Isopropylbenzene	+++++ 1.1442	+++++ 1.0035	1.0700 0.8681	0.9886 0.9337	1.1229	Ave		1.0187				9.8		30.0			
Propylbenzene	+++++ 0.2806	0.2553 0.2565	0.2405 0.2426	0.2166 0.2918	0.2618	Ave		0.2557				9.2		30.0			
2-Chlorotoluene	+++++ 0.2906	0.2913 0.2672	0.2599 0.2412	0.2428 0.2871	0.2787	Ave		0.2699				7.6		30.0			
4-Ethyltoluene	+++++ 0.9839	0.8822 0.8719	0.8073 0.8004	0.7766 0.8681	0.9414	Ave		0.8665				8.2		30.0			
1,3,5-Trimethylbenzene	+++++ 0.5002	0.5144 0.4334	0.4547 0.4008	0.4225 0.4561	0.4860	Ave		0.4585				8.6		30.0			
Alpha Methyl Styrene	+++++ 0.3517	+++++ 0.3492	0.2284 0.3478	0.2209 0.4145	0.3127	Ave		0.3179				22.2		30.0			
Decane	+++++ 0.6574	0.6037 0.5756	0.5696 0.4989	0.5427 0.4758	0.6398	Ave		0.5704				11.2		30.0			
tert-Butylbenzene	+++++ 1.0212	+++++ 0.8699	0.9497 0.7834	0.8998 0.8218	1.0369	Ave		0.9118				10.6		30.0			
1,2,4-Trimethylbenzene	+++++ 0.8794	0.8435 0.7418	0.7504 0.6841	0.7285 0.7099	0.8721	Ave		0.7762				9.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	+++++ 1.2919	+++++ 1.0984	1.1691 0.9877	1.0927 0.9921	1.2854	Ave		1.1310				11.0		30.0			
1,3-Dichlorobenzene	+++++ 0.4099	0.3775 0.3972	0.3536 0.4064	0.3342 0.5042	0.3891	Ave		0.3965				12.8		30.0			
Benzyl chloride	+++++ 0.4101	+++++ 0.4053	0.2838 0.4575	0.2701 0.5420	0.3568	Ave		0.3894				24.6		30.0			
1,4-Dichlorobenzene	+++++ 0.3467	0.3085 0.3409	0.2862 0.3681	0.2766 0.4691	0.3181	Ave		0.3393				17.9		30.0			
4-Isopropyltoluene	+++++ 1.0572	0.9805 0.8935	0.8980 0.8441	0.8621 0.8504	1.0514	Ave		0.9296				9.5		30.0			
1,2,3-Trimethylbenzene	+++++ 0.6839	0.6824 0.5727	0.5992 0.5466	0.5790 0.5862	0.6829	Ave		0.6166				9.2		30.0			
Butylcyclohexane	+++++ 0.7573	0.7963 0.6471	0.6759 0.5621	0.6417 0.5557	0.7464	Ave		0.6728				13.2		30.0			
Indane	+++++ 0.7243	0.6832 0.6413	0.6020 0.6072	0.5803 0.6525	0.6998	Ave		0.6488				7.9		30.0			
1,2-Dichlorobenzene	+++++ 0.4281	0.3879 0.4016	0.3773 0.4016	0.3434 0.4773	0.4106	Ave		0.4035				9.7		30.0			
Butylbenzene	+++++ 0.8271	0.6800 0.7161	0.6905 0.7000	0.6278 0.6951	0.8050	Ave		0.7177				9.2		30.0			
Indene	+++++ 0.4211	0.3055 0.3945	0.3055 0.4031	0.2953 0.4594	0.3928	Ave		0.3721				16.6		30.0			
Undecane	+++++ 0.6130	0.5334 0.5348	0.5637 0.5122	0.5086 0.4720	0.6159	Ave		0.5442				9.3		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 0.6948	0.5622 0.5936	0.5720 0.6048	0.5150 0.6225	0.6684	Ave		0.6042				9.6		30.0			
1,2-Dibromo-3-Chloropropane	0.1652 0.1391	0.0826 0.1371	0.0917 0.1612	0.0919 0.1992	0.1259	Ave		0.1327				29.5		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 0.8351	0.7116 0.7142	0.7250 0.7364	0.6413 0.7290	0.8195	Ave		0.7390				8.4		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.5341	0.4665 0.4486	0.4771 0.4694	0.4161 0.4778	0.5255	Ave		0.4769				8.0		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.6468	0.5792 0.5569	0.5811 0.5902	0.5017 0.6010	0.6481	Ave		0.5881				8.1		30.0			
Dodecane	+++++ 0.5636	+++++ 0.4338	+++++ 0.4825	0.4346 0.4212	0.5682	Ave		0.4840				13.8		30.0			
1,2,4-Trichlorobenzene	+++++ 0.1153	0.0949 0.1129	0.0905 0.1585	0.0762 +++++	0.1009	Ave		0.1070				24.6		30.0			
Naphthalene	0.4313 0.2773	0.1979 0.2653	0.2048 0.3417	0.1751 0.4174	0.2443	Ave		0.2839				33.0	*	30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.1041	0.0933 0.1002	0.0961 0.1397	0.0715 +++++	0.0929	Ave		0.0997				20.5		30.0			
Hexachlorobutadiene	+++++ 0.4409	0.4968 0.3652	0.4626 0.3871	0.3746 0.4182	0.4657	Ave		0.4264				11.2		30.0			
1,2,3-Trichlorobenzene	+++++ 0.1169	0.0919 0.1090	0.1024 0.1470	0.0774 0.1883	0.1070	Ave		0.1175				29.8		30.0			
2-Methylnaphthalene	+++++ 0.0188	0.0182 0.0142	0.0198 0.0234	0.0101 0.0285	0.0152	Ave		0.0185				30.6		50.0			
1-Methylnaphthalene	+++++ 0.0200	0.0201 0.0147	0.0205 0.0246	0.0098 0.0272	0.0188	Ave		0.0195				27.8		50.0			
4-Bromofluorobenzene (Surr)	0.5569 0.6060	0.5729 0.6183	0.5669 0.6052	0.5617 0.6393	0.5880	Ave		0.5906				4.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5523/2	JF22IC01.D
Level 2	IC 140-5523/3	JF22IC02.D
Level 3	IC 140-5523/4	JF22IC03.D
Level 4	IC 140-5523/5	JF22IC04.D
Level 5	IC 140-5523/6	JF22IC05.D
Level 6	ICIS 140-5523/7	JF22IC06.D
Level 7	IC 140-5523/8	JF22IC07.D
Level 8	IC 140-5523/9	JF22IC08.D
Level 9	IC 140-5523/10	JF22IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 74322	3758 143302	6560 288544	15197 568696	38466	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 171785	+++++ 332692	16876 650144	38620 1164099	94985	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	+++++ 651005	32532 1307229	59316 2500166	140732 4418618	363576	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 45845	+++++ 88214	5046 153848	10913 302773	25067	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	+++++ 371615	18190 727582	32599 1405458	76736 2421902	199170	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 203386	+++++ 350643	+++++ 606067	60801 1336036	116129	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	4184 147890	7861 296801	14061 533221	33657 1077395	82084	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	+++++ 103801	+++++ 204963	9528 364739	23616 746524	57483	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	+++++ 163737	+++++ 337432	17623 570149	40990 1159255	95645	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 141086	8158 279818	13738 529966	30969 1110251	76471	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	+++++ 54729	2955 110409	5153 206332	11567 437796	29140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 116482	+++++ 222729	12374 379778	24561 840205	63110	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	+++++ 177848	8179 349781	15295 682940	35692 1405653	92013	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	+++++ 214661	+++++ 408100	19045 760188	45429 1423234	114860	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	+++++ 621893	29427 1205159	54177 2296411	127417 4442645	327570	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 50881	+++++ 93702	5654 166781	10026 389500	26432	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 57557	+++++ 108943	5491 196326	10126 485627	27782	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 220910	+++++ 349669	+++++ 600267	56991 1492629	120631	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	+++++ 744962	+++++ 1317035	66795 2507678	146107 4376471	387973	+++++ 5.99	+++++ 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 26066	+++++ 50079	2365 97557	5773 187143	13885	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	+++++ 125926	+++++ 242733	10577 410197	22404 994775	61651	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	+++++ 178394	8665 351859	14550 696021	35955 1428851	93723	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 317555	15888 579563	27692 1237494	62382 2382939	162292	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 107837	5664 207783	8920 377050	18989 912254	53165	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroetha ne	CBM	Ave	+++++ 426570	20438 809888	36165 1546698	86503 3036710	223225	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 163012	+++++ 305232	17691 583873	36114 1180787	85918	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 163557	8939 294729	13881 573796	32947 1045840	83611	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	+++++ 514119	24918 992410	43276 1953890	101542 3799723	266620	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	+++++ 181960	8553 353708	15820 665147	36395 1345260	95290	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	+++++ 383056	18427 706451	33213 1276291	77661 2327114	202218	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	+++++ 394051	+++++ 758096	31229 1326657	69473 3205110	191223	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	+++++ 377503	18027 687439	31797 1302641	76286 2777161	192069	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	+++++ 326088	+++++ 648961	24129 1103728	53117 2762820	156921	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 57065	+++++ 102957	6456 193612	12150 450257	29406	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	+++++ 165234	7336 300224	13952 572625	33402 1143308	84874	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	+++++ 485009	24409 905127	38161 1604773	85916 3515890	234280	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	+++++ 181693	8942 338040	15396 641922	36349 1430321	92758	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	+++++ 259651	+++++ 486683	19949 899864	46813 2028801	127302	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	+++++ 414764	19881 757083	36514 1390825	85067 3097387	213335	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	+++++ 476674	23991 888552	37259 1627729	82013 3703920	229807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	+++++ 136985	+++++ 261903	10627 469029	24321 1159161	66510	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	+++++ 491600	21626 905660	41035 1638831	98335 3616674	249926	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	+++++ 295685	14298 549094	26030 987874	59968 2263123	151004	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 41337	+++++ 79338	+++++ 179047	7131 360182	19897	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 84227	3400 156430	6492 277573	16308 556586	44050	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	+++++ 473833	24967 859237	43574 1527500	97218 3094582	242064	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10308 536281	22543 994733	38903 1765814	104966 3797031	250454	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 110794	5072 202801	9283 374753	22790 812542	55859	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	+++++ 269521	12865 516119	22661 949009	52829 2143783	138033	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 372876	18473 723980	28733 1344086	64540 3028475	180342	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	+++++ 897864	45542 1645159	80847 2905240	186825 5750307	462412	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	+++++ 158034	+++++ 299782	13718 557515	31573 1201125	79881	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	+++++ 194759	9425 370098	15859 664536	36991 1418404	98083	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	5360 229178	11078 442884	20459 809617	45929 1873495	118547	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	+++++ 212934	9666 405928	17561 746153	42461 1694078	107420	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	7859 397868	16234 776050	30563 1402039	72436 3132699	201889	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	+++++ 58670	+++++ 112981	4364 227685	10391 445938	28993	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	+++++ 141703	5990 279290	9937 516447	41235 1215024	64577	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 367492	17392 674601	31688 1236865	74236 2607782	189819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	+++++ 295884	15075 556003	36781 1131908	54942 2205881	167376	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	5041 259003	10749 519520	18741 940942	43317 2221824	123970	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	+++++ 202943	7861 429638	13213 835409	28773 2103301	96475	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	+++++ 513330	25117 1028413	40141 1807350	90623 4182412	251819	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	CBZd 5	Ave	+++++ 1174730	+++++ 2447394	+++++ 4222753	201557 10035359	567901	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	+++++ 148679	6816 298075	11494 544854	26618 1272593	72695	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	+++++ 441429	18043 875867	34902 1574396	73492 3610870	214421	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	+++++ 415433	17901 839568	31597 1518071	73462 3544888	202739	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 158048	+++++ 307291	9927 629308	25630 1327800	76515	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	+++++ 171049	7543 335449	13336 599701	30969 1338237	84942	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	CBZd 5	Ave	+++++ 1583480	+++++ 2999823	+++++ 5268215	300990 11231032	808090	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	5891 375901	13827 762654	25651 1409503	61819 3355987	177672	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	4726 270820	11892 551155	20400 1044626	46147 2590955	129201	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	5061 226727	10964 435890	19514 794219	45924 1858547	116368	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	+++++ 483560	25203 857705	43660 1422600	97584 2577374	253140	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	+++++ 382171	18658 758472	31203 1366684	68884 3159295	187036	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	+++++ 596545	28810 1219170	43894 2117749	96127 5134454	276806	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	+++++ 454691	20217 939238	32238 1672366	71448 4122460	210486	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	19454 910856	43588 1796987	68375 3061379	149302 7113518	432360	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Nonane	CBZd 5	Ave	+++++ 364149	14679 729041	24448 1270603	57661 2638502	170403	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromoform	CBZd 5	Ave	+++++ 287325	8464 632872	16198 1235633	38261 3162893	126351	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5204 298757	10805 636582	17123 1161198	40993 2966957	131396	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	+++++ 491312	24427 973620	37556 1708918	82015 4222274	236527	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	5790 317051	13340 646257	21810 1208064	51611 2836714	150790	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	+++++ 88107	3572 184661	6337 350332	14455 921976	41958	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	+++++ 645900	+++++ 1292194	47917 2248024	105917 5373006	303206	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	+++++ 158414	6367 330331	10769 628117	23208 1679331	70689	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	+++++ 164057	7267 344057	11641 624631	26016 1651961	75246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	+++++ 555410	22005 1122676	36155 2072618	83203 4995270	254212	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	+++++ 282382	12831 558077	20363 1037781	45264 2624406	131247	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 198517	+++++ 449633	10227 900610	23661 2385158	84426	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	+++++ 371127	15057 741112	25509 1291827	58146 2738103	172771	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	+++++ 576459	+++++ 1120112	42532 2028581	96405 4729064	279995	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	+++++ 496438	21039 955201	33604 1771506	78046 4084905	235496	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	+++++ 729282	+++++ 1414365	52355 2557663	117070 5708680	347096	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	+++++ 231407	9415 511453	15837 1052391	35808 2901271	105055	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	+++++ 231497	+++++ 521842	12711 1184773	28941 3118761	96342	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	+++++ 195721	7696 438982	12819 953235	29631 2699517	85902	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	+++++ 596789	24457 1150454	40217 2185786	92356 4893500	283900	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	+++++ 386097	17021 737400	26836 1415266	62027 3373450	184398	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	+++++ 427484	19863 833271	30267 1455558	68748 3197669	201539	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	+++++ 408894	17042 825803	26958 1572283	62168 3754466	188971	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	+++++ 241683	9676 517072	16895 1039806	36785 2746451	110886	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	+++++ 466916	16960 922062	30924 1812485	67262 3999716	217364	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 237730	7619 507931	13681 1043744	31634 2643801	106078	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 346076	13304 688596	25243 1326289	54486 2716283	166313	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 392201	14022 764381	25618 1566098	55179 3582044	180487	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	1715 78535	2060 176596	4107 417334	9842 1146153	33994	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 471438	17750 919685	32467 1906908	68705 4194777	221281	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 301527	11637 577643	21367 1215600	44578 2749344	141907	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 365106	14446 717139	26023 1528285	53749 3458409	175011	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 318147	+++++ 558539	+++++ 1249421	46563 2423987	153441	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	+++++ 65109	2368 145399	4052 410410	8167 +++++	27246	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	4478 156536	4935 341566	9172 884843	18754 2401988	65976	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 58741	2326 129062	4302 361623	7658 +++++	25086	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Hexachlorobutadiene	CBZd 5	Ave	+++++ 248901	12392 470300	20717 1002249	40131 2406632	125753	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	+++++ 66002	2292 140342	4585 380574	8296 1083656	28890	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	+++++ 33085	1420 57318	2771 189512	3375 511700	12857	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	+++++ 35332	1563 59070	2867 198948	3284 489210	15840	+++++ 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	590004 685127	729043 796104	640074 783587	601768 919690	634109	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1 Analy Batch No.: 5523

SDG No.:

Instrument ID: MJ GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 06/22/2016 15:49 Calibration End Date: 06/22/2016 23:00 Calibration ID: 642

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC01.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 22-Jun-2016 15:49:30 ALS Bottle#: 7 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044591
Misc. Info.: J062216,T15,,140-0003070-002
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:11:59 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:40:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.389	9.389	0.000	90	322287	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.552	11.552	0.000	95	1341042	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.232	16.231	0.001	88	1059355	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.856	17.854	0.002	91	590004	4.00	3.77	
6 Chlorodifluoromethane	67	3.924	3.925	-0.001	81	1653	0.0392	0.0413	
7 Propene	41	3.940	3.939	0.001	79	5861	0.0392	0.0630	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	98	16428	0.0392	0.0464	
9 Chloromethane	52	4.198	4.196	0.002	49	2354	0.0392	0.0941	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	90	9437	0.0392	0.0480	
11 Acetaldehyde	44	4.365	4.364	0.001	84	10708	0.1960	0.4930	
12 Vinyl chloride	62	4.386	4.384	0.002	95	4184	0.0392	0.0493	
14 Butadiene	54	4.483	4.479	0.004	69	2754	0.0392	0.0494	
13 Butane	43	4.478	4.480	-0.002	81	5568	0.0392	0.0601	
15 Bromomethane	94	4.838	4.837	0.001	94	4296	0.0392	0.0538	
16 Chloroethane	64	4.989	4.991	-0.002	41	1583	0.0392	0.0520	
17 Ethanol	31	5.080	5.081	-0.001	91	5501	0.1960	0.4417	
18 Vinyl bromide	106	5.322	5.323	-0.001	94	4323	0.0392	0.0458	
19 2-Methylbutane	43	5.371	5.372	-0.001	86	5837	0.0392	0.0525	
20 Trichlorofluoromethane	101	5.613	5.611	0.002	97	14017	0.0392	0.0428	
21 Acrolein	56	5.623	5.623	0.000	86	3200	0.0392	0.1182	
23 Acetone	58	5.753	5.747	0.006	98	9794	0.1176	0.2653	
24 Isopropyl alcohol	45	5.828	5.819	0.009	90	16924	0.1176	0.1375	
26 Ethyl ether	31	6.038	6.027	0.011	79	2328	0.0392	0.0369	
27 1,1-Dichloroethene	96	6.360	6.368	-0.008	91	4004	0.0392	0.0420	
28 2-Methyl-2-propanol	59	6.473	6.457	0.016	92	6792	0.0392	0.0404	
29 Acrylonitrile	53	6.484	6.479	0.005	51	2168	0.0392	0.0384	
30 1,1,2-Trichloro-1,2,2-trif	101	6.549	6.548	0.001	94	9961	0.0392	0.0447	
31 Methylene Chloride	84	6.737	6.739	-0.002	94	7919	0.0392	0.0894	
32 3-Chloro-1-propene	39	6.753	6.753	0.000	58	4691	0.0392	0.0552	
33 Carbon disulfide	76	6.920	6.916	0.004	98	12081	0.0392	0.0446	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
34 trans-1,2-Dichloroethene	96	7.587	7.587	0.000	93	4204	0.0392	0.0439	
35 2-Methylpentane	43	7.598	7.597	0.001	95	8763	0.0392	0.0449	
36 Methyl tert-butyl ether	73	7.727	7.715	0.012	96	8273	0.0392	0.0421	
37 1,1-Dichloroethane	63	8.017	8.025	-0.008	97	8643	0.0392	0.0444	
38 Vinyl acetate	43	8.130	8.125	0.005	99	6636	0.0392	0.0412	
39 2-Butanone (MEK)	72	8.614	8.597	0.017	83	1558	0.0392	0.0504	
40 Hexane	56	8.614	8.613	0.001	79	3649	0.0392	0.0434	
41 Isopropyl ether	45	8.781	8.773	0.008	96	9162	0.0392	0.0376	
42 cis-1,2-Dichloroethene	96	9.039	9.044	-0.005	92	4186	0.0392	0.0439	
43 Ethyl acetate	43	9.233	9.224	0.009	95	5581	0.0392	0.0433	
44 Chloroform	83	9.389	9.395	-0.006	28	10067	0.0392	0.0467	
45 Tert-butyl ethyl ether	59	9.481	9.471	0.010	94	9080	0.0392	0.0377	
46 Tetrahydrofuran	42	9.846	9.821	0.025	88	2708	0.0392	0.0394	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	94	10468	0.0392	0.0420	
48 1,2-Dichloroethane	62	10.551	10.556	-0.005	96	6592	0.0392	0.0450	
50 Cyclohexane	69	11.024	11.031	-0.007	69	1658	0.0392	0.0422	
51 Benzene	78	11.024	11.031	-0.007	97	12693	0.0392	0.0542	
52 Carbon tetrachloride	117	11.057	11.055	0.002	95	10308	0.0392	0.0414	
53 2,3-Dimethylpentane	71	11.132	11.134	-0.002	85	2257	0.0392	0.0419	
54 Thiophene	84	11.304	11.302	0.002	96	6313	0.0392	0.0472	
55 Tert-amyl methyl ether	73	11.487	11.480	0.007	93	7657	0.0392	0.0470	
56 Isooctane	57	11.761	11.759	0.002	98	22025	0.0392	0.0499	
57 n-Heptane	71	12.122	12.122	0.000	81	3150	0.0392	0.0408	
58 1,2-Dichloropropane	63	12.235	12.227	0.008	73	3825	0.0392	0.0405	
59 Trichloroethene	130	12.262	12.257	0.005	92	5360	0.0392	0.0454	
60 Dibromomethane	93	12.353	12.348	0.005	92	4622	0.0392	0.0442	
62 Dichlorobromomethane	83	12.488	12.487	0.001	98	7859	0.0392	0.0412	
61 1,4-Dioxane	88	12.515	12.501	0.014	13	896	0.0392	0.0321	
63 Methyl methacrylate	41	12.563	12.558	0.005	82	2510	0.0392	0.0348	
64 Methylcyclohexane	83	13.015	13.014	0.001	91	8188	0.0392	0.0456	
65 4-Methyl-2-pentanone (MIBK	43	13.408	13.399	0.009	94	6521	0.0392	0.0412	
66 cis-1,3-Dichloropropene	75	13.461	13.466	-0.005	92	5041	0.0392	0.0409	
67 trans-1,3-Dichloropropene	75	14.145	14.149	-0.004	93	4402	0.0392	0.0508	
68 Toluene	91	14.274	14.277	-0.003	92	10890	0.0392	0.0483	
69 1,1,2-Trichloroethane	83	14.354	14.349	0.005	92	2857	0.0392	0.0437	
70 2-Methylthiophene	97	14.430	14.429	0.001	97	8764	0.0392	0.0466	
71 3-Methylthiophene	97	14.629	14.628	0.001	97	8057	0.0392	0.0447	
72 2-Hexanone	58	14.726	14.717	0.009	93	2820	0.0392	0.0429	
73 n-Octane	85	14.930	14.931	-0.001	91	3317	0.0392	0.0449	
74 Chlorodibromomethane	129	15.048	15.053	-0.005	94	5891	0.0392	0.0377	
75 Ethylene Dibromide	107	15.344	15.344	0.000	98	4726	0.0392	0.0396	
76 Tetrachloroethene	129	15.409	15.408	0.001	93	5061	0.0392	0.0479	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	93	11055	0.0392	0.0526	
78 Chlorobenzene	112	16.280	16.279	0.001	92	8514	0.0392	0.0502	
79 Ethylbenzene	91	16.560	16.557	0.003	97	12503	0.0392	0.0486	
80 2-Ethylthiophene	97	16.657	16.661	-0.004	95	9313	0.0392	0.0479	
81 m-Xylene & p-Xylene	91	16.711	16.715	-0.004	98	19454	0.0784	0.0974	
82 n-Nonane	57	17.109	17.109	0.000	90	6648	0.0392	0.0450	
83 Bromoform	173	17.179	17.179	0.000	86	3700	0.0392	0.0315	
84 Styrene	104	17.179	17.181	-0.002	94	5204	0.0392	0.0424	
85 o-Xylene	91	17.243	17.242	0.001	96	10551	0.0392	0.0492	
86 1,1,2,2-Tetrachloroethane	83	17.561	17.563	-0.002	93	5790	0.0392	0.0424	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
87 1,2,3-Trichloropropane	110	17.717	17.720	-0.004	94	1702	0.0392	0.0439	
88 Isopropylbenzene	105	17.819	17.815	0.004	96	14105	0.0392	0.0523	
89 N-Propylbenzene	120	18.330	18.333	-0.003	99	3033	0.0392	0.0448	
90 2-Chlorotoluene	126	18.384	18.384	0.000	95	3310	0.0392	0.0463	
91 4-Ethyltoluene	105	18.480	18.477	0.003	98	10973	0.0392	0.0478	
92 1,3,5-Trimethylbenzene	120	18.540	18.545	-0.005	90	5497	0.0392	0.0453	
93 Alpha Methyl Styrene	118	18.771	18.771	0.000	87	3023	0.0392	0.0359	
94 n-Decane	57	18.803	18.805	-0.002	90	7045	0.0392	0.0466	
95 tert-Butylbenzene	119	18.959	18.958	0.001	91	12275	0.0392	0.0508	
96 1,2,4-Trimethylbenzene	105	18.970	18.971	-0.001	95	9466	0.0392	0.0460	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	98	14891	0.0392	0.0497	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	93	5642	0.0392	0.0537	
99 Benzyl chloride	91	19.314	19.315	-0.001	94	4534	0.0392	0.0440	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	92	4961	0.0392	0.0552	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	97	13149	0.0392	0.0534	
102 1,2,3-Trimethylbenzene	105	19.427	19.432	-0.005	97	7660	0.0392	0.0469	
103 Butylcyclohexane	83	19.476	19.476	0.000	87	8374	0.0392	0.0470	
104 2,3-Dihydroindene	117	19.675	19.676	-0.001	93	8931	0.0392	0.0520	
105 1,2-Dichlorobenzene	146	19.680	19.680	0.000	73	5322	0.0392	0.0498	
106 n-Butylbenzene	91	19.798	19.797	0.001	95	9034	0.0392	0.0475	
107 Indene	116	19.804	19.805	-0.001	66	4541	0.0392	0.0461	
108 Undecane	57	20.083	20.083	0.000	94	7167	0.0392	0.0497	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.159	20.158	0.001	96	8332	0.0392	0.0521	
110 1,2-Dibromo-3-Chloropropan	157	20.272	20.271	0.001	61	1715	0.0392	0.0488	
111 1,2,4,5-Tetramethylbenzene	119	20.546	20.545	0.001	95	12171	0.0392	0.0622	
112 1,2,3,5-Tetramethylbenzene	119	20.605	20.603	0.002	92	6633	0.0392	0.0525	
113 1,2,3,4-Tetramethylbenzene	119	21.020	21.019	0.001	94	8743	0.0392	0.0561	
114 Dodecane	57	21.165	21.159	0.006	93	6654	0.0392	0.0519	
115 1,2,4-Trichlorobenzene	180	21.391	21.399	-0.008	85	1889	0.0392	0.0666	
116 Naphthalene	128	21.536	21.540	-0.004	96	4478	0.0392	0.0596	
117 Benzo(b)thiophene	134	21.638	21.633	0.005	95	2717	0.0392	0.1029	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	94	5921	0.0392	0.0524	
119 1,2,3-Trichlorobenzene	180	21.773	21.772	0.001	88	1851	0.0392	0.0595	
120 2-Methylnaphthalene	142	22.311	22.314	-0.003	95	1614	0.1225	0.3289	
121 1-Methylnaphthalene	142	22.440	22.439	0.001	94	1445	0.1225	0.2805	
A 124 Toluene Range	1	14.274	(14.244-14.304)		0	22619	0.0392	0.0452	
S 126 Xylenes, Total	100				0		0.1176	0.1466	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0878	

Reagents:

40L12DNP_00005	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

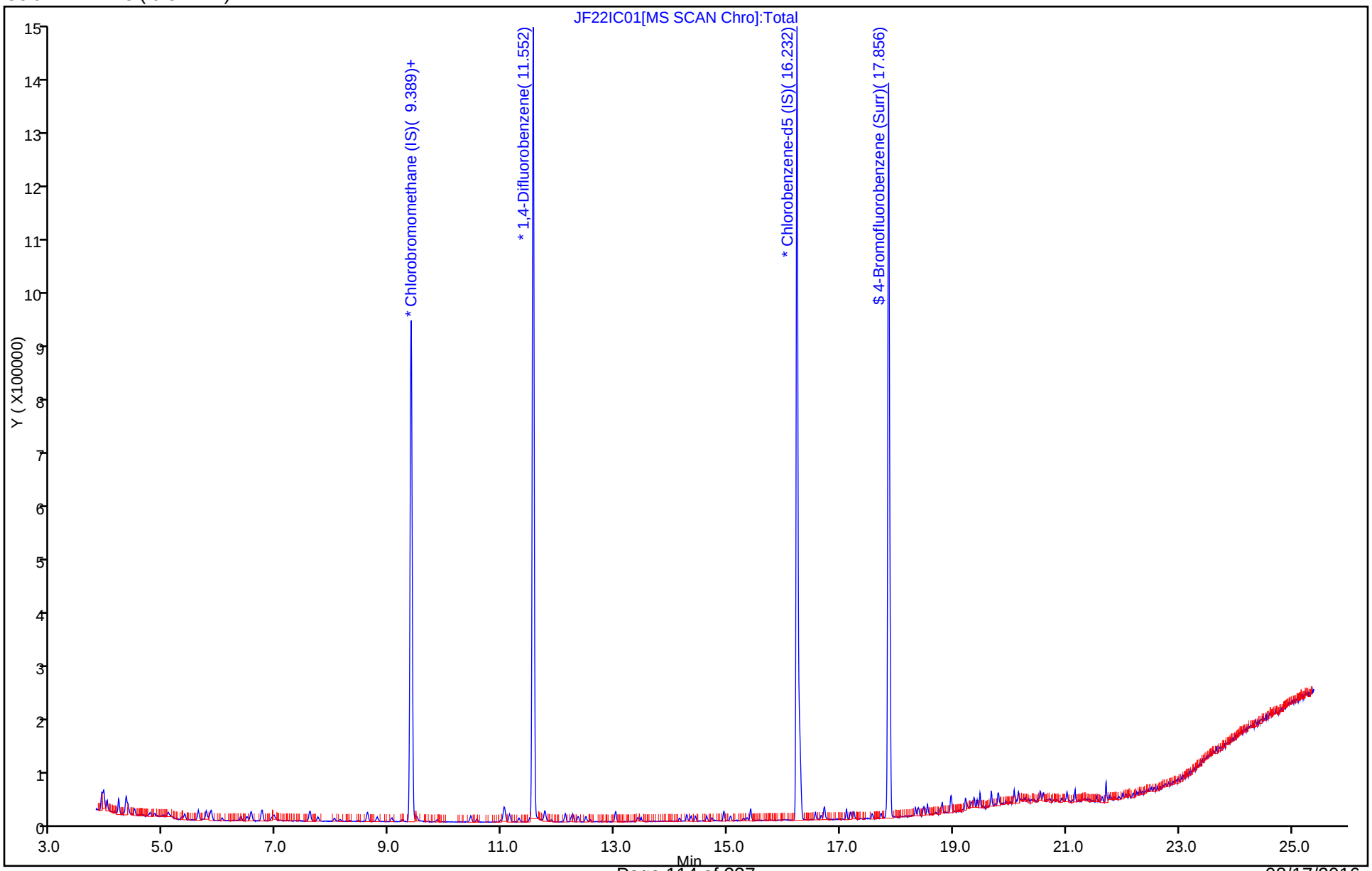
Report Date: 27-Jun-2016 15:12:00 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC01.D

Injection Date:	22-Jun-2016 15:49:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L1			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

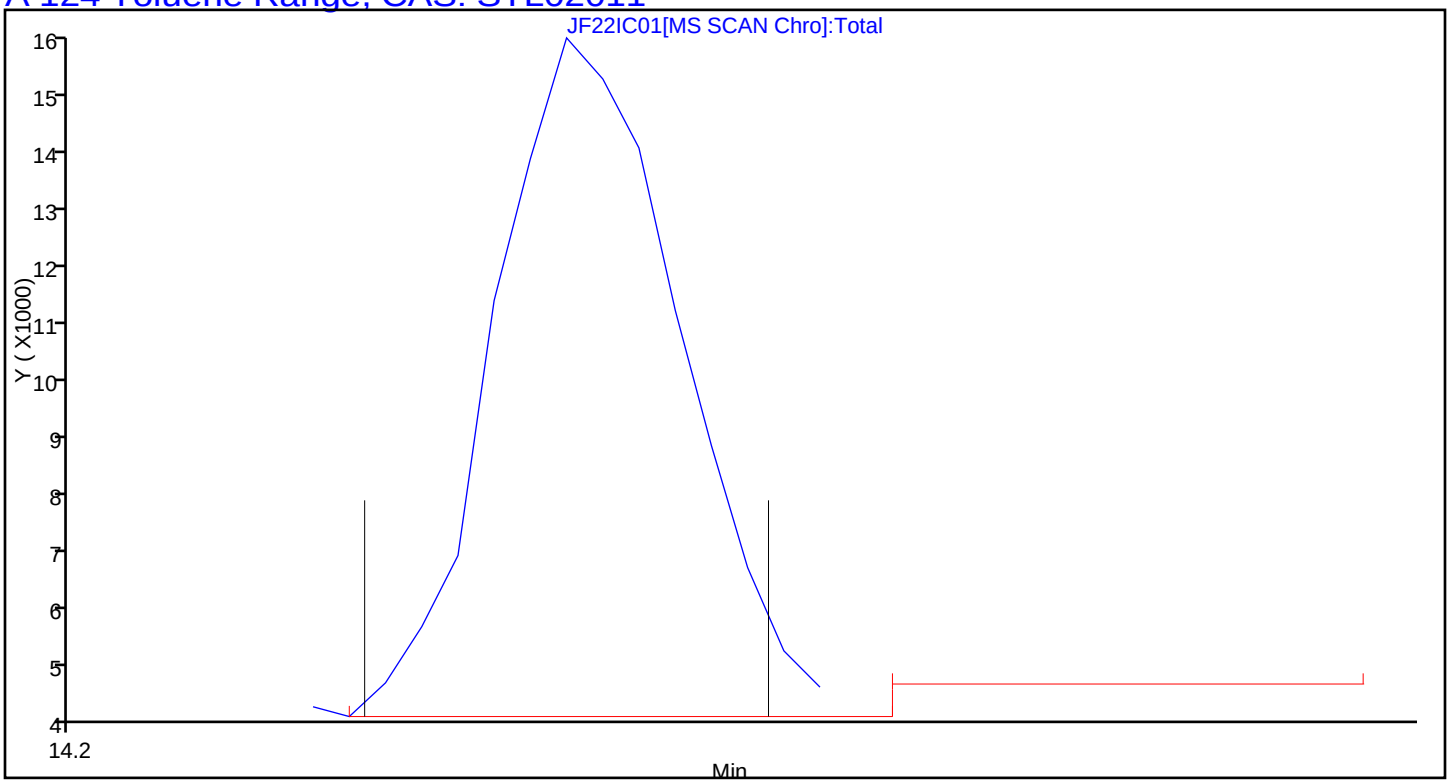


Report Date: 27-Jun-2016 15:12:01 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC01.D				
Injection Date:	22-Jun-2016 15:49:30	Instrument ID:	MJ		
Lims ID:	IC L1				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	2
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC02.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 22-Jun-2016 16:44:30 ALS Bottle#: 7 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044591
Misc. Info.: J062216,T15,,140-0003070-003
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:04 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:41:42

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.387	9.389	-0.002	90	343006	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.550	11.552	-0.002	95	1509826	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.230	16.231	-0.001	87	1272601	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	729043	4.00	3.88	
6 Chlorodifluoromethane	67	3.927	3.925	0.002	96	3758	0.0784	0.0883	
7 Propene	41	3.943	3.939	0.004	96	10186	0.0784	0.1029	
8 Dichlorodifluoromethane	85	3.992	3.995	-0.003	99	32532	0.0784	0.0863	
9 Chloromethane	52	4.191	4.196	-0.005	52	2941	0.0784	0.1104	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	88	18190	0.0784	0.0869	
11 Acetaldehyde	44	4.363	4.364	-0.001	97	24483	0.3920	1.06	
12 Vinyl chloride	62	4.384	4.384	0.000	96	7861	0.0784	0.0871	
14 Butadiene	54	4.476	4.479	-0.003	74	5823	0.0784	0.0982	
13 Butane	43	4.481	4.480	0.001	80	10001	0.0784	0.1014	
15 Bromomethane	94	4.831	4.837	-0.006	97	8158	0.0784	0.0960	
16 Chloroethane	64	4.992	4.991	0.001	91	2955	0.0784	0.0912	
17 Ethanol	31	5.073	5.081	-0.008	94	12837	0.3920	0.9686	
18 Vinyl bromide	106	5.326	5.323	0.003	96	8179	0.0784	0.0814	
19 2-Methylbutane	43	5.374	5.372	0.002	88	11034	0.0784	0.0933	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	98	29427	0.0784	0.0844	
21 Acrolein	56	5.622	5.623	-0.001	39	7980	0.0784	0.2770	
22 Acetonitrile	40	5.702	5.698	0.004	97	3596	0.0784	0.1139	
23 Acetone	58	5.751	5.747	0.004	99	23950	0.2352	0.6095	
24 Isopropyl alcohol	45	5.821	5.819	0.002	93	38136	0.2352	0.2912	
25 Pentane	72	5.848	5.845	0.003	96	1132	0.0784	0.0766	
26 Ethyl ether	31	6.031	6.027	0.004	91	6312	0.0784	0.0941	
27 1,1-Dichloroethene	96	6.369	6.368	0.001	93	8665	0.0784	0.0854	
28 2-Methyl-2-propanol	59	6.466	6.457	0.009	92	15888	0.0784	0.0889	
29 Acrylonitrile	53	6.477	6.479	-0.002	93	5664	0.0784	0.0942	
30 1,1,2-Trichloro-1,2,2-trif	101	6.547	6.548	-0.001	95	20438	0.0784	0.0862	
31 Methylene Chloride	84	6.741	6.739	0.002	97	12357	0.0784	0.1311	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.751	6.753	-0.002	97	8939	0.0784	0.0988	
33 Carbon disulfide	76	6.913	6.916	-0.003	98	24918	0.0784	0.0865	
34 trans-1,2-Dichloroethene	96	7.591	7.587	0.004	94	8553	0.0784	0.0840	
35 2-Methylpentane	43	7.591	7.597	-0.006	94	18427	0.0784	0.0886	
36 Methyl tert-butyl ether	73	7.725	7.715	0.010	97	20924	0.0784	0.1000	
37 1,1-Dichloroethane	63	8.021	8.025	-0.004	99	18027	0.0784	0.0870	
38 Vinyl acetate	43	8.123	8.125	-0.002	100	16495	0.0784	0.0961	
39 2-Butanone (MEK)	72	8.602	8.597	0.005	86	3657	0.0784	0.1111	
40 Hexane	56	8.607	8.613	-0.006	73	7336	0.0784	0.0821	
41 Isopropyl ether	45	8.779	8.773	0.006	97	24409	0.0784	0.0942	
42 cis-1,2-Dichloroethene	96	9.043	9.044	-0.001	98	8942	0.0784	0.0881	
43 Ethyl acetate	43	9.231	9.224	0.007	98	12337	0.0784	0.0900	
44 Chloroform	83	9.393	9.395	-0.002	29	19881	0.0784	0.0866	
45 Tert-butyl ethyl ether	59	9.479	9.471	0.008	94	23991	0.0784	0.0936	
46 Tetrahydrofuran	42	9.834	9.821	0.013	92	6902	0.0784	0.0944	
47 1,1,1-Trichloroethane	97	10.442	10.443	-0.001	97	21626	0.0784	0.0814	
48 1,2-Dichloroethane	62	10.560	10.556	0.004	96	14298	0.0784	0.0867	
49 n-Butanol	31	10.969	10.957	0.012	78	1466	0.0784	0.0637	
50 Cyclohexane	69	11.033	11.031	0.002	68	3400	0.0784	0.0769	
51 Benzene	78	11.028	11.031	-0.003	97	24967	0.0784	0.0947	
52 Carbon tetrachloride	117	11.050	11.055	-0.005	97	22543	0.0784	0.0803	
53 2,3-Dimethylpentane	71	11.141	11.134	0.007	89	5072	0.0784	0.0836	
54 Thiophene	84	11.297	11.302	-0.005	98	12865	0.0784	0.0855	
55 Tert-amyl methyl ether	73	11.485	11.480	0.005	96	18473	0.0784	0.0944	
56 Isooctane	57	11.760	11.759	0.001	98	45542	0.0784	0.0917	
57 n-Heptane	71	12.120	12.122	-0.002	87	7734	0.0784	0.0889	
58 1,2-Dichloropropane	63	12.228	12.227	0.001	87	9425	0.0784	0.0886	
59 Trichloroethene	130	12.255	12.257	-0.002	92	11078	0.0784	0.0833	
60 Dibromomethane	93	12.341	12.348	-0.007	95	9666	0.0784	0.0821	
62 Dichlorobromomethane	83	12.481	12.487	-0.006	98	16234	0.0784	0.0756	
61 1,4-Dioxane	88	12.513	12.501	0.012	68	2200	0.0784	0.0700	
63 Methyl methacrylate	41	12.561	12.558	0.003	91	5990	0.0784	0.0737	
64 Methylcyclohexane	83	13.013	13.014	-0.001	90	17392	0.0784	0.0860	
65 4-Methyl-2-pentanone (MIBK	43	13.406	13.399	0.007	95	15075	0.0784	0.0845	
66 cis-1,3-Dichloropropene	75	13.470	13.466	0.004	92	10749	0.0784	0.0774	
67 trans-1,3-Dichloropropene	75	14.148	14.149	-0.001	98	7861	0.0784	0.0755	
68 Toluene	91	14.272	14.277	-0.005	93	25117	0.0784	0.0927	
69 1,1,2-Trichloroethane	83	14.347	14.349	-0.002	91	6816	0.0784	0.0868	
70 2-Methylthiophene	97	14.428	14.429	-0.001	96	18043	0.0784	0.0799	
71 3-Methylthiophene	97	14.627	14.628	-0.001	98	17901	0.0784	0.0826	
72 2-Hexanone	58	14.724	14.717	0.007	96	5502	0.0784	0.0697	
73 n-Octane	85	14.934	14.931	0.003	90	7543	0.0784	0.0850	
74 Chlorodibromomethane	129	15.052	15.053	-0.001	96	13827	0.0784	0.0736	
75 Ethylene Dibromide	107	15.342	15.344	-0.002	95	11892	0.0784	0.0829	
76 Tetrachloroethene	129	15.407	15.408	-0.001	94	10964	0.0784	0.0863	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	93	25203	0.0784	0.0997	
78 Chlorobenzene	112	16.278	16.279	-0.001	65	18658	0.0784	0.0916	
79 Ethylbenzene	91	16.558	16.557	0.001	99	28810	0.0784	0.0932	
80 2-Ethylthiophene	97	16.660	16.661	-0.001	98	20217	0.0784	0.0865	
81 m-Xylene & p-Xylene	91	16.714	16.715	-0.001	99	43588	0.1568	0.1817	
82 n-Nonane	57	17.112	17.109	0.003	88	14679	0.0784	0.0827	
83 Bromoform	173	17.177	17.179	-0.002	80	8464	0.0784	0.0599	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.182	17.181	0.001	97	10805	0.0784	0.0732	
85 o-Xylene	91	17.241	17.242	-0.001	99	24427	0.0784	0.0948	
86 1,1,2,2-Tetrachloroethane	83	17.564	17.563	0.001	96	13340	0.0784	0.0813	
87 1,2,3-Trichloropropane	110	17.715	17.720	-0.005	95	3572	0.0784	0.0768	
88 Isopropylbenzene	105	17.812	17.815	-0.003	90	31762	0.0784	0.0980	
89 N-Propylbenzene	120	18.333	18.333	0.000	99	6367	0.0784	0.0783	
90 2-Chlorotoluene	126	18.382	18.384	-0.002	96	7267	0.0784	0.0846	
91 4-Ethyltoluene	105	18.479	18.477	0.002	98	22005	0.0784	0.0798	
92 1,3,5-Trimethylbenzene	120	18.549	18.545	0.004	92	12831	0.0784	0.0880	
93 Alpha Methyl Styrene	118	18.769	18.771	-0.002	88	5508	0.0784	0.0545	
94 n-Decane	57	18.807	18.805	0.002	89	15057	0.0784	0.0830	
95 tert-Butylbenzene	119	18.957	18.958	-0.001	90	28142	0.0784	0.0970	
96 1,2,4-Trimethylbenzene	105	18.974	18.971	0.003	96	21039	0.0784	0.0852	
97 sec-Butylbenzene	105	19.221	19.218	0.003	98	33229	0.0784	0.0923	
98 1,3-Dichlorobenzene	146	19.248	19.244	0.004	97	9415	0.0784	0.0746	
99 Benzyl chloride	91	19.318	19.315	0.003	96	7380	0.0784	0.0596	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	91	7696	0.0784	0.0713	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	96	24457	0.0784	0.0827	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	98	17021	0.0784	0.0868	
103 Butylcyclohexane	83	19.479	19.476	0.003	89	19863	0.0784	0.0928	
104 2,3-Dihydroindene	117	19.678	19.676	0.002	92	17042	0.0784	0.0826	
105 1,2-Dichlorobenzene	146	19.678	19.680	-0.002	73	9676	0.0784	0.0754	
106 n-Butylbenzene	91	19.797	19.797	0.000	97	16960	0.0784	0.0743	
107 Indene	116	19.802	19.805	-0.003	50	7619	0.0784	0.0644	
108 Undecane	57	20.082	20.083	-0.001	92	13304	0.0784	0.0768	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.157	20.158	-0.001	97	14022	0.0784	0.0729	
110 1,2-Dibromo-3-Chloropropan	157	20.275	20.271	0.004	87	2060	0.0784	0.0488	
111 1,2,4,5-Tetramethylbenzene	119	20.544	20.545	-0.001	96	17750	0.0784	0.0755	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	93	11637	0.0784	0.0767	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	96	14446	0.0784	0.0772	
114 Dodecane	57	21.158	21.159	-0.001	94	10958	0.0784	0.0712	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	89	2368	0.0784	0.0695	
116 Naphthalene	128	21.540	21.540	0.000	96	4935	0.0784	0.0546	
117 Benzo(b)thiophene	134	21.636	21.633	0.003	94	2326	0.0784	0.0734	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	12392	0.0784	0.0913	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	92	2292	0.0784	0.0613	
120 2-Methylnaphthalene	142	22.314	22.314	0.000	94	1420	0.2450	0.2409	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	95	1563	0.2450	0.2525	
A 124 Toluene Range	1	14.272	(14.242-14.302)		0	52921	0.0784	0.0880	
S 126 Xylenes, Total	100				0		0.2352	0.2765	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1721	

Reagents:

40L12DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

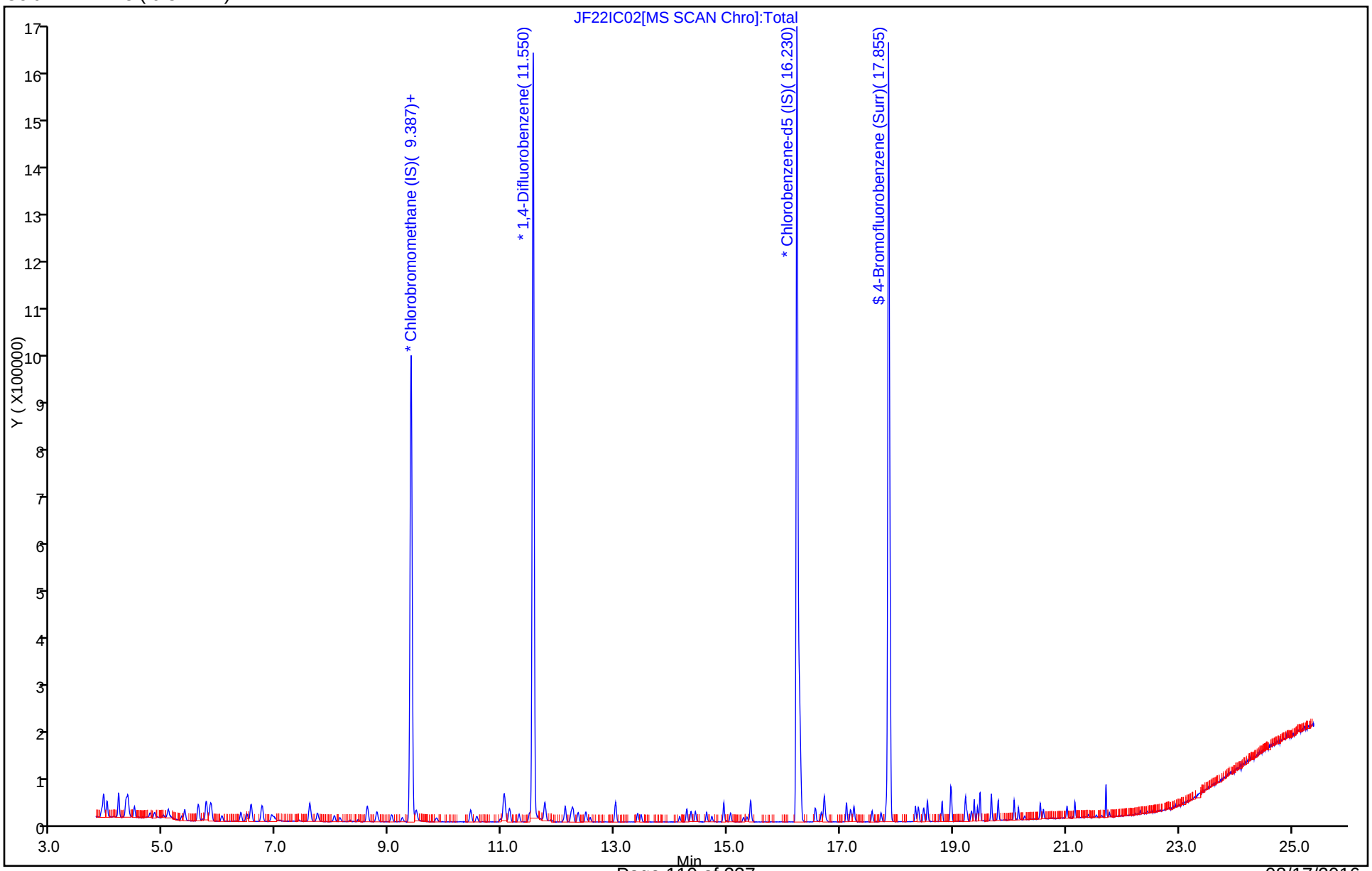
Report Date: 27-Jun-2016 15:12:05 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC02.D

Injection Date:	22-Jun-2016 16:44:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L2			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

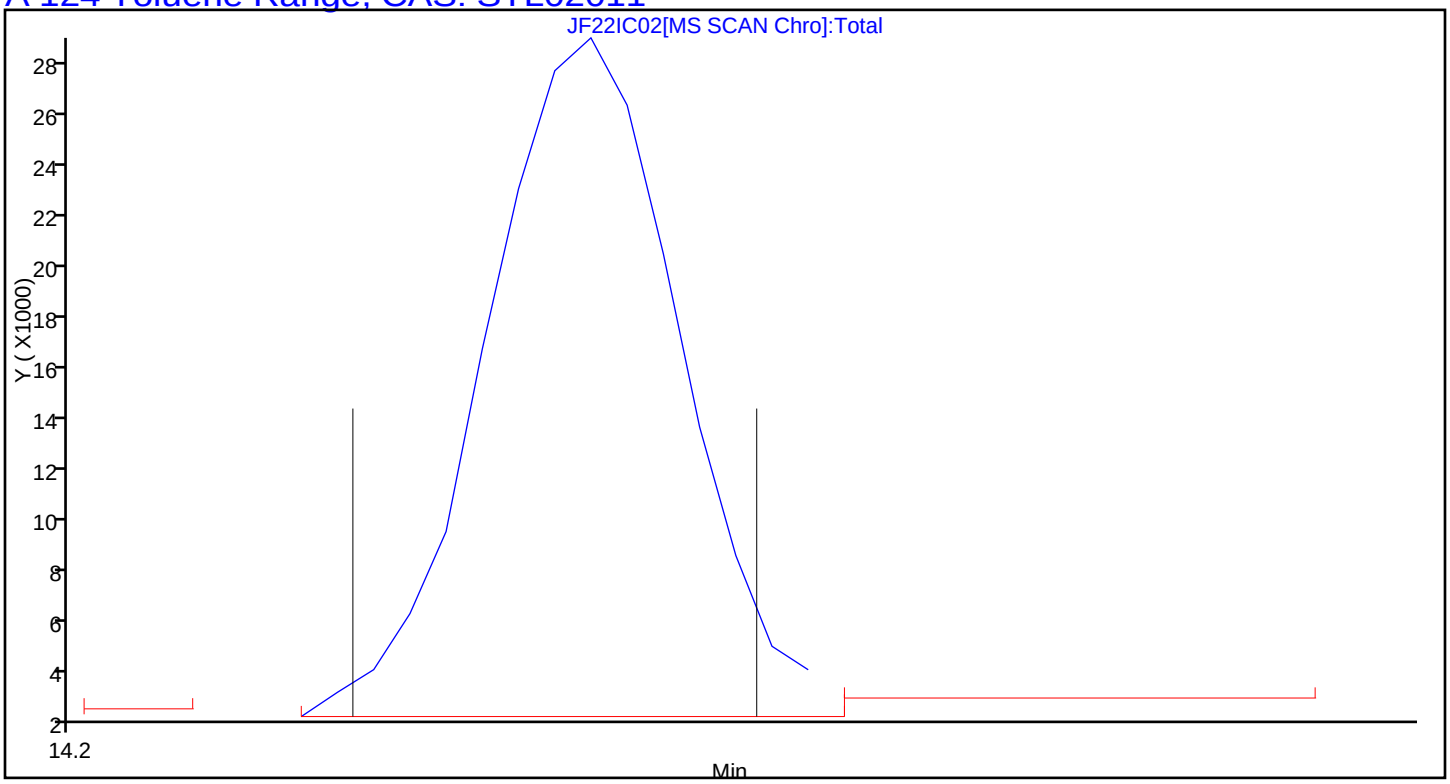


Report Date: 27-Jun-2016 15:12:05 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC02.D				
Injection Date:	22-Jun-2016 16:44:30	Instrument ID:	MJ		
Lims ID:	IC L2				
Client ID:					
Operator ID:	7126	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC03.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 22-Jun-2016 17:38:30 ALS Bottle#: 8 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044592
Misc. Info.: J062216,T15,,140-0003070-004
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:09 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:42:49

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.389	9.389	0.000	90	319566	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	95	1381724	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	89	1128997	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.856	17.854	0.002	91	640074	4.00	3.84	
6 Chlorodifluoromethane	67	3.929	3.925	0.004	95	6560	0.1587	0.1654	
7 Propene	41	3.939	3.939	0.000	98	16876	0.1587	0.1830	
8 Dichlorodifluoromethane	85	3.998	3.995	0.003	99	59316	0.1587	0.1689	
9 Chloromethane	52	4.203	4.196	0.007	52	5046	0.1587	0.2033	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	88	32599	0.1587	0.1672	
11 Acetaldehyde	44	4.370	4.364	0.006	98	43064	0.7933	2.00	
12 Vinyl chloride	62	4.386	4.384	0.002	97	14061	0.1587	0.1671	
14 Butadiene	54	4.483	4.479	0.004	71	9528	0.1587	0.1725	
13 Butane	43	4.483	4.480	0.003	82	17623	0.1587	0.1919	
15 Bromomethane	94	4.838	4.837	0.001	95	13738	0.1587	0.1735	
16 Chloroethane	64	4.994	4.991	0.003	94	5153	0.1587	0.1708	
17 Ethanol	31	5.080	5.081	-0.001	93	12374	0.7933	1.00	
18 Vinyl bromide	106	5.322	5.323	-0.001	98	15295	0.1587	0.1634	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	19045	0.1587	0.1728	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	54177	0.1587	0.1667	
21 Acrolein	56	5.623	5.623	0.000	89	5654	0.1587	0.2107	
22 Acetonitrile	40	5.693	5.698	-0.005	99	5491	0.1587	0.1866	
23 Acetone	58	5.758	5.747	0.011	98	41326	0.4760	1.13	
24 Isopropyl alcohol	45	5.817	5.819	-0.002	96	66795	0.4760	0.5475	
25 Pentane	72	5.844	5.845	-0.001	95	2365	0.1587	0.1719	
26 Ethyl ether	31	6.032	6.027	0.005	92	10577	0.1587	0.1692	
27 1,1-Dichloroethene	96	6.371	6.368	0.003	93	14550	0.1587	0.1539	
28 2-Methyl-2-propanol	59	6.462	6.457	0.005	93	27692	0.1587	0.1663	
29 Acrylonitrile	53	6.478	6.479	-0.001	94	8920	0.1587	0.1593	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	96	36165	0.1587	0.1637	
31 Methylene Chloride	84	6.737	6.739	-0.002	98	17691	0.1587	0.2014	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.753	6.753	0.000	95	13881	0.1587	0.1647	
33 Carbon disulfide	76	6.920	6.916	0.004	98	43276	0.1587	0.1613	
34 trans-1,2-Dichloroethene	96	7.587	7.587	0.000	94	15820	0.1587	0.1667	
35 2-Methylpentane	43	7.603	7.597	0.006	93	33213	0.1587	0.1715	
36 Methyl tert-butyl ether	73	7.732	7.715	0.017	96	31229	0.1587	0.1602	
37 1,1-Dichloroethane	63	8.022	8.025	-0.003	99	31797	0.1587	0.1647	
38 Vinyl acetate	43	8.125	8.125	-0.001	100	24129	0.1587	0.1510	
39 2-Butanone (MEK)	72	8.603	8.597	0.006	86	6456	0.1587	0.2105	
40 Hexane	56	8.614	8.613	0.001	78	13952	0.1587	0.1675	
41 Isopropyl ether	45	8.775	8.773	0.002	96	38161	0.1587	0.1581	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	98	15396	0.1587	0.1629	
43 Ethyl acetate	43	9.222	9.224	-0.002	98	19949	0.1587	0.1561	
44 Chloroform	83	9.394	9.395	-0.001	41	36514	0.1587	0.1707	
45 Tert-butyl ethyl ether	59	9.469	9.471	-0.002	95	37259	0.1587	0.1560	
46 Tetrahydrofuran	42	9.835	9.821	0.014	92	10627	0.1587	0.1560	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	95	41035	0.1587	0.1659	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	97	26030	0.1587	0.1725	
49 n-Butanol	31	10.959	10.957	0.002	84	2938	0.1587	0.1395	
50 Cyclohexane	69	11.035	11.031	0.004	71	6492	0.1587	0.1605	
51 Benzene	78	11.029	11.031	-0.002	97	43574	0.1587	0.1806	
52 Carbon tetrachloride	117	11.056	11.055	0.001	97	38903	0.1587	0.1515	
53 2,3-Dimethylpentane	71	11.132	11.134	-0.002	89	9283	0.1587	0.1673	
54 Thiophene	84	11.304	11.302	0.002	99	22661	0.1587	0.1645	
55 Tert-amyl methyl ether	73	11.487	11.480	0.007	95	28733	0.1587	0.1655	
56 Isooctane	57	11.761	11.759	0.002	98	80847	0.1587	0.1779	
57 n-Heptane	71	12.121	12.122	-0.001	90	13718	0.1587	0.1722	
58 1,2-Dichloropropane	63	12.229	12.227	0.002	89	15859	0.1587	0.1630	
59 Trichloroethene	130	12.256	12.257	-0.001	95	20459	0.1587	0.1681	
60 Dibromomethane	93	12.353	12.348	0.005	94	17561	0.1587	0.1630	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	30563	0.1587	0.1556	
61 1,4-Dioxane	88	12.514	12.501	0.013	87	4364	0.1587	0.1518	
63 Methyl methacrylate	41	12.563	12.558	0.005	90	9937	0.1587	0.1337	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	31688	0.1587	0.1712	
65 4-Methyl-2-pentanone (MIBK	43	13.402	13.399	0.003	96	36781	0.1587	0.2254	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	18741	0.1587	0.1475	
67 trans-1,3-Dichloropropene	75	14.150	14.149	0.001	97	13213	0.1587	0.1431	
68 Toluene	91	14.279	14.277	0.002	93	40141	0.1587	0.1670	
69 1,1,2-Trichloroethane	83	14.349	14.349	0.000	97	11494	0.1587	0.1650	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	34902	0.1587	0.1742	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	31597	0.1587	0.1643	
72 2-Hexanone	58	14.720	14.717	0.003	96	9927	0.1587	0.1418	
73 n-Octane	85	14.930	14.931	-0.001	91	13336	0.1587	0.1694	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	25651	0.1587	0.1539	
75 Ethylene Dibromide	107	15.349	15.344	0.005	97	20400	0.1587	0.1603	
76 Tetrachloroethene	129	15.408	15.408	0.000	94	19514	0.1587	0.1732	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	95	43660	0.1587	0.1948	
78 Chlorobenzene	112	16.280	16.279	0.001	78	31203	0.1587	0.1726	
79 Ethylbenzene	91	16.560	16.557	0.003	99	43894	0.1587	0.1601	
80 2-Ethylthiophene	97	16.662	16.661	0.001	96	32238	0.1587	0.1556	
81 m-Xylene & p-Xylene	91	16.716	16.715	0.001	99	68375	0.3173	0.3213	
82 n-Nonane	57	17.108	17.109	-0.001	88	24448	0.1587	0.1552	
83 Bromoform	173	17.178	17.179	-0.001	85	16198	0.1587	0.1292	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.184	17.181	0.003	98	17123	0.1587	0.1308	
85 o-Xylene	91	17.243	17.242	0.001	98	37556	0.1587	0.1643	
86 1,1,2,2-Tetrachloroethane	83	17.565	17.563	0.002	95	21810	0.1587	0.1498	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	96	6337	0.1587	0.1535	
88 Isopropylbenzene	105	17.818	17.815	0.003	92	47917	0.1587	0.1666	
89 N-Propylbenzene	120	18.335	18.333	0.002	99	10769	0.1587	0.1492	
90 2-Chlorotoluene	126	18.389	18.384	0.005	97	11641	0.1587	0.1528	
91 4-Ethyltoluene	105	18.475	18.477	-0.002	98	36155	0.1587	0.1478	
92 1,3,5-Trimethylbenzene	120	18.545	18.545	0.000	92	20363	0.1587	0.1573	
93 Alpha Methyl Styrene	118	18.776	18.771	0.005	86	10227	0.1587	0.1140	
94 n-Decane	57	18.808	18.805	0.003	89	25509	0.1587	0.1584	
95 tert-Butylbenzene	119	18.959	18.958	0.001	94	42532	0.1587	0.1653	
96 1,2,4-Trimethylbenzene	105	18.975	18.971	0.004	96	33604	0.1587	0.1534	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	98	52355	0.1587	0.1640	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	97	15837	0.1587	0.1415	
99 Benzyl chloride	91	19.314	19.315	-0.001	96	12711	0.1587	0.1157	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	94	12819	0.1587	0.1339	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	96	40217	0.1587	0.1533	
102 1,2,3-Trimethylbenzene	105	19.438	19.432	0.006	97	26836	0.1587	0.1542	
103 Butylcyclohexane	83	19.475	19.476	-0.001	89	30267	0.1587	0.1594	
104 2,3-Dihydroindene	117	19.674	19.676	-0.002	94	26958	0.1587	0.1472	
105 1,2-Dichlorobenzene	146	19.680	19.680	0.000	96	16895	0.1587	0.1484	
106 n-Butylbenzene	91	19.798	19.797	0.001	97	30924	0.1587	0.1527	
107 Indene	116	19.803	19.805	-0.002	93	13681	0.1587	0.1302	
108 Undecane	57	20.083	20.083	0.000	92	25243	0.1587	0.1643	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	97	25618	0.1587	0.1502	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	88	4107	0.1587	0.1097	
111 1,2,4,5-Tetramethylbenzene	119	20.546	20.545	0.001	96	32467	0.1587	0.1557	
112 1,2,3,5-Tetramethylbenzene	119	20.605	20.603	0.002	95	21367	0.1587	0.1587	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	26023	0.1587	0.1568	
114 Dodecane	57	21.159	21.159	0.000	97	24486	0.1587	0.1792	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	91	4052	0.1587	0.1341	
116 Naphthalene	128	21.541	21.540	0.001	97	9172	0.1587	0.1145	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	96	4302	0.1587	0.1529	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	94	20717	0.1587	0.1721	
119 1,2,3-Trichlorobenzene	180	21.778	21.772	0.006	94	4585	0.1587	0.1383	
120 2-Methylnaphthalene	142	22.316	22.314	0.002	95	2771	0.4958	0.5299	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	93	2867	0.4958	0.5222	
A 124 Toluene Range	1	14.279	(14.249-14.309)		0	91878	0.1587	0.1722	
S 126 Xylenes, Total	100				0		0.4760	0.4856	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3296	

Reagents:

40L3DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

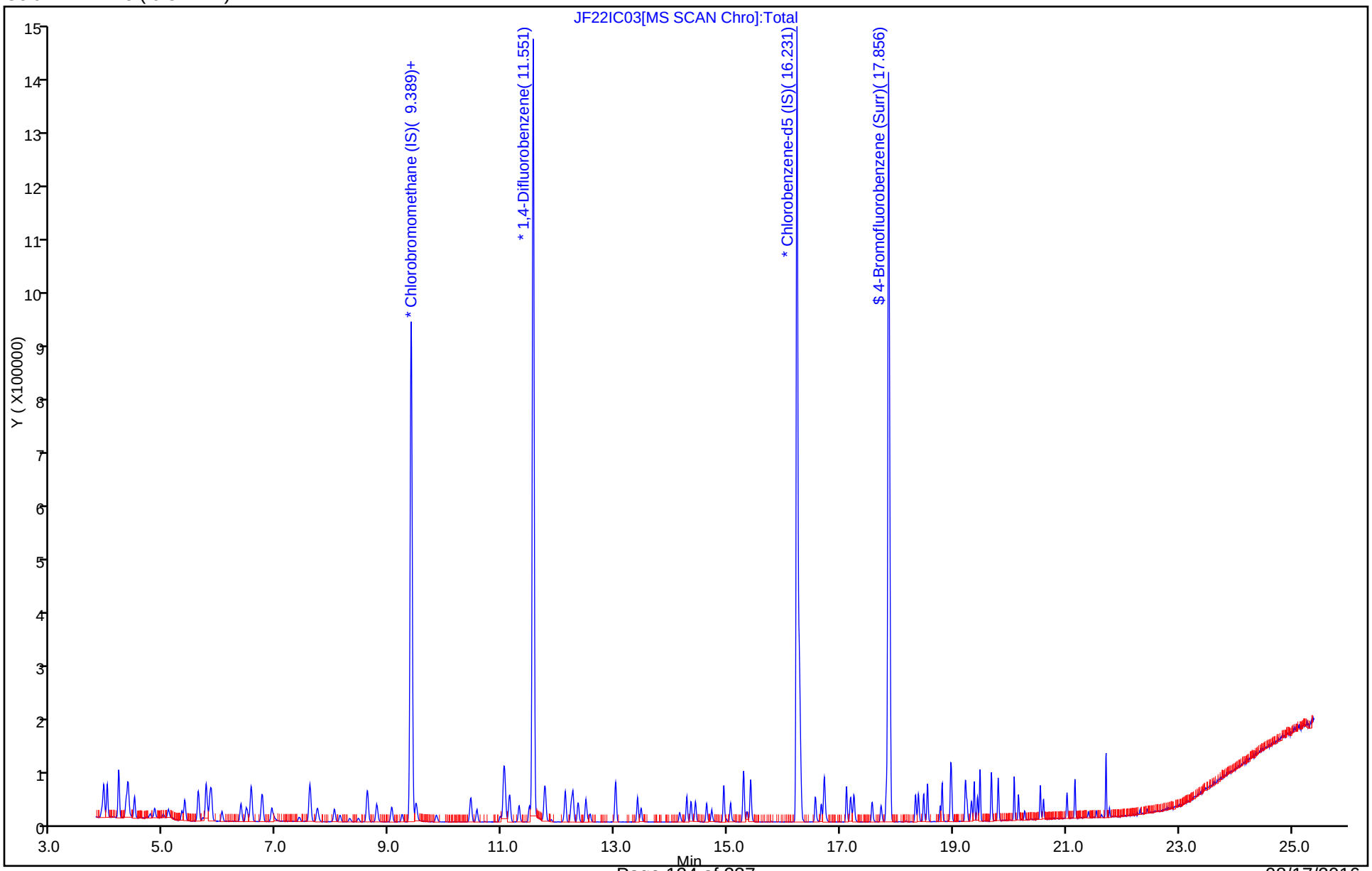
Report Date: 27-Jun-2016 15:12:10 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC03.D

Injection Date:	22-Jun-2016 17:38:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L3			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

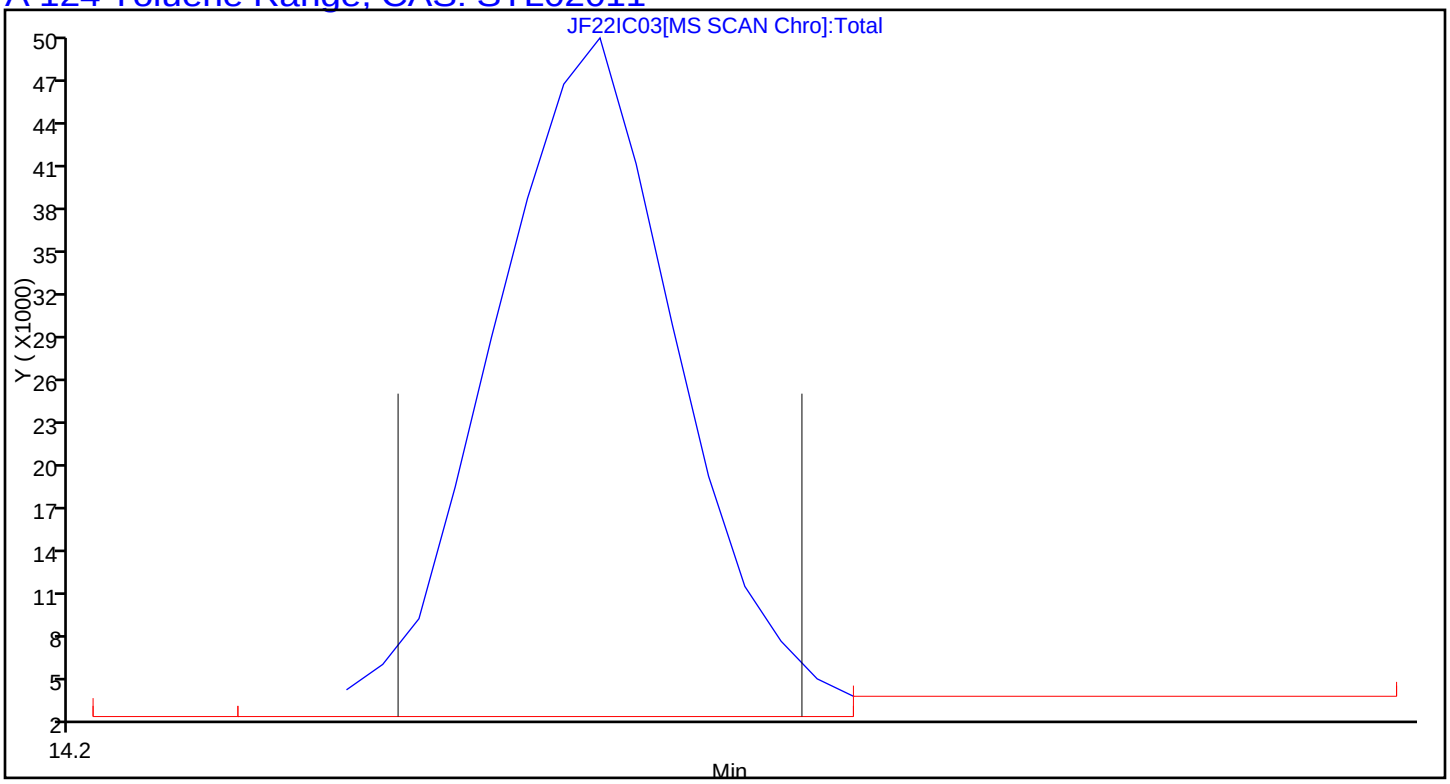


Report Date: 27-Jun-2016 15:12:10 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC03.D				
Injection Date:	22-Jun-2016 17:38:30	Instrument ID:	MJ		
Lims ID:	IC L3				
Client ID:					
Operator ID:	7126	ALS Bottle#:	8	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 22-Jun-2016 18:32:30 ALS Bottle#: 9 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044590
Misc. Info.: J062216,T15,,140-0003070-005
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:14 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 22-Jun-2016 20:12:09

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	93	305958	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.550	11.552	-0.002	96	1294497	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	88	1071346	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	601768	4.00	3.80	
6 Chlorodifluoromethane	67	3.922	3.925	-0.003	95	15197	0.4000	0.4002	
7 Propene	41	3.938	3.939	-0.001	98	38620	0.4000	0.4374	
8 Dichlorodifluoromethane	85	3.998	3.995	0.003	99	140732	0.4000	0.4185	
9 Chloromethane	52	4.197	4.196	0.001	55	10913	0.4000	0.4593	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	88	76736	0.4000	0.4112	
11 Acetaldehyde	44	4.369	4.364	0.005	97	60801	2.00	2.95	
12 Vinyl chloride	62	4.385	4.384	0.001	98	33657	0.4000	0.4179	
14 Butadiene	54	4.476	4.479	-0.003	72	23616	0.4000	0.4467	
13 Butane	43	4.482	4.480	0.002	82	40990	0.4000	0.4661	
15 Bromomethane	94	4.837	4.837	0.000	97	30969	0.4000	0.4086	
16 Chloroethane	64	4.987	4.991	-0.004	96	11567	0.4000	0.4004	
17 Ethanol	31	5.079	5.081	-0.002	92	24561	2.00	2.08	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	35692	0.4000	0.3983	
19 2-Methylbutane	43	5.375	5.372	0.003	90	45429	0.4000	0.4306	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	99	127417	0.4000	0.4095	
21 Acrolein	56	5.622	5.623	-0.001	89	10026	0.4000	0.3902	
22 Acetonitrile	40	5.692	5.698	-0.006	97	10126	0.4000	0.3595	
23 Acetone	58	5.746	5.747	-0.001	98	56991	1.20	1.63	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	91	146107	1.20	1.25	
25 Pentane	72	5.843	5.845	-0.002	98	5773	0.4000	0.4382	
26 Ethyl ether	31	6.031	6.027	0.004	88	22404	0.4000	0.3744	
27 1,1-Dichloroethene	96	6.365	6.368	-0.003	93	35955	0.4000	0.3972	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.006	93	62382	0.4000	0.3913	
29 Acrylonitrile	53	6.478	6.479	-0.001	91	18989	0.4000	0.3541	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	96	86503	0.4000	0.4090	
31 Methylene Chloride	84	6.741	6.739	0.002	98	36114	0.4000	0.4295	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	95	32947	0.4000	0.4083	
33 Carbon disulfide	76	6.913	6.916	-0.003	99	101542	0.4000	0.3953	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	93	36395	0.4000	0.4006	
35 2-Methylpentane	43	7.597	7.597	-0.001	93	77661	0.4000	0.4188	
36 Methyl tert-butyl ether	73	7.715	7.715	0.000	97	69473	0.4000	0.3722	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	99	76286	0.4000	0.4127	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	53117	0.4000	0.3471	
39 2-Butanone (MEK)	72	8.597	8.597	0.000	86	12150	0.4000	0.4137	
40 Hexane	56	8.613	8.613	0.000	85	33402	0.4000	0.4189	
41 Isopropyl ether	45	8.775	8.773	0.002	97	85916	0.4000	0.3718	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	99	36349	0.4000	0.4017	
43 Ethyl acetate	43	9.226	9.224	0.002	99	46813	0.4000	0.3827	
44 Chloroform	83	9.393	9.395	-0.002	94	85067	0.4000	0.4153	
45 Tert-butyl ethyl ether	59	9.474	9.471	0.003	95	82013	0.4000	0.3586	
46 Tetrahydrofuran	42	9.829	9.821	0.008	94	24321	0.4000	0.3729	
47 1,1,1-Trichloroethane	97	10.442	10.443	-0.001	96	98335	0.4000	0.4151	
48 1,2-Dichloroethane	62	10.555	10.556	-0.001	98	59968	0.4000	0.4241	
49 n-Butanol	31	10.959	10.957	0.002	80	7131	0.4000	0.3614	
50 Cyclohexane	69	11.029	11.031	-0.002	73	16308	0.4000	0.4304	
51 Benzene	78	11.034	11.031	0.003	97	97218	0.4000	0.4302	
52 Carbon tetrachloride	117	11.055	11.055	0.000	97	104966	0.4000	0.4363	
53 2,3-Dimethylpentane	71	11.136	11.134	0.002	88	22790	0.4000	0.4384	
54 Thiophene	84	11.298	11.302	-0.004	100	52829	0.4000	0.4093	
55 Tert-amyl methyl ether	73	11.480	11.480	0.000	96	64540	0.4000	0.3918	
56 Isooctane	57	11.760	11.759	0.001	98	186825	0.4000	0.4389	
57 n-Heptane	71	12.121	12.122	-0.001	89	31573	0.4000	0.4231	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	89	36991	0.4000	0.4057	
59 Trichloroethene	130	12.255	12.257	-0.002	94	45929	0.4000	0.4028	
60 Dibromomethane	93	12.347	12.348	-0.001	93	42461	0.4000	0.4206	
62 Dichlorobromomethane	83	12.486	12.487	-0.001	99	72436	0.4000	0.3936	
61 1,4-Dioxane	88	12.503	12.501	0.002	78	10391	0.4000	0.3859	
63 Methyl methacrylate	41	12.551	12.558	-0.007	88	41235	0.4000	0.5921	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	74236	0.4000	0.4282	
65 4-Methyl-2-pentanone (MIBK	43	13.401	13.399	0.002	96	54942	0.4000	0.3594	
66 cis-1,3-Dichloropropene	75	13.465	13.466	-0.001	94	43317	0.4000	0.3639	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	28773	0.4000	0.3284	
68 Toluene	91	14.278	14.277	0.001	93	90623	0.4000	0.3972	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	98	26618	0.4000	0.4028	
70 2-Methylthiophene	97	14.428	14.429	-0.001	97	73492	0.4000	0.3864	
71 3-Methylthiophene	97	14.627	14.628	-0.001	99	73462	0.4000	0.4026	
72 2-Hexanone	58	14.719	14.717	0.002	95	25630	0.4000	0.3857	
73 n-Octane	85	14.934	14.931	0.003	91	30969	0.4000	0.4145	
74 Chlorodibromomethane	129	15.052	15.053	-0.001	98	61819	0.4000	0.3908	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	97	46147	0.4000	0.3821	
76 Tetrachloroethene	129	15.407	15.408	-0.001	94	45924	0.4000	0.4296	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	95	97584	0.4000	0.4588	
78 Chlorobenzene	112	16.279	16.279	0.000	94	68884	0.4000	0.4016	
79 Ethylbenzene	91	16.553	16.557	-0.004	99	96127	0.4000	0.3695	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	71448	0.4000	0.3633	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	99	149302	0.8000	0.7394	
82 n-Nonane	57	17.107	17.109	-0.002	88	57661	0.4000	0.3858	
83 Bromoform	173	17.183	17.179	0.004	92	38261	0.4000	0.3216	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.183	17.181	0.002	99	40993	0.4000	0.3300	
85 o-Xylene	91	17.242	17.242	0.000	97	82015	0.4000	0.3781	
86 1,1,2,2-Tetrachloroethane	83	17.565	17.563	0.002	96	51611	0.4000	0.3735	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	97	14455	0.4000	0.3690	
88 Isopropylbenzene	105	17.812	17.815	-0.003	93	105917	0.4000	0.3882	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	23208	0.4000	0.3389	
90 2-Chlorotoluene	126	18.382	18.384	-0.002	97	26016	0.4000	0.3599	
91 4-Ethyltoluene	105	18.479	18.477	0.002	98	83203	0.4000	0.3585	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	45264	0.4000	0.3686	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	84	23661	0.4000	0.2779	
94 n-Decane	57	18.802	18.805	-0.003	89	58146	0.4000	0.3806	
95 tert-Butylbenzene	119	18.958	18.958	0.000	91	96405	0.4000	0.3947	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	78046	0.4000	0.3754	
97 sec-Butylbenzene	105	19.216	19.218	-0.002	98	117070	0.4000	0.3865	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	98	35808	0.4000	0.3372	
99 Benzyl chloride	91	19.313	19.315	-0.002	97	28941	0.4000	0.2775	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	94	29631	0.4000	0.3261	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	96	92356	0.4000	0.3709	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	99	62027	0.4000	0.3756	
103 Butylcyclohexane	83	19.474	19.476	-0.002	88	68748	0.4000	0.3815	
104 2,3-Dihydroindene	117	19.673	19.676	-0.003	94	62168	0.4000	0.3577	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	96	36785	0.4000	0.3404	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	67262	0.4000	0.3499	
107 Indene	116	19.808	19.805	0.003	91	31634	0.4000	0.3174	
108 Undecane	57	20.082	20.083	-0.001	93	54486	0.4000	0.3738	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	98	55179	0.4000	0.3410	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	93	9842	0.4000	0.2770	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	96	68705	0.4000	0.3471	
112 1,2,3,5-Tetramethylbenzene	119	20.599	20.603	-0.004	95	44578	0.4000	0.3490	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	97	53749	0.4000	0.3412	
114 Dodecane	57	21.158	21.159	-0.001	96	46563	0.4000	0.3592	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	93	8167	0.4000	0.2849	
116 Naphthalene	128	21.540	21.540	0.000	98	18754	0.4000	0.2466	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	97	7658	0.4000	0.2869	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	40131	0.4000	0.3514	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	94	8296	0.4000	0.2636	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	97	3375	1.25	0.6801	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	95	3284	1.25	0.6303	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	201557	0.4000	0.3981	
A 125 C8 Range	1	14.919	(14.901-14.937)		0	300990	0.4000	0.4518	
S 126 Xylenes, Total	100				0		1.20	1.12	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.8023	

Reagents:

40L4DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

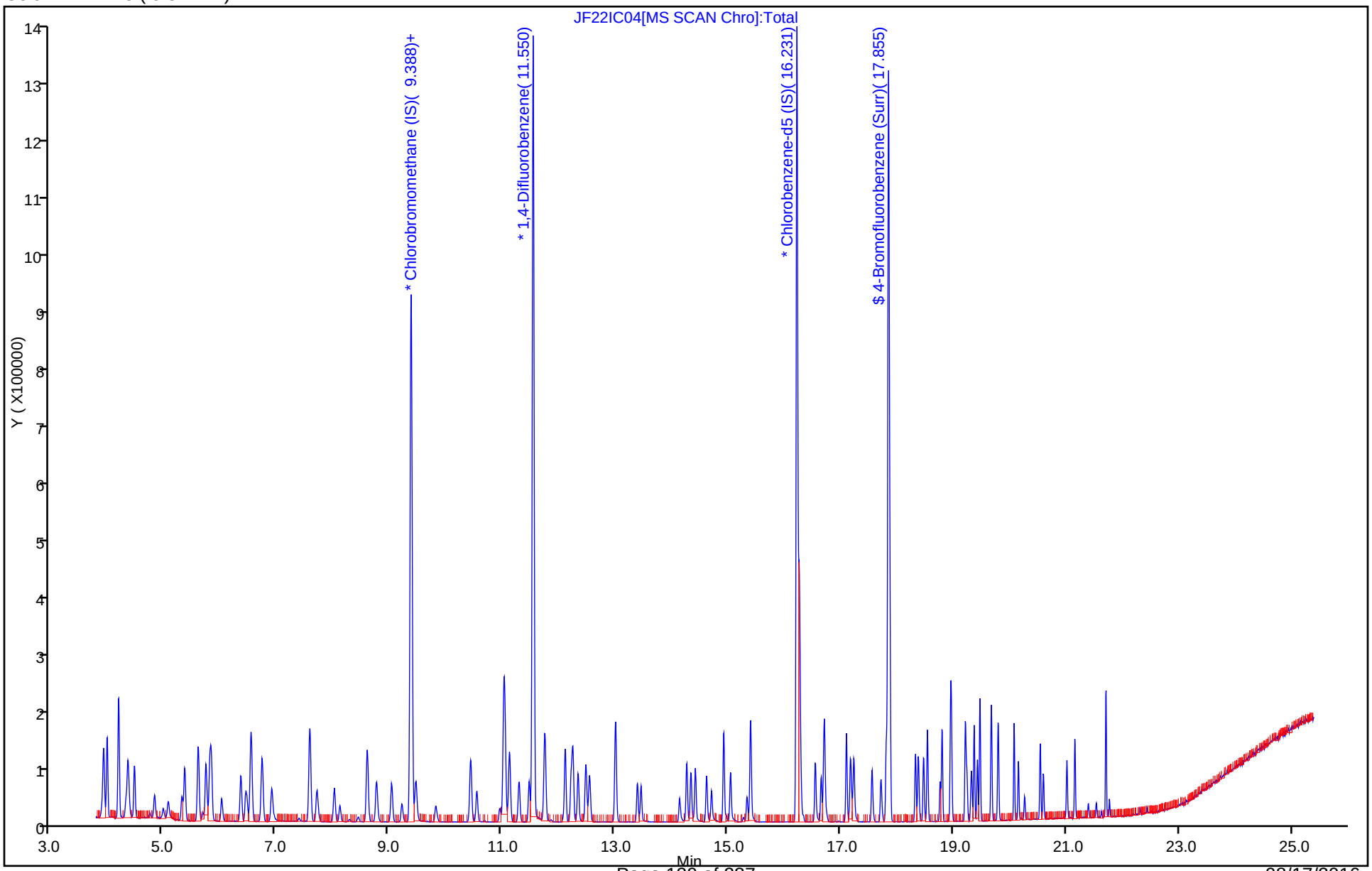
Report Date: 27-Jun-2016 15:12:15 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D

Injection Date:	22-Jun-2016 18:32:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L4			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

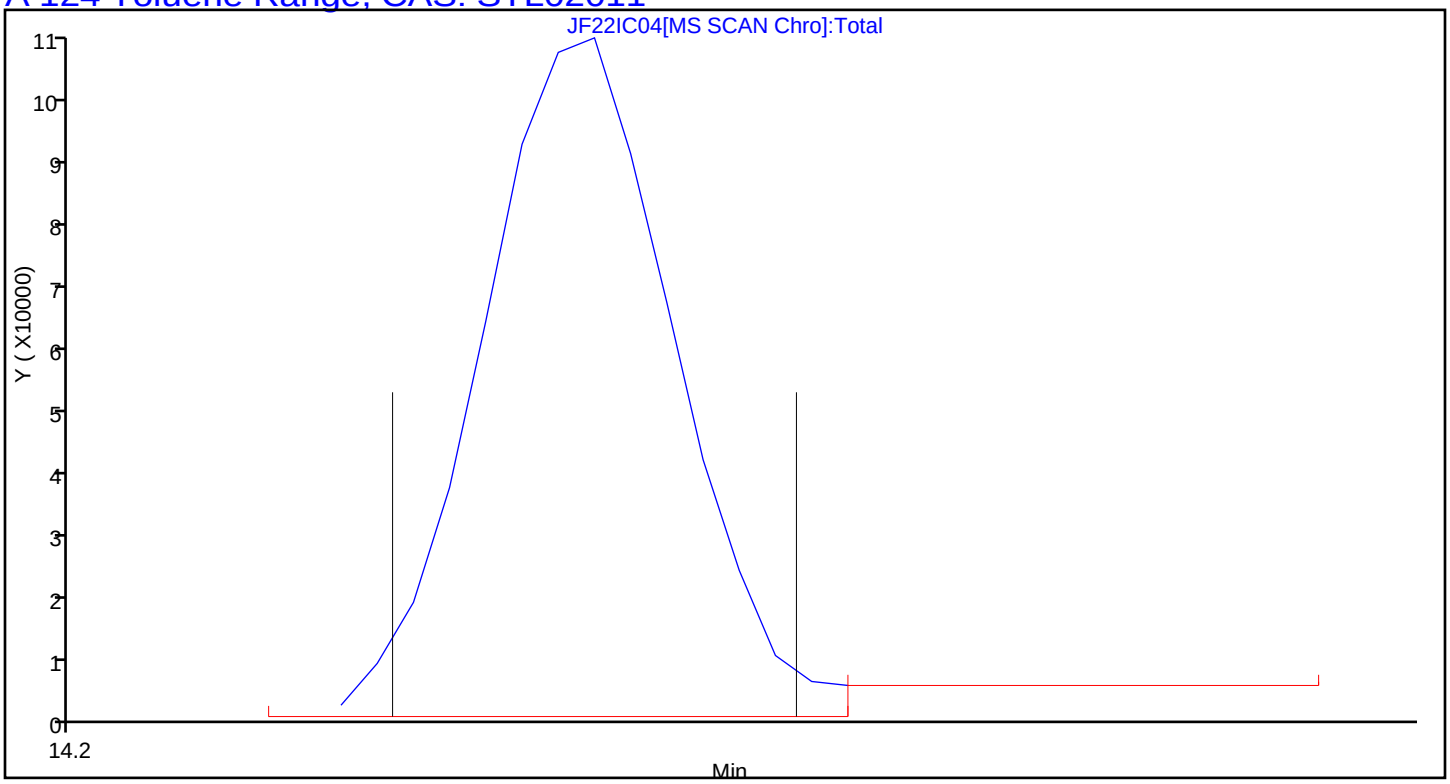


Report Date: 27-Jun-2016 15:12:15 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D				
Injection Date:	22-Jun-2016 18:32:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

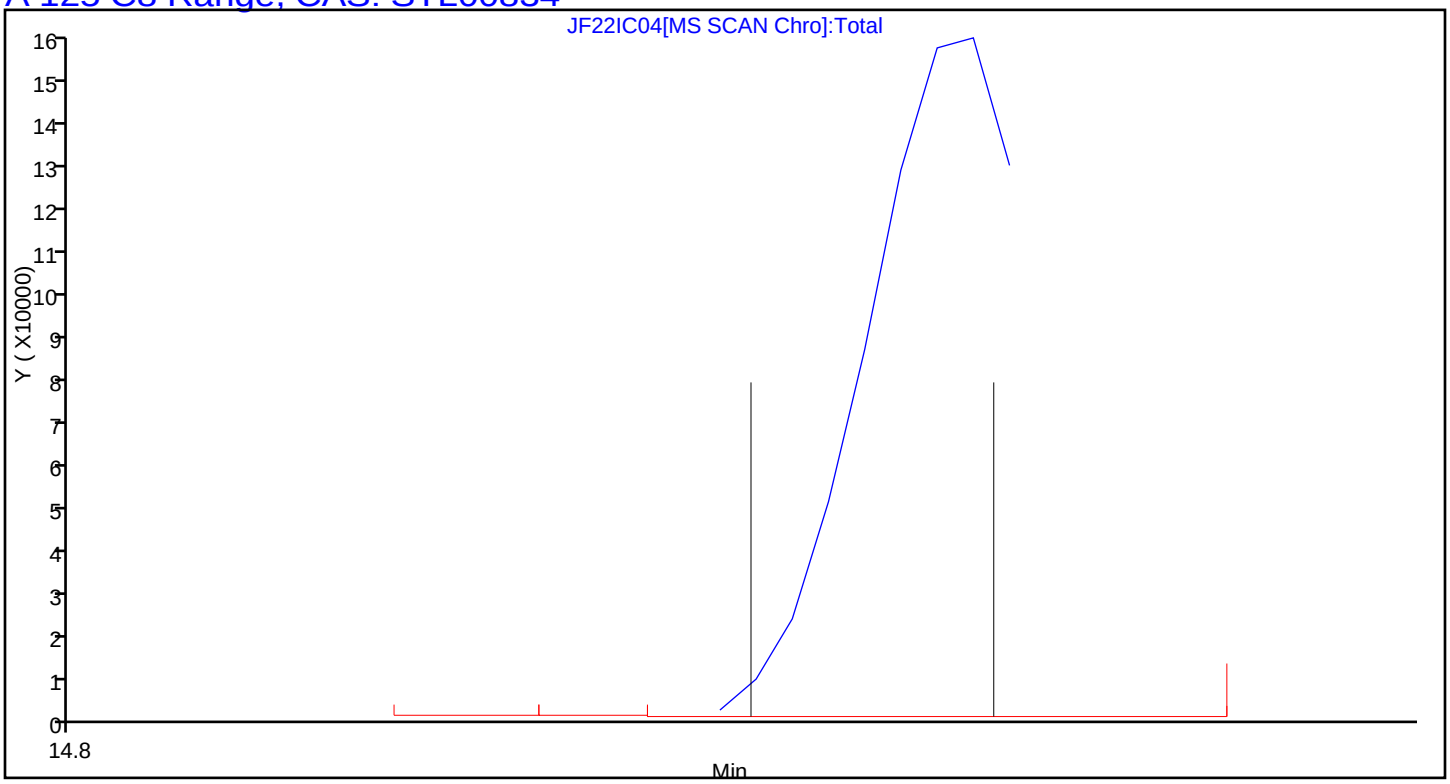


Report Date: 27-Jun-2016 15:12:15 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC04.D				
Injection Date:	22-Jun-2016 18:32:30	Instrument ID:	MJ		
Lims ID:	IC L4				
Client ID:					
Operator ID:	7126	ALS Bottle#:	9	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 22-Jun-2016 19:26:30 ALS Bottle#: 10 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044585
Misc. Info.: J062216,T15,,140-0003070-006
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:18 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 07:44:34

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	92	298784	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.550	11.552	-0.002	95	1278099	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.230	16.231	-0.001	87	1078392	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	634109	4.00	3.98	
6 Chlorodifluoromethane	67	3.922	3.925	-0.003	96	38466	1.00	1.04	
7 Propene	41	3.938	3.939	-0.001	99	94985	1.00	1.10	
8 Dichlorodifluoromethane	85	3.992	3.995	-0.003	99	363576	1.00	1.11	
9 Chloromethane	52	4.197	4.196	0.000	98	25067	1.00	1.08	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	93	199170	1.00	1.09	
11 Acetaldehyde	44	4.363	4.364	-0.001	96	116129	5.01	5.77	
12 Vinyl chloride	62	4.379	4.384	-0.005	99	82084	1.00	1.04	
14 Butadiene	54	4.476	4.479	-0.003	76	57483	1.00	1.11	
13 Butane	43	4.476	4.480	-0.004	81	95645	1.00	1.11	
15 Bromomethane	94	4.837	4.837	0.000	97	76471	1.00	1.03	
16 Chloroethane	64	4.993	4.991	0.002	97	29140	1.00	1.03	
17 Ethanol	31	5.079	5.081	-0.002	91	63110	5.01	5.47	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	92013	1.00	1.05	
19 2-Methylbutane	43	5.369	5.372	-0.003	90	114860	1.00	1.11	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	99	327570	1.00	1.08	
21 Acrolein	56	5.617	5.623	-0.006	91	26432	1.00	1.05	
22 Acetonitrile	40	5.697	5.698	-0.001	98	27782	1.00	1.01	
23 Acetone	58	5.746	5.747	-0.001	98	120631	3.01	3.52	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	92	387973	3.01	3.40	
25 Pentane	72	5.843	5.845	-0.002	98	13885	1.00	1.08	
26 Ethyl ether	31	6.026	6.027	-0.001	92	61651	1.00	1.06	
27 1,1-Dichloroethene	96	6.370	6.368	0.002	93	93723	1.00	1.06	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.007	93	162292	1.00	1.04	
29 Acrylonitrile	53	6.477	6.479	-0.002	94	53165	1.00	1.02	
30 1,1,2-Trichloro-1,2,2-trif	101	6.547	6.548	-0.001	96	223225	1.00	1.08	
31 Methylene Chloride	84	6.741	6.739	0.002	98	85918	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	97	83611	1.00	1.06	
33 Carbon disulfide	76	6.913	6.916	-0.003	98	266620	1.00	1.06	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	94	95290	1.00	1.07	
35 2-Methylpentane	43	7.596	7.597	-0.001	94	202218	1.00	1.12	
36 Methyl tert-butyl ether	73	7.709	7.715	-0.006	97	191223	1.00	1.05	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	100	192069	1.00	1.06	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	156921	1.00	1.05	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	29406	1.00	1.03	
40 Hexane	56	8.613	8.613	0.000	88	84874	1.00	1.09	
41 Isopropyl ether	45	8.769	8.773	-0.004	97	234280	1.00	1.04	
42 cis-1,2-Dichloroethene	96	9.043	9.044	-0.001	99	92758	1.00	1.05	
43 Ethyl acetate	43	9.221	9.224	-0.003	99	127302	1.00	1.07	
44 Chloroform	83	9.393	9.395	-0.002	95	213335	1.00	1.07	
45 Tert-butyl ethyl ether	59	9.468	9.471	-0.003	95	229807	1.00	1.03	
46 Tetrahydrofuran	42	9.818	9.821	-0.003	91	66510	1.00	1.04	
47 1,1,1-Trichloroethane	97	10.442	10.443	-0.001	96	249926	1.00	1.08	
48 1,2-Dichloroethane	62	10.555	10.556	-0.001	99	151004	1.00	1.08	
49 n-Butanol	31	10.953	10.957	-0.004	79	19897	1.00	1.02	
50 Cyclohexane	69	11.028	11.031	-0.003	84	44050	1.00	1.18	
51 Benzene	78	11.034	11.031	0.003	98	242064	1.00	1.08	
52 Carbon tetrachloride	117	11.055	11.055	0.000	97	250454	1.00	1.05	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	88	55859	1.00	1.09	
54 Thiophene	84	11.297	11.302	-0.005	100	138033	1.00	1.08	
55 Tert-amyl methyl ether	73	11.475	11.480	-0.005	96	180342	1.00	1.09	
56 Isooctane	57	11.760	11.759	0.001	98	462412	1.00	1.10	
57 n-Heptane	71	12.120	12.122	-0.002	90	79881	1.00	1.08	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	90	98083	1.00	1.09	
59 Trichloroethene	130	12.255	12.257	-0.002	95	118547	1.00	1.05	
60 Dibromomethane	93	12.346	12.348	-0.002	95	107420	1.00	1.08	
62 Dichlorobromomethane	83	12.486	12.487	-0.001	99	201889	1.00	1.11	
61 1,4-Dioxane	88	12.497	12.501	-0.004	87	28993	1.00	1.09	
63 Methyl methacrylate	41	12.556	12.558	-0.002	91	64577	1.00	0.9392	
64 Methylcyclohexane	83	13.013	13.014	-0.001	92	189819	1.00	1.11	
65 4-Methyl-2-pentanone (MIBK	43	13.395	13.399	-0.004	96	167376	1.00	1.11	
66 cis-1,3-Dichloropropene	75	13.465	13.466	-0.001	94	123970	1.00	1.05	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	96475	1.00	1.09	
68 Toluene	91	14.278	14.277	0.001	93	251819	1.00	1.10	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	98	72695	1.00	1.09	
70 2-Methylthiophene	97	14.428	14.429	-0.001	97	214421	1.00	1.12	
71 3-Methylthiophene	97	14.627	14.628	-0.001	99	202739	1.00	1.10	
72 2-Hexanone	58	14.713	14.717	-0.004	95	76515	1.00	1.14	
73 n-Octane	85	14.934	14.931	0.003	92	84942	1.00	1.13	
74 Chlorodibromomethane	129	15.052	15.053	-0.001	98	177672	1.00	1.12	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	98	129201	1.00	1.06	
76 Tetrachloroethene	129	15.407	15.408	-0.001	95	116368	1.00	1.08	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	95	253140	1.00	1.18	
78 Chlorobenzene	112	16.279	16.279	0.000	93	187036	1.00	1.08	
79 Ethylbenzene	91	16.559	16.557	0.002	99	276806	1.00	1.06	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	210486	1.00	1.06	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	99	432360	2.00	2.13	
82 n-Nonane	57	17.107	17.109	-0.002	89	170403	1.00	1.13	
83 Bromoform	173	17.177	17.179	-0.002	92	126351	1.00	1.06	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.183	17.181	0.002	99	131396	1.00	1.05	
85 o-Xylene	91	17.242	17.242	0.000	97	236527	1.00	1.08	
86 1,1,2,2-Tetrachloroethane	83	17.564	17.563	0.001	98	150790	1.00	1.08	
87 1,2,3-Trichloropropane	110	17.720	17.720	0.000	97	41958	1.00	1.06	
88 Isopropylbenzene	105	17.817	17.815	0.002	95	303206	1.00	1.10	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	70689	1.00	1.03	
90 2-Chlorotoluene	126	18.382	18.384	-0.002	97	75246	1.00	1.03	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	254212	1.00	1.09	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	131247	1.00	1.06	
93 Alpha Methyl Styrene	118	18.769	18.771	-0.002	86	84426	1.00	0.9852	
94 n-Decane	57	18.807	18.805	0.002	89	172771	1.00	1.12	
95 tert-Butylbenzene	119	18.958	18.958	0.000	89	279995	1.00	1.14	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	235496	1.00	1.13	
97 sec-Butylbenzene	105	19.216	19.218	-0.002	98	347096	1.00	1.14	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	99	105055	1.00	0.9827	
99 Benzyl chloride	91	19.318	19.315	0.003	97	96342	1.00	0.9178	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	94	85902	1.00	0.9391	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	97	283900	1.00	1.13	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	98	184398	1.00	1.11	
103 Butylcyclohexane	83	19.474	19.476	-0.002	89	201539	1.00	1.11	
104 2,3-Dihydroindene	117	19.679	19.676	0.003	93	188971	1.00	1.08	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	95	110886	1.00	1.02	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	217364	1.00	1.12	
107 Indene	116	19.808	19.805	0.003	92	106078	1.00	1.06	
108 Undecane	57	20.082	20.083	-0.001	93	166313	1.00	1.13	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.157	20.158	-0.001	98	180487	1.00	1.11	
110 1,2-Dibromo-3-Chloropropan	157	20.270	20.271	-0.001	94	33994	1.00	0.9505	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	96	221281	1.00	1.11	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	95	141907	1.00	1.10	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	96	175011	1.00	1.10	
114 Dodecane	57	21.158	21.159	-0.001	97	153441	1.00	1.18	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	94	27246	1.00	0.9441	
116 Naphthalene	128	21.540	21.540	0.000	99	65976	1.00	0.8620	
117 Benzo(b)thiophene	134	21.631	21.633	-0.002	99	25086	1.00	0.9337	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	125753	1.00	1.09	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	95	28890	1.00	0.9121	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	97	12857	3.13	2.57	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	97	15840	3.13	3.02	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	567901	1.00	1.11	
A 125 C8 Range	1	14.930	(14.901-14.958)		0	808090	1.00	1.21	
S 126 Xylenes, Total	100				0		3.00	3.21	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.12	

Reagents:

40L5DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

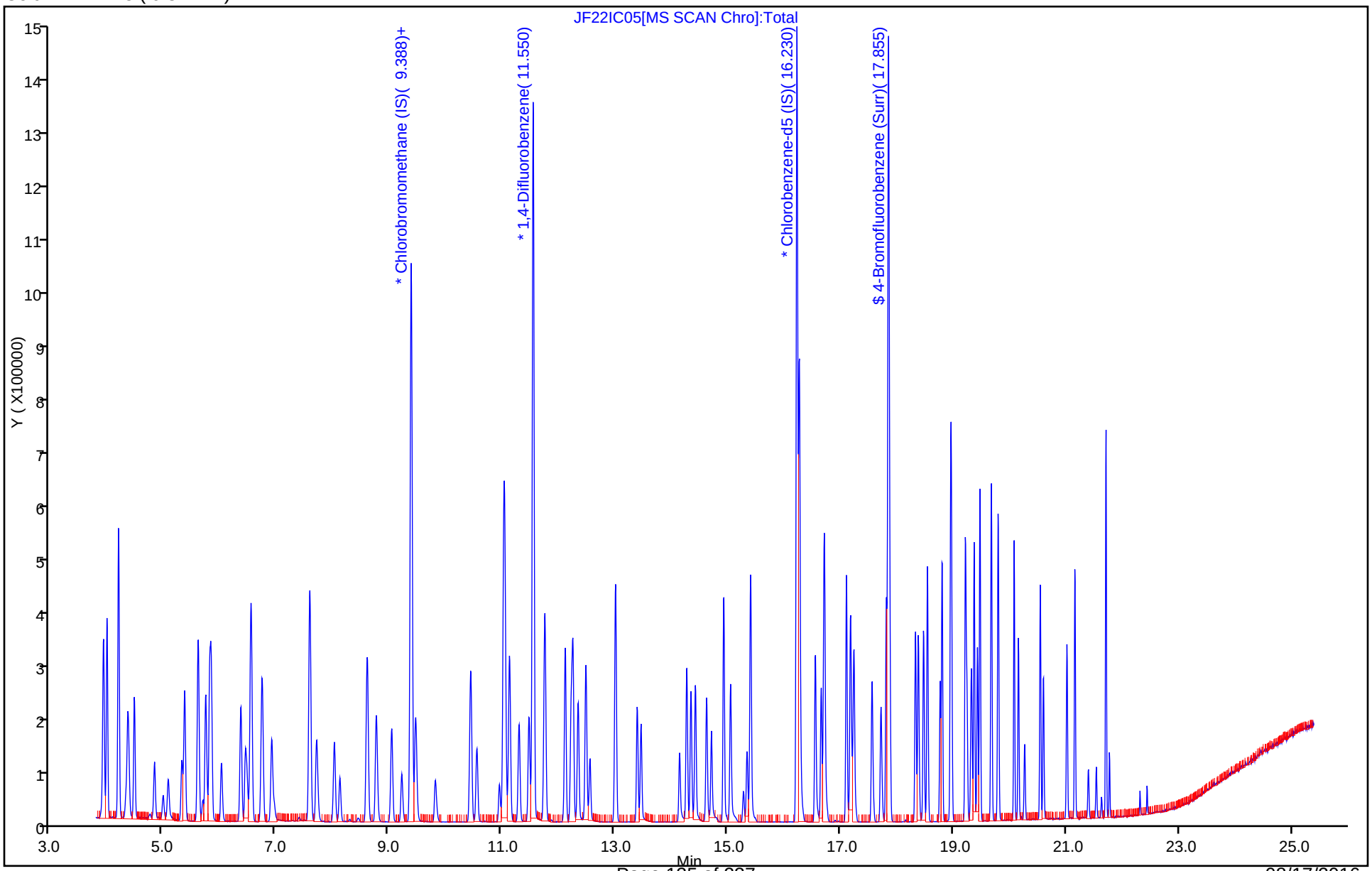
Report Date: 27-Jun-2016 15:12:20 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D

Injection Date:	22-Jun-2016 19:26:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L5			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

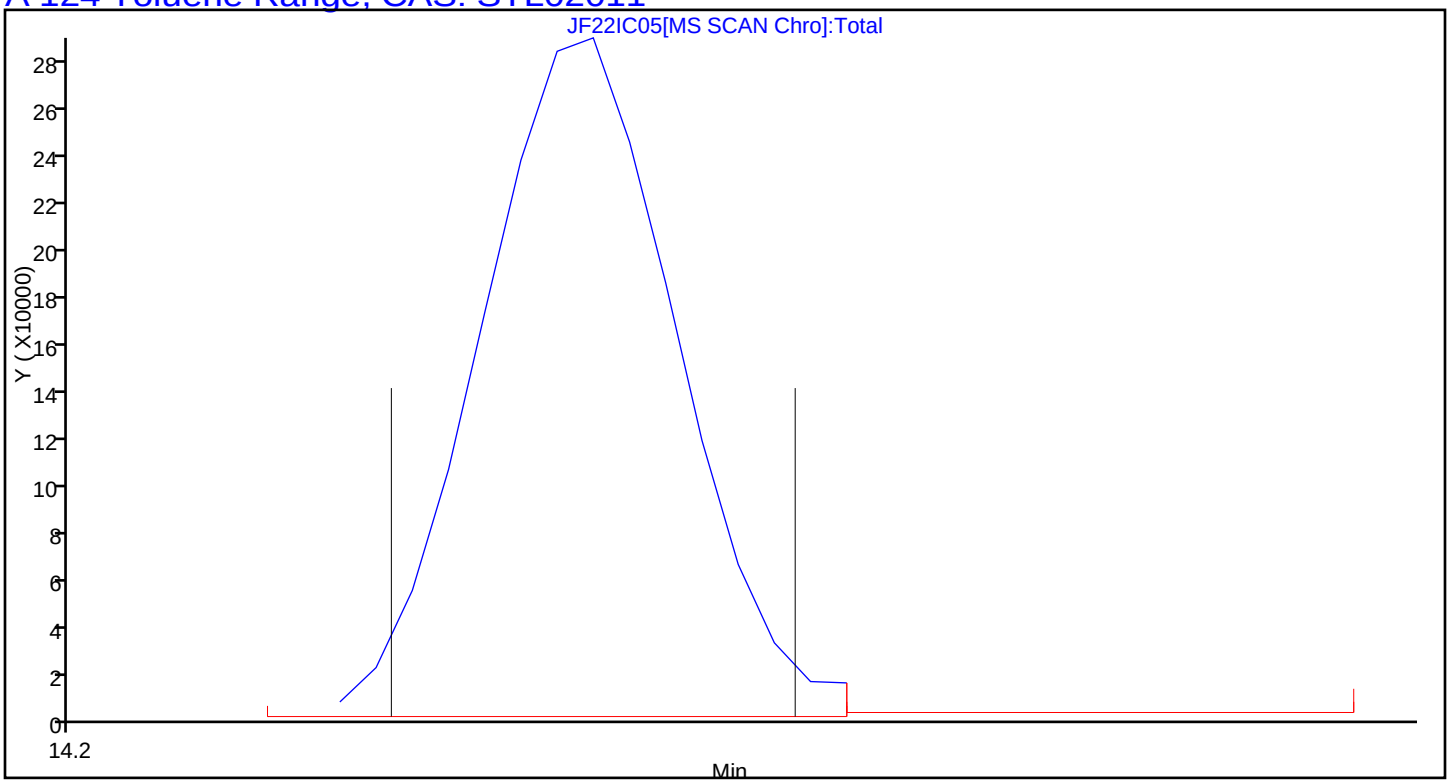


Report Date: 27-Jun-2016 15:12:20 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D				
Injection Date:	22-Jun-2016 19:26:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

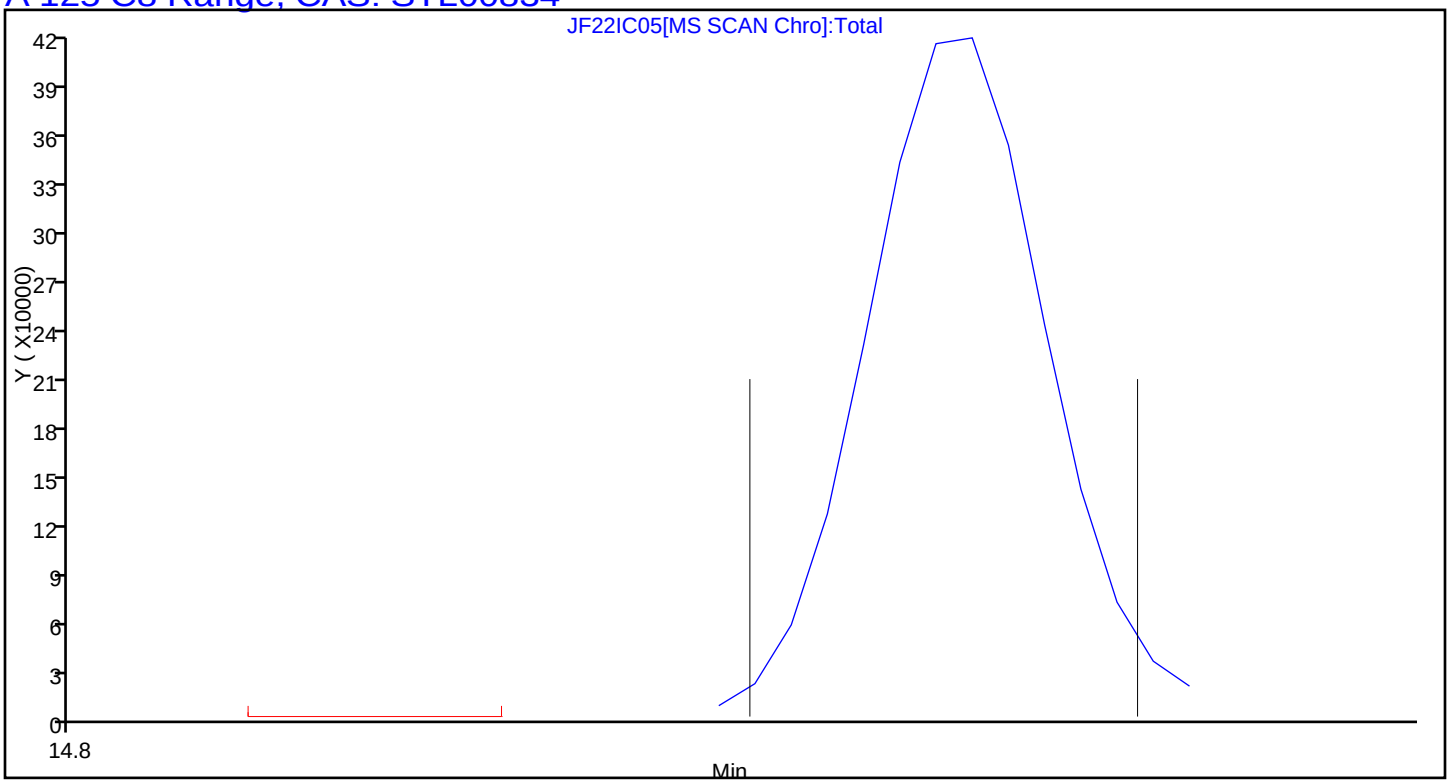


Report Date: 27-Jun-2016 15:12:20 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC05.D				
Injection Date:	22-Jun-2016 19:26:30	Instrument ID:	MJ		
Lims ID:	IC L5				
Client ID:					
Operator ID:	7126	ALS Bottle#:	10	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 22-Jun-2016 20:20:30 ALS Bottle#: 11 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044586
Misc. Info.: J062216,T15,,140-0003070-003
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:23 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 14:46:08

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	94	295193	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	96	1295936	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	87	1130543	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	91	685127	4.00	4.10	
6 Chlorodifluoromethane	67	3.923	3.925	-0.002	95	74322	2.00	2.03	
7 Propene	41	3.939	3.939	0.000	99	171785	2.00	2.02	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	99	651005	2.00	2.01	
9 Chloromethane	52	4.197	4.196	0.001	98	45845	2.00	2.00	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.197	4.201	-0.004	98	371615	2.00	2.06	
11 Acetaldehyde	44	4.364	4.364	0.000	93	203386	9.99	10.2	
12 Vinyl chloride	62	4.385	4.384	0.001	99	147890	2.00	1.90	
14 Butadiene	54	4.477	4.479	-0.002	79	103801	2.00	2.03	
13 Butane	43	4.477	4.480	-0.003	80	163737	2.00	1.93	
15 Bromomethane	94	4.837	4.837	0.000	97	141086	2.00	1.93	
16 Chloroethane	64	4.993	4.991	0.002	96	54729	2.00	1.96	
17 Ethanol	31	5.079	5.081	-0.002	91	116482	9.99	10.2	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	177848	2.00	2.06	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	214661	2.00	2.11	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	621893	2.00	2.07	
21 Acrolein	56	5.623	5.623	0.000	91	50881	2.00	2.05	
22 Acetonitrile	40	5.698	5.698	0.000	97	57557	2.00	2.12	
23 Acetone	58	5.741	5.747	-0.006	98	220910	5.99	6.53	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	95	744962	5.99	6.61	
25 Pentane	72	5.848	5.845	0.003	98	26066	2.00	2.05	
26 Ethyl ether	31	6.021	6.027	-0.006	89	125926	2.00	2.18	
27 1,1-Dichloroethene	96	6.370	6.368	0.002	93	178394	2.00	2.04	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.006	93	317555	2.00	2.06	
29 Acrylonitrile	53	6.478	6.479	-0.001	93	107837	2.00	2.08	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	96	426570	2.00	2.09	
31 Methylene Chloride	84	6.736	6.739	-0.003	98	163012	2.00	2.01	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	96	163557	2.00	2.10	
33 Carbon disulfide	76	6.914	6.916	-0.002	99	514119	2.00	2.07	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	94	181960	2.00	2.08	
35 2-Methylpentane	43	7.591	7.597	-0.006	93	383056	2.00	2.14	
36 Methyl tert-butyl ether	73	7.710	7.715	-0.005	96	394051	2.00	2.19	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	100	377503	2.00	2.12	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	326088	2.00	2.21	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	57065	2.00	2.01	
40 Hexane	56	8.614	8.613	0.001	89	165234	2.00	2.15	
41 Isopropyl ether	45	8.770	8.773	-0.003	97	485009	2.00	2.18	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	99	181693	2.00	2.08	
43 Ethyl acetate	43	9.221	9.224	-0.003	99	259651	2.00	2.20	
44 Chloroform	83	9.394	9.395	-0.001	96	414764	2.00	2.10	
45 Tert-butyl ethyl ether	59	9.469	9.471	-0.002	94	476674	2.00	2.16	
46 Tetrahydrofuran	42	9.813	9.821	-0.008	93	136985	2.00	2.18	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	491600	2.00	2.15	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	98	295685	2.00	2.09	
49 n-Butanol	31	10.948	10.957	-0.009	80	41337	2.00	2.09	
50 Cyclohexane	69	11.029	11.031	-0.002	94	84227	2.00	2.22	
51 Benzene	78	11.029	11.031	-0.002	98	473833	2.00	2.09	
52 Carbon tetrachloride	117	11.056	11.055	0.001	99	536281	2.00	2.23	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	89	110794	2.00	2.13	
54 Thiophene	84	11.303	11.302	0.001	100	269521	2.00	2.09	
55 Tert-amyl methyl ether	73	11.475	11.480	-0.005	97	372876	2.00	2.14	
56 Isooctane	57	11.755	11.759	-0.004	99	897864	2.00	2.11	
57 n-Heptane	71	12.121	12.122	-0.001	89	158034	2.00	2.12	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	90	194759	2.00	2.13	
59 Trichloroethene	130	12.255	12.257	-0.002	95	229178	2.00	2.01	
60 Dibromomethane	93	12.347	12.348	-0.001	95	212934	2.00	2.11	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	397868	2.00	2.16	
61 1,4-Dioxane	88	12.492	12.501	-0.009	87	58670	2.00	2.18	
63 Methyl methacrylate	41	12.557	12.558	-0.001	92	141703	2.00	2.03	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	367492	2.00	2.12	
65 4-Methyl-2-pentanone (MIBK	43	13.396	13.399	-0.003	96	295884	2.00	1.93	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	259003	2.00	2.17	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	202943	2.00	2.19	
68 Toluene	91	14.278	14.277	0.001	93	513330	2.00	2.13	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	98	148679	2.00	2.13	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	441429	2.00	2.20	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	415433	2.00	2.16	
72 2-Hexanone	58	14.714	14.717	-0.003	96	158048	2.00	2.25	
73 n-Octane	85	14.929	14.931	-0.002	91	171049	2.00	2.17	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	375901	2.00	2.25	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	99	270820	2.00	2.13	
76 Tetrachloroethene	129	15.408	15.408	0.000	95	226727	2.00	2.01	
77 2,3-Dimethylheptane	43	16.269	16.269	-0.001	95	483560	2.00	2.15	
78 Chlorobenzene	112	16.279	16.279	0.000	94	382171	2.00	2.11	
79 Ethylbenzene	91	16.559	16.557	0.002	99	596545	2.00	2.17	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	454691	2.00	2.19	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	100	910856	3.99	4.27	
82 n-Nonane	57	17.108	17.109	-0.001	88	364149	2.00	2.31	
83 Bromoform	173	17.178	17.179	-0.001	91	287325	2.00	2.29	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.178	17.181	-0.003	99	298757	2.00	2.28	
85 o-Xylene	91	17.242	17.242	0.000	98	491312	2.00	2.15	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	317051	2.00	2.17	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	98	88107	2.00	2.13	
88 Isopropylbenzene	105	17.818	17.815	0.003	96	645900	2.00	2.24	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	158414	2.00	2.19	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	97	164057	2.00	2.15	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	555410	2.00	2.27	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	282382	2.00	2.18	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	86	198517	2.00	2.21	
94 n-Decane	57	18.802	18.805	-0.003	89	371127	2.00	2.30	
95 tert-Butylbenzene	119	18.958	18.958	0.000	90	576459	2.00	2.24	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	496438	2.00	2.26	
97 sec-Butylbenzene	105	19.216	19.218	-0.002	98	729282	2.00	2.28	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	99	231407	2.00	2.06	
99 Benzyl chloride	91	19.313	19.315	-0.002	97	231497	2.00	2.10	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	95	195721	2.00	2.04	
101 4-Isopropyltoluene	119	19.372	19.373	-0.001	96	596789	2.00	2.27	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	98	386097	2.00	2.22	
103 Butylcyclohexane	83	19.475	19.476	-0.001	89	427484	2.00	2.25	
104 2,3-Dihydroindene	117	19.679	19.676	0.003	93	408894	2.00	2.23	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	96	241683	2.00	2.12	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	466916	2.00	2.30	
107 Indene	116	19.803	19.805	-0.002	90	237730	2.00	2.26	
108 Undecane	57	20.083	20.083	0.000	93	346076	2.00	2.25	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	97	392201	2.00	2.30	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	96	78535	2.00	2.09	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	96	471438	2.00	2.26	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	95	301527	2.00	2.24	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	365106	2.00	2.20	
114 Dodecane	57	21.158	21.159	-0.001	97	318147	2.00	2.33	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	94	65109	2.00	2.15	
116 Naphthalene	128	21.540	21.540	0.000	99	156536	2.00	1.95	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	99	58741	2.00	2.09	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	96	248901	2.00	2.07	
119 1,2,3-Trichlorobenzene	180	21.772	21.772	0.000	94	66002	2.00	1.99	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	99	33085	6.24	6.32	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	97	35332	6.24	6.43	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	1174730	2.00	2.20	
A 125 C8 Range	1	14.930	(14.891-14.970)		0	1583480	2.00	2.25	
S 126 Xylenes, Total	100				0		5.99	6.42	
S 127 1,2-Dichloroethene, Total	1				0		3.99	4.16	

Reagents:

40L6DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

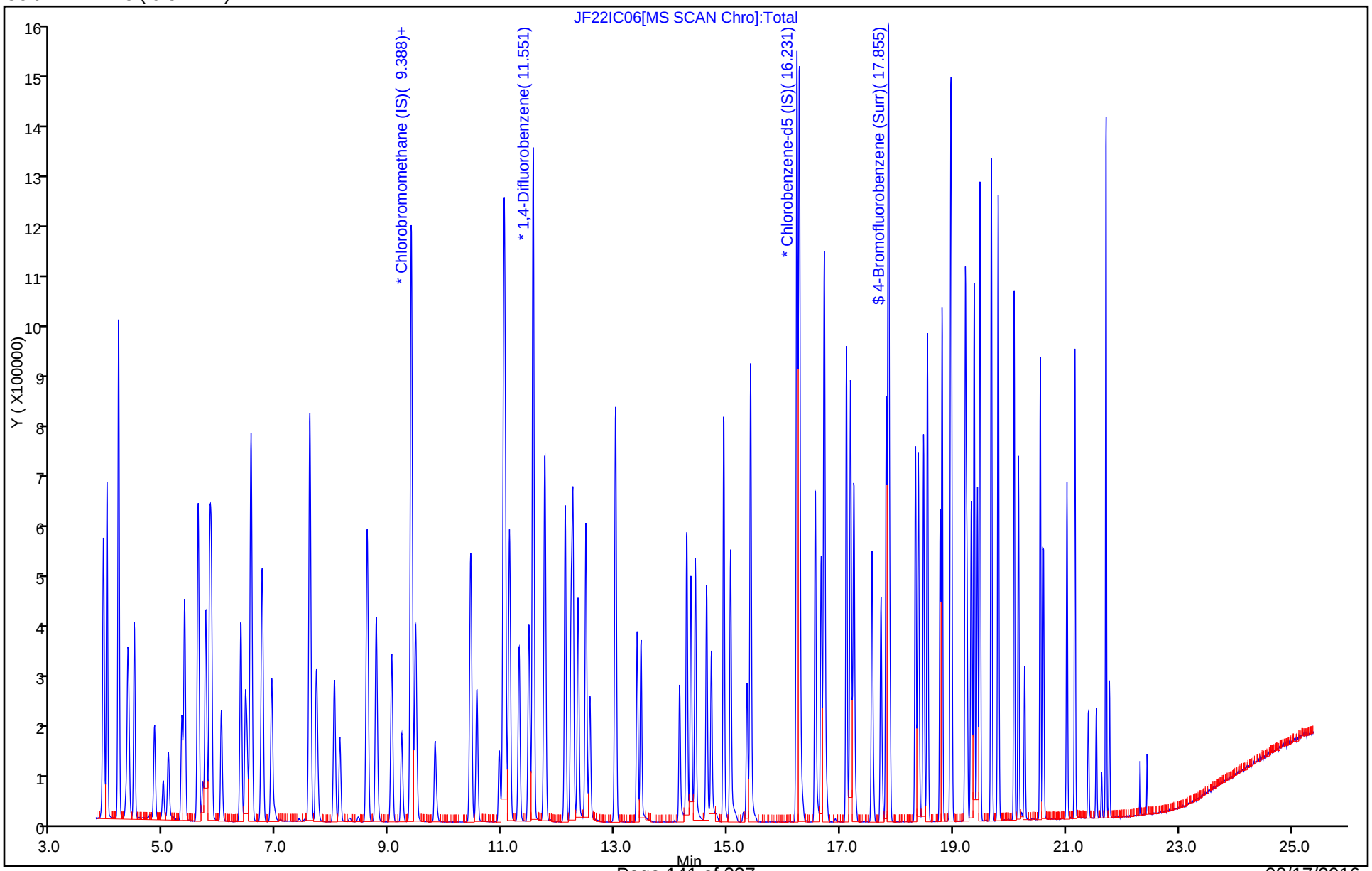
Report Date: 27-Jun-2016 15:12:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D

Injection Date:	22-Jun-2016 20:20:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ICIS L6			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

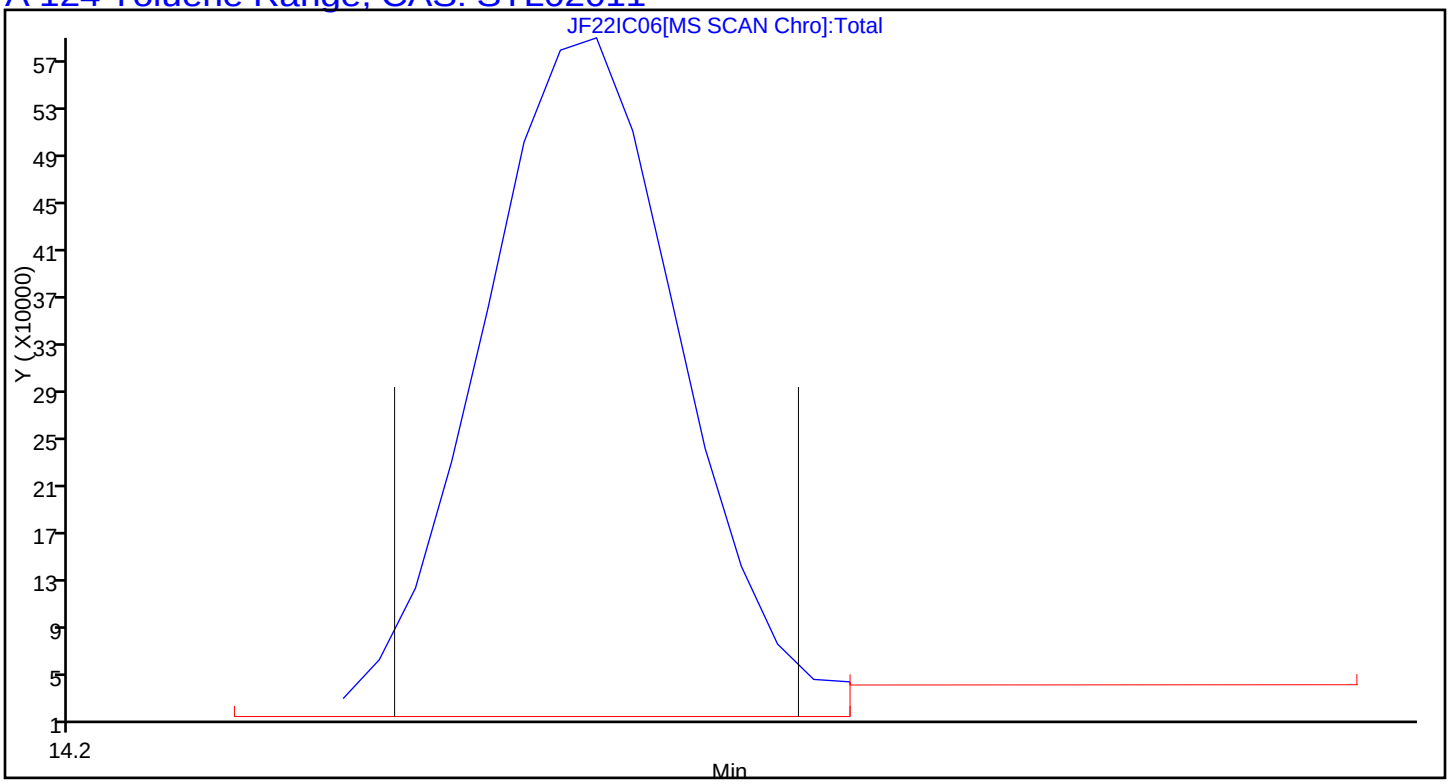


Report Date: 27-Jun-2016 15:12:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D				
Injection Date:	22-Jun-2016 20:20:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

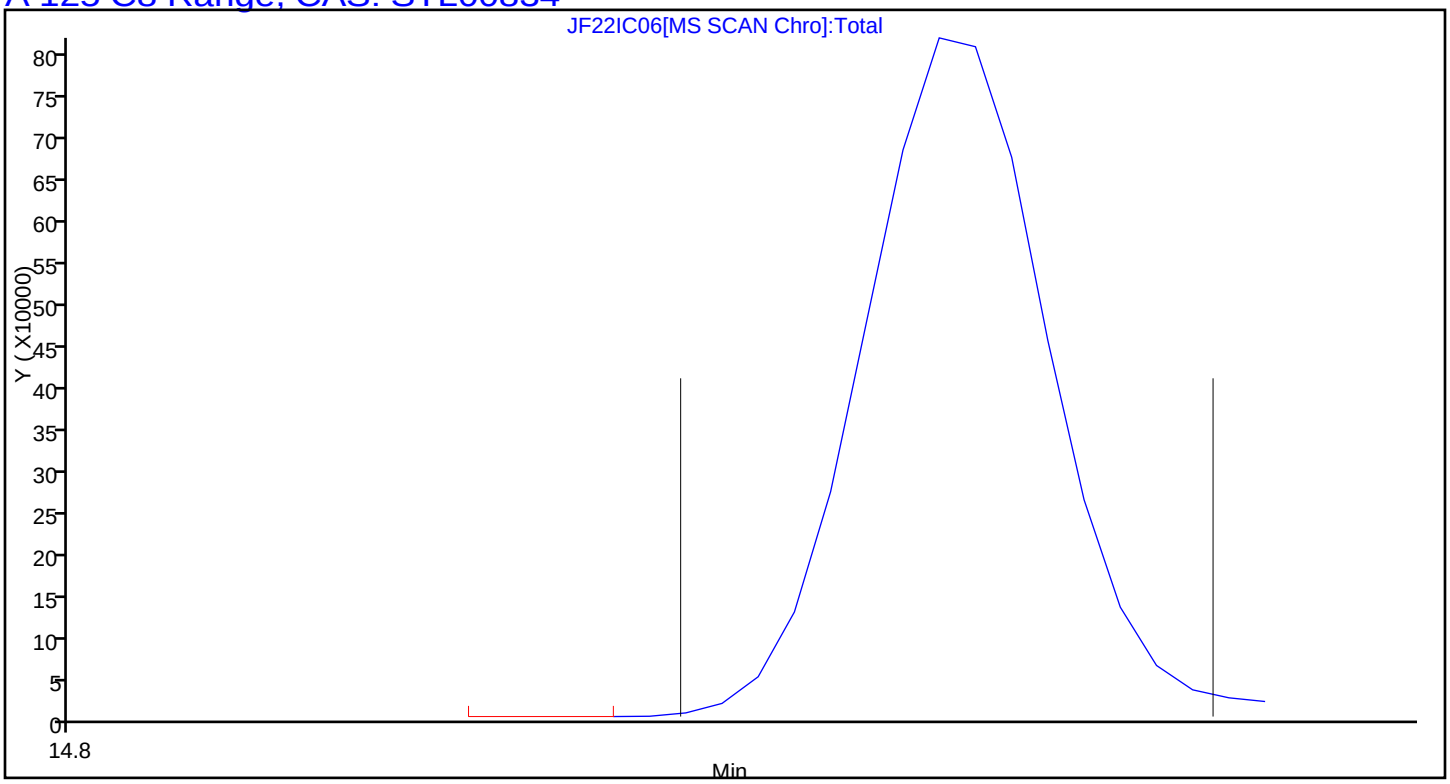


Report Date: 27-Jun-2016 15:12:25 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC06.D				
Injection Date:	22-Jun-2016 20:20:30	Instrument ID:	MJ		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	7126	ALS Bottle#:	11	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 22-Jun-2016 21:14:30 ALS Bottle#: 12 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044587
Misc. Info.: J062216,T15,,140-0003070-008
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:29 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 14:46:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	91	310883	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	95	1421150	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	87	1287644	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.850	17.854	-0.004	92	796104	4.00	4.19	
6 Chlorodifluoromethane	67	3.928	3.925	0.003	95	143302	4.00	3.71	
7 Propene	41	3.939	3.939	0.000	99	332692	4.00	3.71	
8 Dichlorodifluoromethane	85	3.998	3.995	0.003	99	1307229	4.00	3.83	
9 Chloromethane	52	4.197	4.196	0.001	52	88214	4.00	3.65	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	87	727582	4.00	3.84	
11 Acetaldehyde	44	4.364	4.364	0.000	95	350643	20.0	16.7	
12 Vinyl chloride	62	4.386	4.384	0.002	99	296801	4.00	3.63	
14 Butadiene	54	4.482	4.479	0.003	75	204963	4.00	3.82	
13 Butane	43	4.482	4.480	0.002	81	337432	4.00	3.78	
15 Bromomethane	94	4.837	4.837	0.000	97	279818	4.00	3.63	
16 Chloroethane	64	4.993	4.991	0.002	96	110409	4.00	3.76	
17 Ethanol	31	5.085	5.081	0.004	91	222729	20.0	18.5	
18 Vinyl bromide	106	5.322	5.323	-0.001	98	349781	4.00	3.84	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	408100	4.00	3.81	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	1205159	4.00	3.81	
21 Acrolein	56	5.628	5.623	0.005	90	93702	4.00	3.59	
22 Acetonitrile	40	5.698	5.698	0.000	99	108943	4.00	3.81	
23 Acetone	58	5.741	5.747	-0.006	97	349669	12.0	9.82	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	96	1317035	12.0	11.1	
25 Pentane	72	5.843	5.845	-0.002	99	50079	4.00	3.74	
26 Ethyl ether	31	6.021	6.027	-0.006	90	242733	4.00	3.99	
27 1,1-Dichloroethene	96	6.371	6.368	0.003	94	351859	4.00	3.83	
28 2-Methyl-2-propanol	59	6.451	6.457	-0.006	92	579563	4.00	3.58	
29 Acrylonitrile	53	6.478	6.479	-0.001	94	207783	4.00	3.81	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	97	809888	4.00	3.77	
31 Methylene Chloride	84	6.742	6.739	0.003	98	305232	4.00	3.57	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.753	6.753	0.000	97	294729	4.00	3.59	
33 Carbon disulfide	76	6.919	6.916	0.003	98	992410	4.00	3.80	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	95	353708	4.00	3.83	
35 2-Methylpentane	43	7.597	7.597	0.000	94	706451	4.00	3.75	
36 Methyl tert-butyl ether	73	7.705	7.715	-0.010	96	758096	4.00	4.00	
37 1,1-Dichloroethane	63	8.027	8.025	0.002	100	687439	4.00	3.66	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	648961	4.00	4.17	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	102957	4.00	3.45	
40 Hexane	56	8.614	8.613	0.001	90	300224	4.00	3.71	
41 Isopropyl ether	45	8.770	8.773	-0.003	97	905127	4.00	3.86	
42 cis-1,2-Dichloroethene	96	9.044	9.044	0.000	99	338040	4.00	3.68	
43 Ethyl acetate	43	9.222	9.224	-0.002	100	486683	4.00	3.92	
44 Chloroform	83	9.399	9.395	0.004	97	757083	4.00	3.64	
45 Tert-butyl ethyl ether	59	9.464	9.471	-0.007	94	888552	4.00	3.82	
46 Tetrahydrofuran	42	9.808	9.821	-0.013	93	261903	4.00	3.95	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	905660	4.00	3.76	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	98	549094	4.00	3.54	
49 n-Butanol	31	10.949	10.957	-0.009	78	79338	4.00	3.66	
50 Cyclohexane	69	11.035	11.031	0.004	74	156430	4.00	3.76	
51 Benzene	78	11.035	11.031	0.004	98	859237	4.00	3.46	
52 Carbon tetrachloride	117	11.056	11.055	0.001	97	994733	4.00	3.77	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	90	202801	4.00	3.55	
54 Thiophene	84	11.304	11.302	0.002	99	516119	4.00	3.64	
55 Tert-amyl methyl ether	73	11.476	11.480	-0.004	97	723980	4.00	3.66	
56 Isooctane	57	11.761	11.759	0.002	99	1645159	4.00	3.52	
57 n-Heptane	71	12.121	12.122	-0.001	89	299782	4.00	3.66	
58 1,2-Dichloropropane	63	12.229	12.227	0.002	90	370098	4.00	3.70	
59 Trichloroethene	130	12.256	12.257	-0.001	95	442884	4.00	3.54	
60 Dibromomethane	93	12.347	12.348	-0.001	96	405928	4.00	3.66	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	776050	4.00	3.84	
61 1,4-Dioxane	88	12.492	12.501	-0.009	84	112981	4.00	3.82	
63 Methyl methacrylate	41	12.557	12.558	-0.001	91	279290	4.00	3.65	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	674601	4.00	3.54	
65 4-Methyl-2-pentanone (MIBK	43	13.396	13.399	-0.003	95	556003	4.00	3.31	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	519520	4.00	3.98	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	429638	4.00	4.08	
68 Toluene	91	14.278	14.277	0.001	93	1028413	4.00	3.75	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	99	298075	4.00	3.75	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	875867	4.00	3.83	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	839568	4.00	3.83	
72 2-Hexanone	58	14.714	14.717	-0.003	96	307291	4.00	3.85	
73 n-Octane	85	14.929	14.931	-0.002	90	335449	4.00	3.74	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	762654	4.00	4.01	
75 Ethylene Dibromide	107	15.344	15.344	0.000	98	551155	4.00	3.80	
76 Tetrachloroethene	129	15.408	15.408	0.000	96	435890	4.00	3.39	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	93	857705	4.00	3.35	
78 Chlorobenzene	112	16.280	16.279	0.001	94	758472	4.00	3.68	
79 Ethylbenzene	91	16.554	16.557	-0.003	99	1219170	4.00	3.90	
80 2-Ethylthiophene	97	16.662	16.661	0.001	97	939238	4.00	3.97	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	100	1796987	8.00	7.40	
82 n-Nonane	57	17.108	17.109	-0.001	87	729041	4.00	4.06	
83 Bromoform	173	17.178	17.179	-0.001	94	632872	4.00	4.43	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.178	17.181	-0.003	99	636582	4.00	4.26	
85 o-Xylene	91	17.242	17.242	0.000	98	973620	4.00	3.73	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	646257	4.00	3.89	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	98	184661	4.00	3.92	
88 Isopropylbenzene	105	17.813	17.815	-0.002	96	1292194	4.00	3.94	
89 N-Propylbenzene	120	18.335	18.333	0.001	99	330331	4.00	4.01	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	97	344057	4.00	3.96	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	1122676	4.00	4.02	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	558077	4.00	3.78	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	87	449633	4.00	4.39	
94 n-Decane	57	18.803	18.805	-0.002	90	741112	4.00	4.04	
95 tert-Butylbenzene	119	18.959	18.958	0.001	91	1120112	4.00	3.82	
96 1,2,4-Trimethylbenzene	105	18.969	18.971	-0.002	96	955201	4.00	3.82	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	97	1414365	4.00	3.88	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	98	511453	4.00	4.01	
99 Benzyl chloride	91	19.314	19.315	-0.001	98	521842	4.00	4.16	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	93	438982	4.00	4.02	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	96	1150454	4.00	3.84	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	98	737400	4.00	3.71	
103 Butylcyclohexane	83	19.475	19.476	-0.001	90	833271	4.00	3.85	
104 2,3-Dihydroindene	117	19.674	19.676	-0.002	94	825803	4.00	3.95	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	97	517072	4.00	3.98	
106 n-Butylbenzene	91	19.798	19.797	0.001	98	922062	4.00	3.99	
107 Indene	116	19.803	19.805	-0.002	88	507931	4.00	4.24	
108 Undecane	57	20.083	20.083	0.000	93	688596	4.00	3.93	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	98	764381	4.00	3.93	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	98	176596	4.00	4.14	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	97	919685	4.00	3.87	
112 1,2,3,5-Tetramethylbenzene	119	20.599	20.603	-0.004	95	577643	4.00	3.76	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	717139	4.00	3.79	
114 Dodecane	57	21.159	21.159	0.000	97	558539	4.00	3.58	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	94	145399	4.00	4.22	
116 Naphthalene	128	21.541	21.540	0.001	99	341566	4.00	3.74	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	99	129062	4.00	4.02	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	96	470300	4.00	3.43	
119 1,2,3-Trichlorobenzene	180	21.772	21.772	0.000	96	140342	4.00	3.71	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	100	57318	12.5	9.61	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	99	59070	12.5	9.43	
A 124 Toluene Range	1	14.278	(14.248-14.308)		0	2447394	4.00	4.02	
A 125 C8 Range	1	14.943	(14.891-15.013)		0	2999823	4.00	3.75	
S 126 Xylenes, Total	100				0		12.0	11.1	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.51	

Reagents:

40L7DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

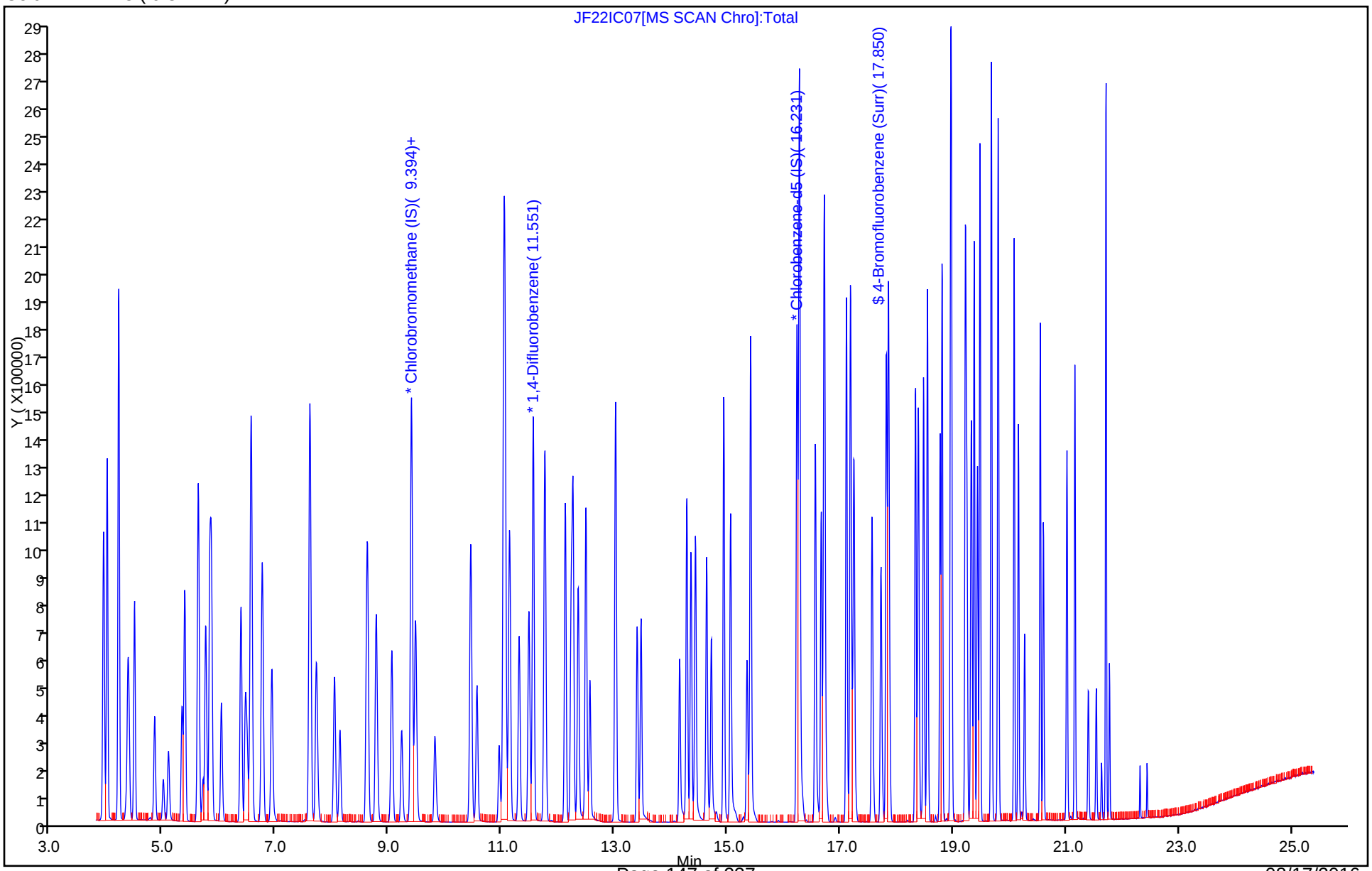
Report Date: 27-Jun-2016 15:12:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D

Injection Date:	22-Jun-2016 21:14:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L7			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

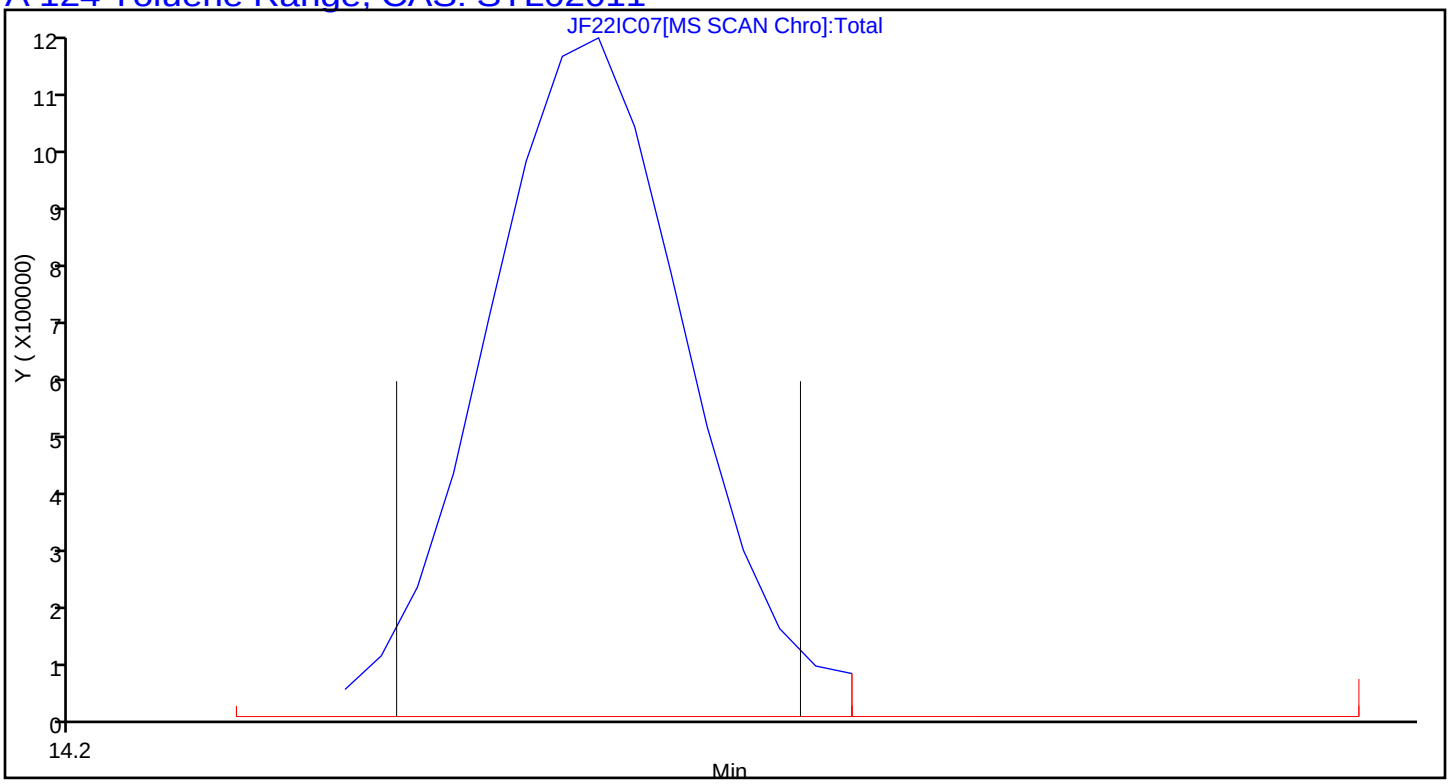


Report Date: 27-Jun-2016 15:12:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D				
Injection Date:	22-Jun-2016 21:14:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

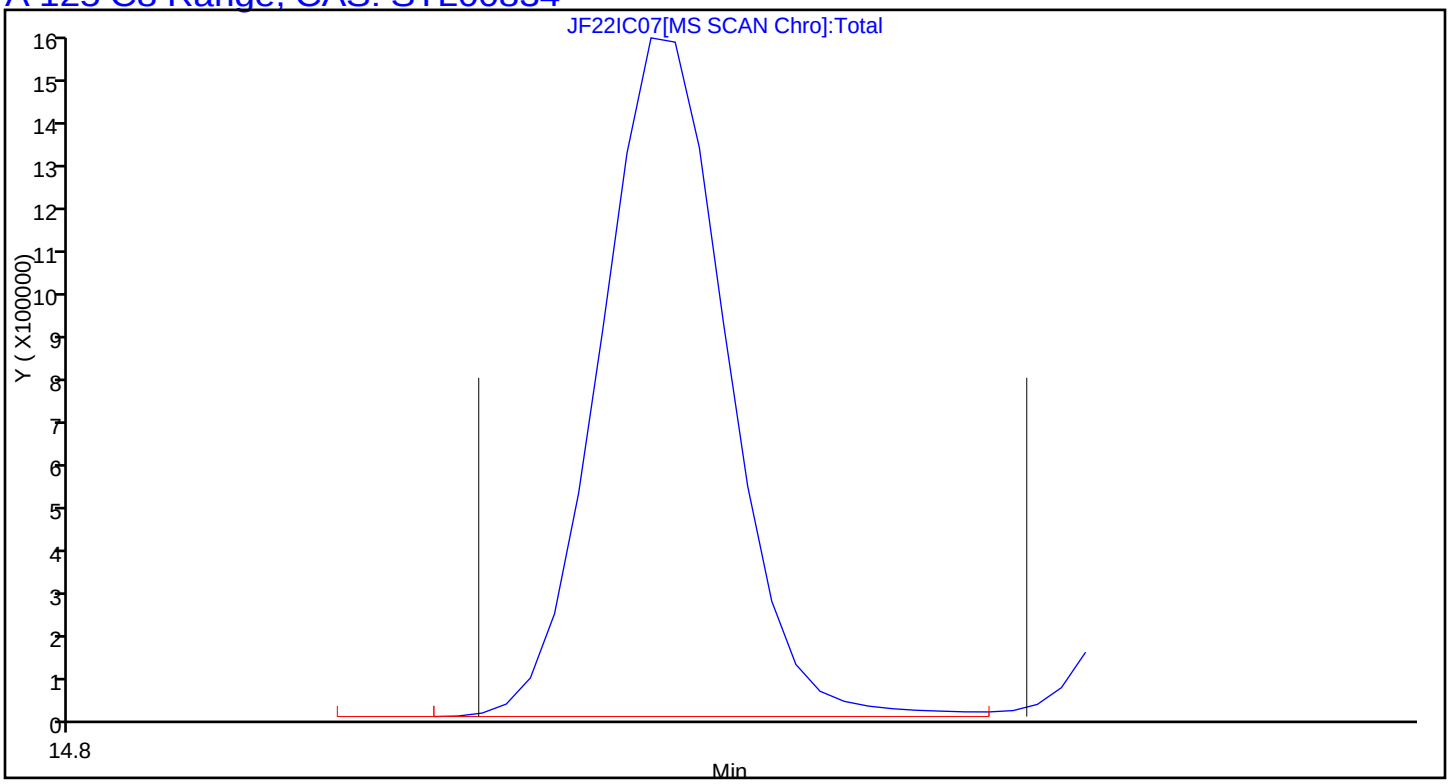


Report Date: 27-Jun-2016 15:12:30 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC07.D				
Injection Date:	22-Jun-2016 21:14:30	Instrument ID:	MJ		
Lims ID:	IC L7				
Client ID:					
Operator ID:	7126	ALS Bottle#:	12	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 22-Jun-2016 22:07:30 ALS Bottle#: 13 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044588
Misc. Info.: J062216,T15,,140-0003070-009
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:34 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 08:43:07

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.389	9.389	0.000	92	299776	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.557	11.552	0.005	95	1334753	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.232	16.231	0.001	87	1294721	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.851	17.854	-0.003	92	783587	4.00	4.10	
6 Chlorodifluoromethane	67	3.923	3.925	-0.002	95	288544	8.00	7.76	
7 Propene	41	3.934	3.939	-0.005	99	650144	8.00	7.52	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	99	2500166	8.00	7.59	
9 Chloromethane	52	4.192	4.196	-0.004	51	153848	8.00	6.61	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.198	4.201	-0.003	87	1405458	8.00	7.69	
11 Acetaldehyde	44	4.359	4.364	-0.005	93	606067	40.0	30.0	
12 Vinyl chloride	62	4.381	4.384	-0.003	99	533221	8.00	6.76	
14 Butadiene	54	4.478	4.479	-0.001	77	364739	8.00	7.04	
13 Butane	43	4.478	4.480	-0.002	80	570149	8.00	6.62	
15 Bromomethane	94	4.838	4.837	0.001	98	529966	8.00	7.14	
16 Chloroethane	64	4.989	4.991	-0.002	95	206332	8.00	7.29	
17 Ethanol	31	5.085	5.081	0.004	90	379778	40.0	32.8	
18 Vinyl bromide	106	5.322	5.323	-0.001	98	682940	8.00	7.78	
19 2-Methylbutane	43	5.371	5.372	-0.002	88	760188	8.00	7.35	
20 Trichlorofluoromethane	101	5.607	5.611	-0.004	99	2296411	8.00	7.53	
21 Acrolein	56	5.623	5.623	0.000	91	166781	8.00	6.62	
22 Acetonitrile	40	5.699	5.698	0.001	99	196326	8.00	7.11	
23 Acetone	58	5.742	5.747	-0.005	97	600267	24.0	17.5	
24 Isopropyl alcohol	45	5.817	5.819	-0.002	96	2507678	24.0	21.9	
25 Pentane	72	5.844	5.845	-0.001	100	97557	8.00	7.56	
26 Ethyl ether	31	6.021	6.027	-0.006	87	410197	8.00	7.00	
27 1,1-Dichloroethene	96	6.366	6.368	-0.002	94	696021	8.00	7.85	
28 2-Methyl-2-propanol	59	6.452	6.457	-0.005	92	1237494	8.00	7.92	
29 Acrylonitrile	53	6.479	6.479	0.000	93	377050	8.00	7.18	
30 1,1,2-Trichloro-1,2,2-trif	101	6.549	6.548	0.001	97	1546698	8.00	7.46	
31 Methylene Chloride	84	6.737	6.739	-0.002	97	583873	8.00	7.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.753	6.753	0.000	98	573796	8.00	7.26	
33 Carbon disulfide	76	6.914	6.916	-0.002	99	1953890	8.00	7.76	
34 trans-1,2-Dichloroethene	96	7.587	7.587	0.000	95	665147	8.00	7.47	
35 2-Methylpentane	43	7.598	7.597	0.001	93	1276291	8.00	7.02	
36 Methyl tert-butyl ether	73	7.705	7.715	-0.010	96	1326657	8.00	7.25	
37 1,1-Dichloroethane	63	8.028	8.025	0.003	100	1302641	8.00	7.19	
38 Vinyl acetate	43	8.125	8.125	0.000	100	1103728	8.00	7.36	
39 2-Butanone (MEK)	72	8.587	8.597	-0.010	97	193612	8.00	6.73	
40 Hexane	56	8.614	8.613	0.001	91	572625	8.00	7.33	
41 Isopropyl ether	45	8.765	8.773	-0.008	97	1604773	8.00	7.09	
42 cis-1,2-Dichloroethene	96	9.045	9.044	0.001	98	641922	8.00	7.24	
43 Ethyl acetate	43	9.222	9.224	-0.002	99	899864	8.00	7.51	
44 Chloroform	83	9.400	9.395	0.005	96	1390825	8.00	6.93	
45 Tert-butyl ethyl ether	59	9.464	9.471	-0.007	94	1627729	8.00	7.26	
46 Tetrahydrofuran	42	9.803	9.821	-0.018	92	469029	8.00	7.34	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	1638831	8.00	7.06	
48 1,2-Dichloroethane	62	10.556	10.556	0.000	98	987874	8.00	6.78	
49 n-Butanol	31	10.944	10.957	-0.013	82	179047	8.00	8.80	
50 Cyclohexane	69	11.030	11.031	-0.001	92	277573	8.00	7.10	
51 Benzene	78	11.035	11.031	0.004	99	1527500	8.00	6.56	
52 Carbon tetrachloride	117	11.057	11.055	0.002	98	1765814	8.00	7.12	
53 2,3-Dimethylpentane	71	11.132	11.134	-0.002	90	374753	8.00	6.99	
54 Thiophene	84	11.304	11.302	0.002	99	949009	8.00	7.13	
55 Tert-amyl methyl ether	73	11.476	11.480	-0.004	97	1344086	8.00	6.75	
56 Isooctane	57	11.756	11.759	-0.003	98	2905240	8.00	6.62	
57 n-Heptane	71	12.122	12.122	0.000	88	557515	8.00	7.25	
58 1,2-Dichloropropane	63	12.224	12.227	-0.003	91	664536	8.00	7.07	
59 Trichloroethene	130	12.256	12.257	-0.001	95	809617	8.00	6.89	
60 Dibromomethane	93	12.348	12.348	0.000	96	746153	8.00	7.17	
62 Dichlorobromomethane	83	12.488	12.487	0.001	99	1402039	8.00	7.39	
61 1,4-Dioxane	88	12.493	12.501	-0.008	83	227685	8.00	8.20	
63 Methyl methacrylate	41	12.557	12.558	-0.001	90	516447	8.00	7.19	
64 Methylcyclohexane	83	13.015	13.014	0.001	93	1236865	8.00	6.92	
65 4-Methyl-2-pentanone (MIBK	43	13.397	13.399	-0.002	95	1131908	8.00	7.18	
66 cis-1,3-Dichloropropene	75	13.467	13.466	0.001	93	940942	8.00	7.67	
67 trans-1,3-Dichloropropene	75	14.150	14.149	0.001	97	835409	8.00	7.89	
68 Toluene	91	14.279	14.277	0.002	93	1807350	8.00	6.56	
69 1,1,2-Trichloroethane	83	14.349	14.349	0.000	99	544854	8.00	6.82	
70 2-Methylthiophene	97	14.430	14.429	0.001	97	1574396	8.00	6.85	
71 3-Methylthiophene	97	14.629	14.628	0.001	99	1518071	8.00	6.88	
72 2-Hexanone	58	14.709	14.717	-0.008	97	629308	8.00	7.84	
73 n-Octane	85	14.930	14.931	-0.001	88	599701	8.00	6.64	
74 Chlorodibromomethane	129	15.054	15.053	0.001	97	1409503	8.00	7.37	
75 Ethylene Dibromide	107	15.344	15.344	0.000	98	1044626	8.00	7.16	
76 Tetrachloroethene	129	15.409	15.408	0.001	96	794219	8.00	6.15	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	91	1422600	8.00	5.53	
78 Chlorobenzene	112	16.280	16.279	0.001	93	1366684	8.00	6.59	
79 Ethylbenzene	91	16.554	16.557	-0.003	98	2117749	8.00	6.74	
80 2-Ethylthiophene	97	16.662	16.661	0.001	97	1672366	8.00	7.04	
81 m-Xylene & p-Xylene	91	16.716	16.715	0.001	99	3061379	16.0	12.5	
82 n-Nonane	57	17.108	17.109	-0.001	87	1270603	8.00	7.03	
83 Bromoform	173	17.178	17.179	-0.001	96	1235633	8.00	8.59	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.178	17.181	-0.003	98	1161198	8.00	7.74	
85 o-Xylene	91	17.243	17.242	0.001	99	1708918	8.00	6.52	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	1208064	8.00	7.24	
87 1,2,3-Trichloropropane	110	17.722	17.720	0.002	97	350332	8.00	7.40	
88 Isopropylbenzene	105	17.813	17.815	-0.002	97	2248024	8.00	6.82	
89 N-Propylbenzene	120	18.330	18.333	-0.003	99	628117	8.00	7.59	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	96	624631	8.00	7.15	
91 4-Ethyltoluene	105	18.475	18.477	-0.002	97	2072618	8.00	7.39	
92 1,3,5-Trimethylbenzene	120	18.545	18.545	0.000	93	1037781	8.00	6.99	
93 Alpha Methyl Styrene	118	18.771	18.771	0.000	87	900610	8.00	8.75	
94 n-Decane	57	18.803	18.805	-0.002	91	1291827	8.00	7.00	
95 tert-Butylbenzene	119	18.959	18.958	0.001	90	2028581	8.00	6.87	
96 1,2,4-Trimethylbenzene	105	18.970	18.971	-0.001	95	1771506	8.00	7.05	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	97	2557663	8.00	6.99	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	98	1052391	8.00	8.20	
99 Benzyl chloride	91	19.314	19.315	-0.001	98	1184773	8.00	9.40	
100 1,4-Dichlorobenzene	146	19.325	19.329	-0.004	93	953235	8.00	8.68	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	95	2185786	8.00	7.26	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	98	1415266	8.00	7.09	
103 Butylcyclohexane	83	19.475	19.476	-0.001	90	1455558	8.00	6.68	
104 2,3-Dihydroindene	117	19.675	19.676	-0.002	94	1572283	8.00	7.49	
105 1,2-Dichlorobenzene	146	19.680	19.680	0.000	96	1039806	8.00	7.96	
106 n-Butylbenzene	91	19.793	19.797	-0.004	98	1812485	8.00	7.80	
107 Indene	116	19.804	19.805	-0.001	88	1043744	8.00	8.66	
108 Undecane	57	20.083	20.083	0.000	93	1326289	8.00	7.53	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.159	20.158	0.001	98	1566098	8.00	8.01	
110 1,2-Dibromo-3-Chloropropan	157	20.266	20.271	-0.005	98	417334	8.00	9.72	
111 1,2,4,5-Tetramethylbenzene	119	20.546	20.545	0.001	97	1906908	8.00	7.97	
112 1,2,3,5-Tetramethylbenzene	119	20.600	20.603	-0.003	95	1215600	8.00	7.87	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	1528285	8.00	8.03	
114 Dodecane	57	21.159	21.159	0.000	99	1249421	8.00	7.98	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	95	410410	8.00	11.8	
116 Naphthalene	128	21.541	21.540	0.001	98	884843	8.00	9.63	
117 Benzo(b)thiophene	134	21.633	21.633	0.000	99	361623	8.00	11.2	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	95	1002249	8.00	7.26	
119 1,2,3-Trichlorobenzene	180	21.772	21.772	0.000	96	380574	8.00	10.0	
120 2-Methylnaphthalene	142	22.316	22.314	0.002	99	189512	25.0	31.6	
121 1-Methylnaphthalene	142	22.440	22.439	0.001	99	198948	25.0	31.6	
A 124 Toluene Range	1	14.279	(14.249-14.309)		0	4222753	8.00	6.90	
A 125 C8 Range	1	14.946	(14.897-15.019)		0	5268215	8.00	6.54	
S 126 Xylenes, Total	100				0		24.0	19.1	
S 127 1,2-Dichloroethene, Total	1				0		16.0	14.7	

Reagents:

40L8DNP_00005	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

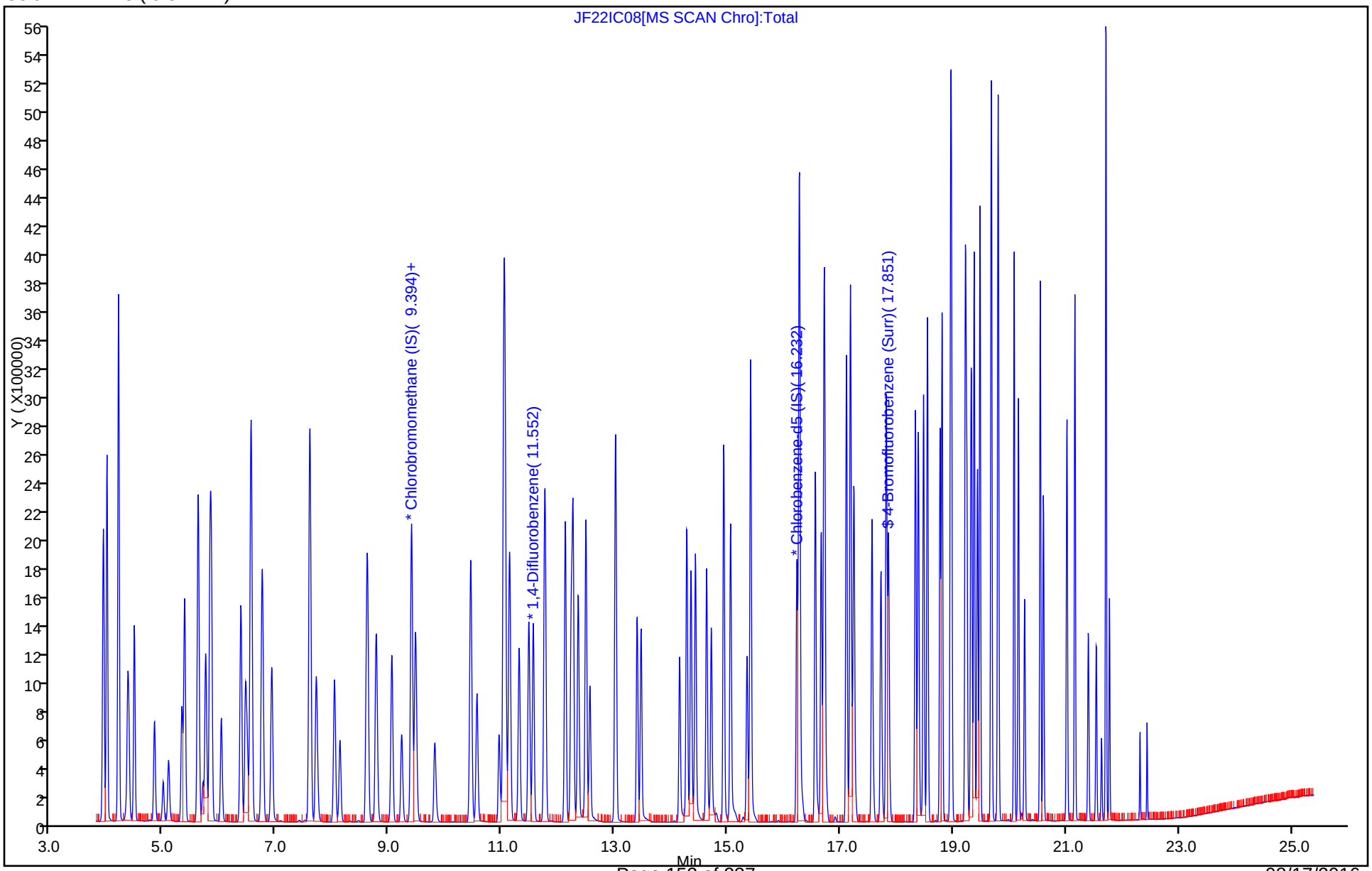
Report Date: 27-Jun-2016 15:12:35 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D

Injection Date:	22-Jun-2016 22:07:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L8			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

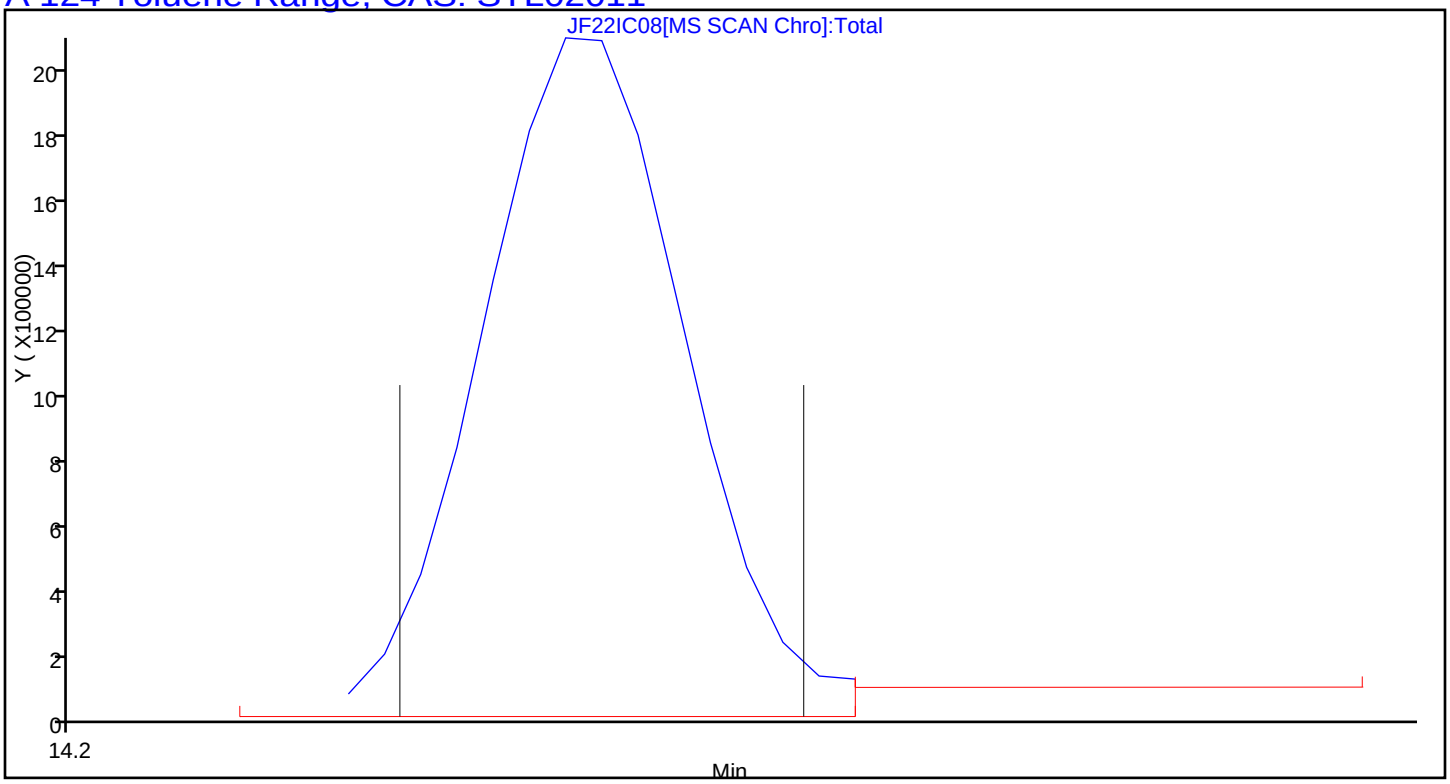


Report Date: 27-Jun-2016 15:12:35 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D				
Injection Date:	22-Jun-2016 22:07:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

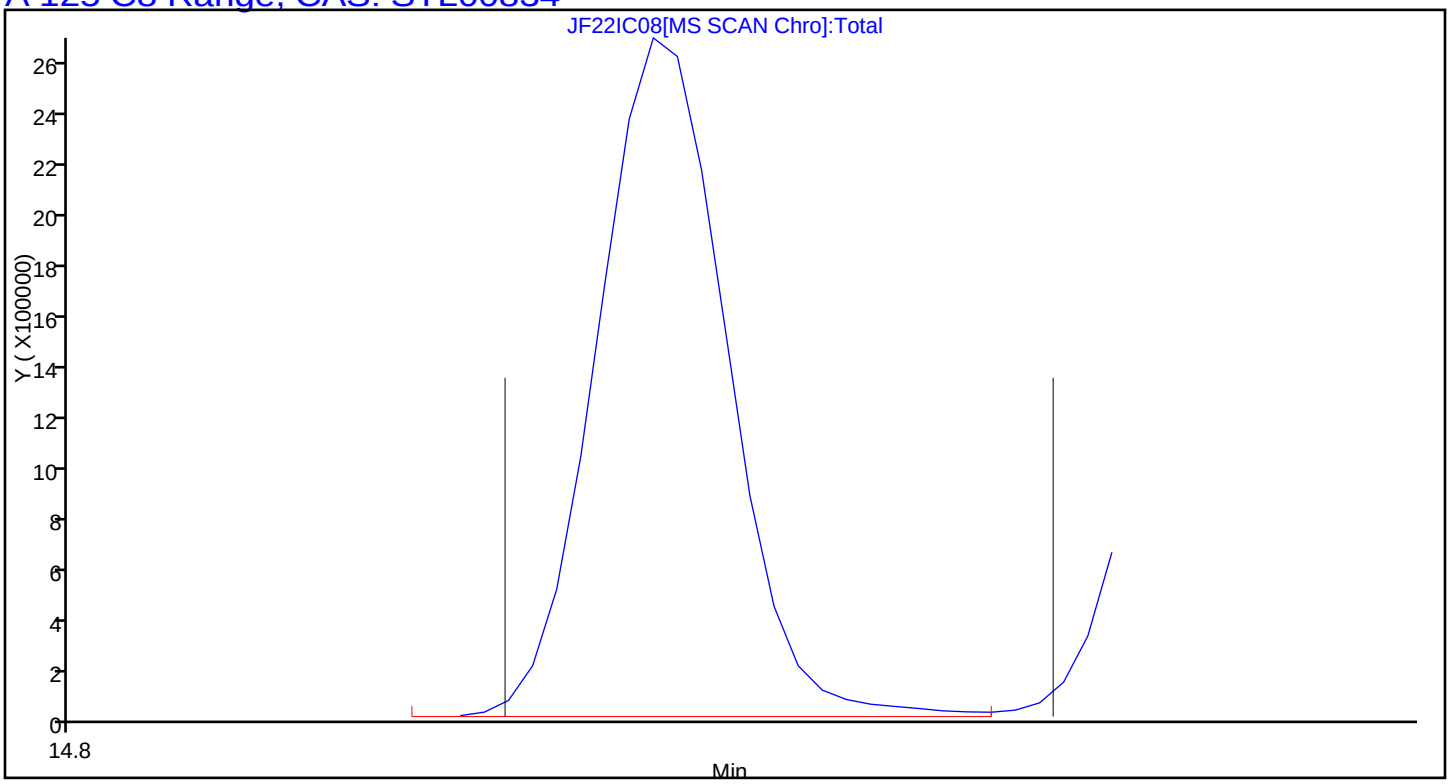


Report Date: 27-Jun-2016 15:12:35 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC08.D				
Injection Date:	22-Jun-2016 22:07:30	Instrument ID:	MJ		
Lims ID:	IC L8				
Client ID:					
Operator ID:	7126	ALS Bottle#:	13	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 22-Jun-2016 23:00:30 ALS Bottle#: 14 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044589
Misc. Info.: J062216,T15,,140-0003070-010
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:12:39 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: tajh Date: 23-Jun-2016 08:43:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.393	9.389	0.004	90	324648	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.555	11.552	0.003	95	1456404	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.230	16.231	-0.001	87	1438583	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.855	17.854	0.001	93	919690	4.00	4.33	
6 Chlorodifluoromethane	67	3.927	3.925	0.002	95	568696	16.0	14.1	
7 Propene	41	3.938	3.939	-0.001	99	1164099	16.0	12.4	
8 Dichlorodifluoromethane	85	3.997	3.995	0.002	98	4418618	16.0	12.4	
9 Chloromethane	52	4.196	4.196	0.000	99	302773	16.0	12.0	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.202	4.201	0.001	86	2421902	16.0	12.2	
11 Acetaldehyde	44	4.363	4.364	-0.001	90	1336036	80.0	61.1	
12 Vinyl chloride	62	4.385	4.384	0.001	98	1077395	16.0	12.6	
14 Butadiene	54	4.481	4.479	0.002	78	746524	16.0	13.3	
13 Butane	43	4.481	4.480	0.001	80	1159255	16.0	12.4	
15 Bromomethane	94	4.836	4.837	-0.001	98	1110251	16.0	13.8	
16 Chloroethane	64	4.992	4.991	0.001	96	437796	16.0	14.3	
17 Ethanol	31	5.089	5.081	0.008	90	840205	80.0	67.0	
18 Vinyl bromide	106	5.326	5.323	0.003	98	1405653	16.0	14.8	
19 2-Methylbutane	43	5.374	5.372	0.002	87	1423234	16.0	12.7	
20 Trichlorofluoromethane	101	5.611	5.611	0.000	98	4442645	16.0	13.5	
21 Acrolein	56	5.627	5.623	0.004	92	389500	16.0	14.3	
22 Acetonitrile	40	5.703	5.698	0.005	98	485627	16.0	16.2	
23 Acetone	58	5.746	5.747	-0.001	96	1492629	48.0	40.1	
24 Isopropyl alcohol	45	5.826	5.819	0.007	96	4376471	48.0	35.3	
25 Pentane	72	5.848	5.845	0.003	99	187143	16.0	13.4	
26 Ethyl ether	31	6.020	6.027	-0.007	85	994775	16.0	15.7	
27 1,1-Dichloroethene	96	6.370	6.368	0.002	96	1428851	16.0	14.9	
28 2-Methyl-2-propanol	59	6.456	6.457	-0.001	92	2382939	16.0	14.1	
29 Acrylonitrile	53	6.483	6.479	0.004	93	912254	16.0	16.0	
30 1,1,2-Trichloro-1,2,2-trif	101	6.553	6.548	0.005	95	3036710	16.0	13.5	
31 Methylene Chloride	84	6.741	6.739	0.002	94	1180787	16.0	13.2	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.757	6.753	0.004	99	1045840	16.0	12.2	
33 Carbon disulfide	76	6.918	6.916	0.002	99	3799723	16.0	13.9	
34 trans-1,2-Dichloroethene	96	7.591	7.587	0.004	96	1345260	16.0	14.0	
35 2-Methylpentane	43	7.602	7.597	0.005	91	2327114	16.0	11.8	
36 Methyl tert-butyl ether	73	7.704	7.715	-0.011	96	3205110	16.0	16.2	
37 1,1-Dichloroethane	63	8.032	8.025	0.007	100	2777161	16.0	14.2	
38 Vinyl acetate	43	8.129	8.125	0.004	100	2762820	16.0	17.0	
39 2-Butanone (MEK)	72	8.591	8.597	-0.006	97	450257	16.0	14.4	
40 Hexane	56	8.613	8.613	0.000	91	1143308	16.0	13.5	
41 Isopropyl ether	45	8.769	8.773	-0.004	94	3515890	16.0	14.3	
42 cis-1,2-Dichloroethene	96	9.049	9.044	0.005	97	1430321	16.0	14.9	
43 Ethyl acetate	43	9.221	9.224	-0.003	99	2028801	16.0	15.6	
44 Chloroform	83	9.398	9.395	0.003	97	3097387	16.0	14.3	
45 Tert-butyl ethyl ether	59	9.468	9.471	-0.003	94	3703920	16.0	15.3	
46 Tetrahydrofuran	42	9.802	9.821	-0.019	91	1159161	16.0	16.7	
47 1,1,1-Trichloroethane	97	10.447	10.443	0.004	97	3616674	16.0	14.4	
48 1,2-Dichloroethane	62	10.555	10.556	-0.001	98	2263123	16.0	14.2	
49 n-Butanol	31	10.953	10.957	-0.004	79	360182	16.0	16.2	
50 Cyclohexane	69	11.034	11.031	0.003	93	556586	16.0	13.1	
51 Benzene	78	11.034	11.031	0.003	99	3094582	16.0	12.2	
52 Carbon tetrachloride	117	11.055	11.055	0.000	99	3797031	16.0	14.0	
53 2,3-Dimethylpentane	71	11.136	11.134	0.002	89	812542	16.0	13.9	
54 Thiophene	84	11.308	11.302	0.006	99	2143783	16.0	14.8	
55 Tert-amyl methyl ether	73	11.475	11.480	-0.005	97	3028475	16.0	13.7	
56 Isooctane	57	11.760	11.759	0.001	97	5750307	16.0	12.0	
57 n-Heptane	71	12.126	12.122	0.004	85	1201125	16.0	14.3	
58 1,2-Dichloropropane	63	12.228	12.227	0.001	90	1418404	16.0	13.8	
59 Trichloroethene	130	12.260	12.257	0.003	96	1873495	16.0	14.6	
60 Dibromomethane	93	12.352	12.348	0.004	94	1694078	16.0	14.9	
62 Dichlorobromomethane	83	12.491	12.487	0.004	99	3132699	16.0	15.1	
61 1,4-Dioxane	88	12.491	12.501	-0.010	81	445938	16.0	14.7	
63 Methyl methacrylate	41	12.561	12.558	0.003	88	1215024	16.0	15.5	
64 Methylcyclohexane	83	13.013	13.014	-0.001	94	2607782	16.0	13.4	
65 4-Methyl-2-pentanone (MIBK	43	13.395	13.399	-0.004	93	2205881	16.0	12.8	
66 cis-1,3-Dichloropropene	75	13.471	13.466	0.004	93	2221824	16.0	16.6	
67 trans-1,3-Dichloropropene	75	14.154	14.149	0.005	97	2103301	16.0	17.9	
68 Toluene	91	14.277	14.277	0.000	94	4182412	16.0	13.7	
69 1,1,2-Trichloroethane	83	14.353	14.349	0.004	98	1272593	16.0	14.3	
70 2-Methylthiophene	97	14.433	14.429	0.004	96	3610870	16.0	14.1	
71 3-Methylthiophene	97	14.632	14.628	0.004	98	3544888	16.0	14.5	
72 2-Hexanone	58	14.713	14.717	-0.004	99	1327800	16.0	14.9	
73 n-Octane	85	14.934	14.931	0.003	93	1338237	16.0	13.3	
74 Chlorodibromomethane	129	15.057	15.053	0.004	96	3355987	16.0	15.8	
75 Ethylene Dibromide	107	15.348	15.344	0.004	99	2590955	16.0	16.0	
76 Tetrachloroethene	129	15.413	15.408	0.004	97	1858547	16.0	12.9	
77 2,3-Dimethylheptane	43	16.268	16.269	-0.001	84	2577374	16.0	9.02	
78 Chlorobenzene	112	16.279	16.279	0.000	93	3159295	16.0	13.7	
79 Ethylbenzene	91	16.558	16.557	0.001	97	5134454	16.0	14.7	
80 2-Ethylthiophene	97	16.661	16.661	0.000	97	4122460	16.0	15.6	
81 m-Xylene & p-Xylene	91	16.720	16.715	0.005	96	7113518	32.0	26.2	
82 n-Nonane	57	17.112	17.109	0.003	82	2638502	16.0	13.1	
83 Bromoform	173	17.182	17.179	0.003	95	3162893	16.0	19.8	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.182	17.181	0.001	97	2966957	16.0	17.8	
85 o-Xylene	91	17.242	17.242	0.000	99	4222274	16.0	14.5	
86 1,1,2,2-Tetrachloroethane	83	17.564	17.563	0.001	97	2836714	16.0	15.3	
87 1,2,3-Trichloropropane	110	17.720	17.720	0.000	96	921976	16.0	17.5	
88 Isopropylbenzene	105	17.817	17.815	0.002	97	5373006	16.0	14.7	
89 N-Propylbenzene	120	18.334	18.333	0.001	96	1679331	16.0	18.3	
90 2-Chlorotoluene	126	18.387	18.384	0.003	93	1651961	16.0	17.0	
91 4-Ethyltoluene	105	18.479	18.477	0.002	95	4995270	16.0	16.0	
92 1,3,5-Trimethylbenzene	120	18.549	18.545	0.004	94	2624406	16.0	15.9	
93 Alpha Methyl Styrene	118	18.769	18.771	-0.002	86	2385158	16.0	20.9	
94 n-Decane	57	18.807	18.805	0.002	93	2738103	16.0	13.3	
95 tert-Butylbenzene	119	18.958	18.958	0.000	91	4729064	16.0	14.4	
96 1,2,4-Trimethylbenzene	105	18.974	18.971	0.003	94	4084905	16.0	14.6	
97 sec-Butylbenzene	105	19.221	19.218	0.003	96	5708680	16.0	14.0	
98 1,3-Dichlorobenzene	146	19.243	19.244	-0.001	98	2901271	16.0	20.3	
99 Benzyl chloride	91	19.313	19.315	-0.002	98	3118761	16.0	22.3	
100 1,4-Dichlorobenzene	146	19.329	19.329	0.000	93	2699517	16.0	22.1	
101 4-Isopropyltoluene	119	19.377	19.373	0.004	93	4893500	16.0	14.6	
102 1,2,3-Trimethylbenzene	105	19.431	19.432	-0.001	97	3373450	16.0	15.2	
103 Butylcyclohexane	83	19.479	19.476	0.003	90	3197669	16.0	13.2	
104 2,3-Dihydroindene	117	19.678	19.676	0.002	94	3754466	16.0	16.1	
105 1,2-Dichlorobenzene	146	19.684	19.680	0.004	95	2746451	16.0	18.9	
106 n-Butylbenzene	91	19.797	19.797	0.000	98	3999716	16.0	15.5	
107 Indene	116	19.808	19.805	0.003	90	2643801	16.0	19.8	
108 Undecane	57	20.082	20.083	-0.001	90	2716283	16.0	13.9	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.157	20.158	-0.001	96	3582044	16.0	16.5	
110 1,2-Dibromo-3-Chloropropan	157	20.270	20.271	-0.001	97	1146153	16.0	24.0	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	97	4194777	16.0	15.8	
112 1,2,3,5-Tetramethylbenzene	119	20.604	20.603	0.001	96	2749344	16.0	16.0	
113 1,2,3,4-Tetramethylbenzene	119	21.018	21.019	-0.001	98	3458409	16.0	16.4	
114 Dodecane	57	21.158	21.159	-0.001	99	2423987	16.0	13.9	
115 1,2,4-Trichlorobenzene	180	21.400	21.399	0.001	95	1298586	16.0	33.7	
116 Naphthalene	128	21.540	21.540	0.000	99	2401988	16.0	23.5	
117 Benzo(b)thiophene	134	21.631	21.633	-0.002	99	1108826	16.0	30.9	
118 Hexachlorobutadiene	225	21.712	21.713	-0.001	95	2406632	16.0	15.7	
119 1,2,3-Trichlorobenzene	180	21.771	21.772	-0.001	96	1083656	16.0	25.6	
120 2-Methylnaphthalene	142	22.314	22.314	0.000	98	511700	50.0	76.8	
121 1-Methylnaphthalene	142	22.438	22.439	-0.001	99	489210	50.0	69.9	
A 124 Toluene Range	1	14.277	(14.247-14.307)		0	10035359	16.0	14.8	
A 125 C8 Range	1	14.944	(14.890-15.044)		0	11231032	16.0	12.6	
S 126 Xylenes, Total	100				0		48.0	40.7	
S 127 1,2-Dichloroethene, Total	1				0		32.0	28.9	

Reagents:

40L9DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

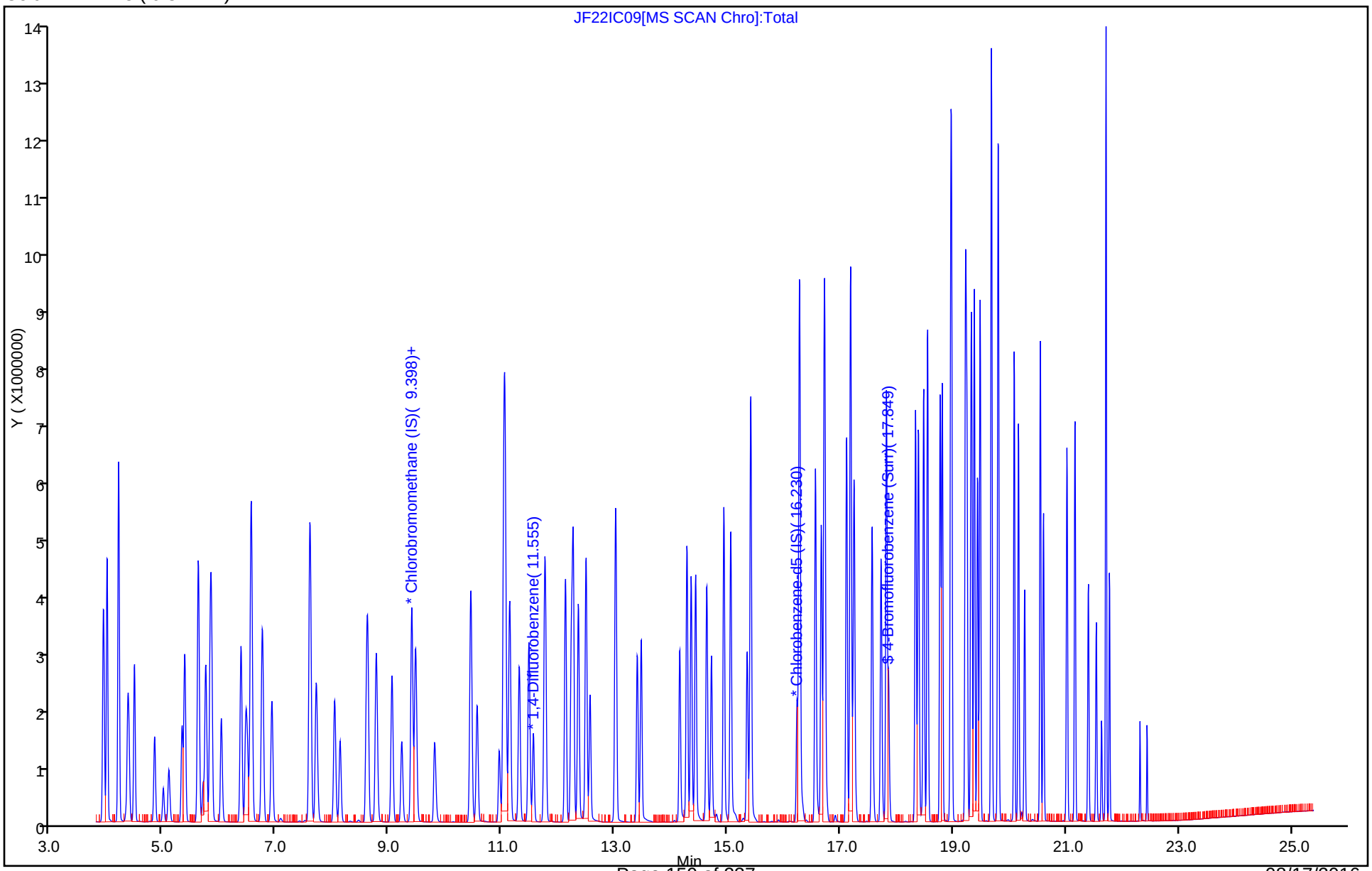
Report Date: 27-Jun-2016 15:12:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Injection Date:	22-Jun-2016 23:00:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	IC L9			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

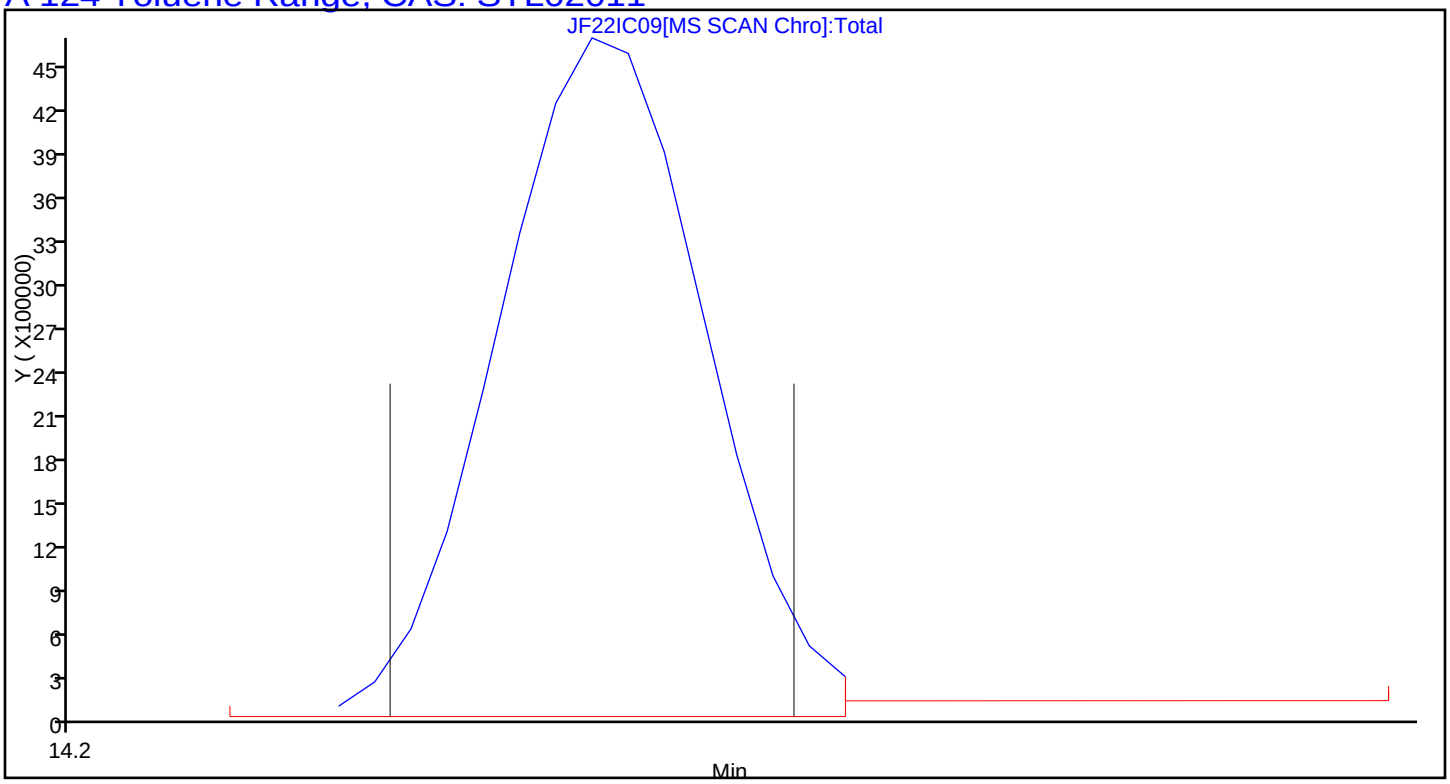


Report Date: 27-Jun-2016 15:12:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Injection Date:	22-Jun-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

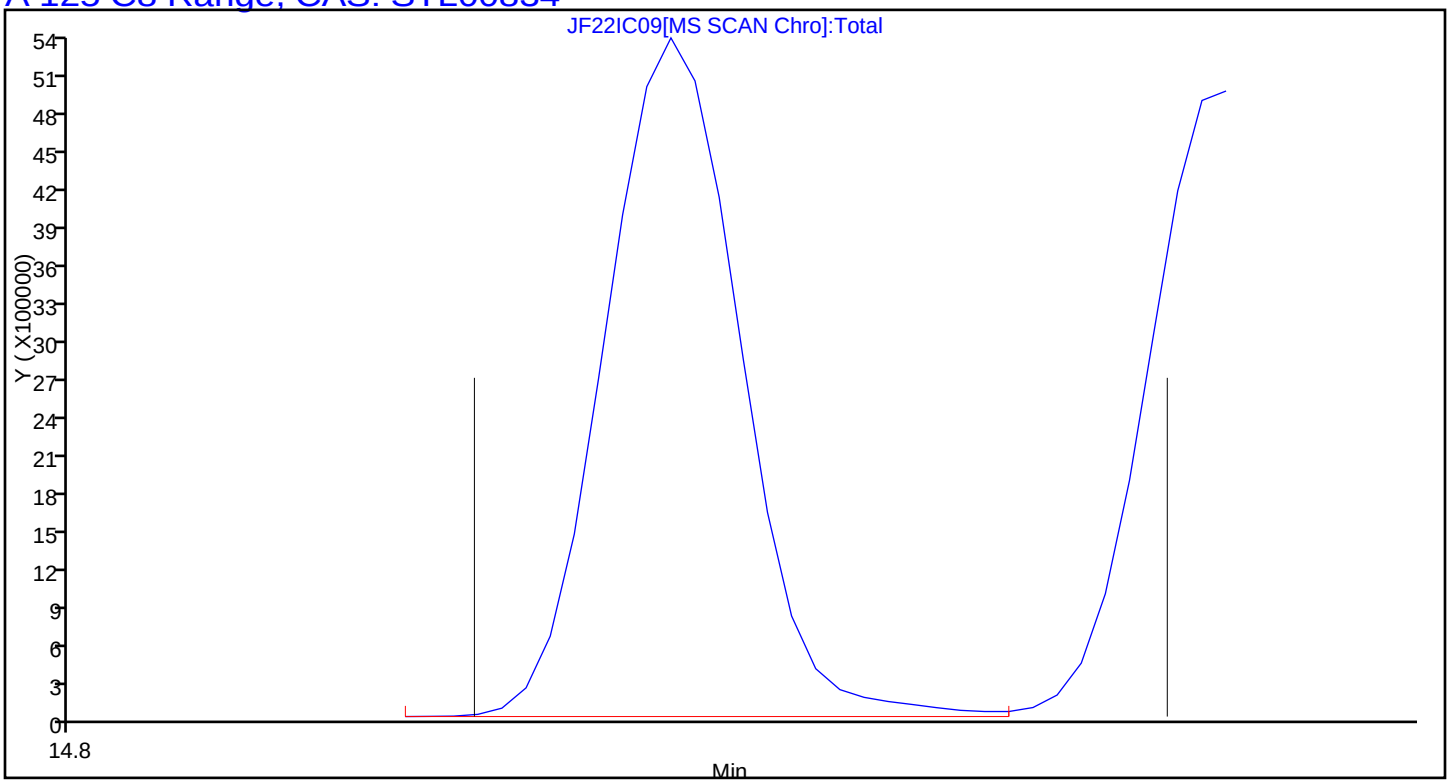


Report Date: 27-Jun-2016 15:12:40 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Injection Date:	22-Jun-2016 23:00:30	Instrument ID:	MJ		
Lims ID:	IC L9				
Client ID:					
Operator ID:	7126	ALS Bottle#:	14	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.4577		1.84	2.00	-7.8	35.0
Propene	Ave	1.154	1.043		1.81	2.00	-9.7	35.0
Dichlorodifluoromethane	Ave	4.396	4.203		1.91	2.00	-4.4	35.0
Chloromethane	Ave	0.3106	0.2987		1.92	2.00	-3.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.325		1.91	2.00	-4.7	35.0
Acetaldehyde	Ave	0.2696	0.2166		8.04	10.0	-19.6	35.0
Vinyl chloride	Ave	1.053	1.005		1.91	2.00	-4.5	35.0
Butane	Ave	1.150	1.143		1.99	2.00	-0.6	35.0
1,3-Butadiene	Ave	0.6912	0.6786		1.96	2.00	-1.8	35.0
Bromomethane	Ave	0.9910	0.8891		1.79	2.00	-10.3	35.0
Chloroethane	Ave	0.3777	0.3535		1.87	2.00	-6.4	35.0
Ethanol	Ave	0.1546	0.1422		9.20	10.0	-8.0	35.0
Vinyl bromide	Ave	1.172	1.174		2.00	2.00	0.2	35.0
2-Methylbutane	Ave	1.379	1.330		1.93	2.00	-3.6	35.0
Trichlorofluoromethane	Ave	4.068	3.824		1.88	2.00	-6.0	35.0
Acrolein	Ave	0.3360	0.2403		1.43	2.00	-28.5	35.0
Acetonitrile	Ave	0.3683	0.3377		1.83	2.00	-8.3	35.0
Acetone	Ave	0.4583	0.4025		5.27	6.00	-12.2	35.0
Isopropyl alcohol	Ave	1.527	1.389		5.46	6.00	-9.0	35.0
Pentane	Ave	0.1722	0.1657		1.92	2.00	-3.8	35.0
Ethyl ether	Ave	0.7823	0.7112		1.82	2.00	-9.1	35.0
1,1-Dichloroethene	Ave	1.183	1.132		1.91	2.00	-4.3	35.0
tert-Butyl alcohol	Ave	2.084	1.947		1.87	2.00	-6.6	35.0
Acrylonitrile	Ave	0.7011	0.6319		1.80	2.00	-9.9	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.650		1.92	2.00	-4.1	35.0
Methylene Chloride	Ave	1.099	1.018		1.85	2.00	-7.4	35.0
3-Chloropropene	Ave	1.055	1.039		1.97	2.00	-1.5	35.0
Carbon disulfide	Ave	3.359	3.239		1.93	2.00	-3.6	35.0
trans-1,2-Dichloroethene	Ave	1.188	1.152		1.94	2.00	-3.0	35.0
2-Methylpentane	Ave	2.424	2.494		2.06	2.00	2.9	35.0
Methyl tert-butyl ether	Ave	2.440	2.242		1.84	2.00	-8.1	35.0
1,1-Dichloroethane	Ave	2.417	2.338		1.94	2.00	-3.2	35.0
Vinyl acetate	Ave	2.001	1.878		1.88	2.00	-6.1	35.0
2-Butanone (MEK)	Ave	0.3839	0.3342		1.74	2.00	-13.0	35.0
Hexane	Ave	1.043	1.001		1.92	2.00	-3.9	35.0
Isopropyl ether	Ave	3.021	2.743		1.82	2.00	-9.2	35.0
cis-1,2-Dichloroethene	Ave	1.183	1.157		1.96	2.00	-2.2	35.0
Ethyl acetate	Ave	1.599	1.446		1.81	2.00	-9.6	35.0
Chloroform	Ave	2.678	2.528		1.89	2.00	-5.6	35.0
Tert-butyl ethyl ether	Ave	2.990	2.910		1.95	2.00	-2.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.8157		1.91	2.00	-4.3	35.0
1,1,1-Trichloroethane	Ave	3.097	2.981		1.92	2.00	-3.8	35.0
1,2-Dichloroethane	Ave	0.4369	0.4085		1.87	2.00	-6.5	35.0
1-Butanol	Ave	0.0610	0.0607		1.99	2.00	-0.4	35.0
Benzene	Ave	0.6983	0.6894		1.97	2.00	-1.3	35.0
Cyclohexane	Ave	0.1171	0.1196		2.04	2.00	2.2	35.0
Carbon tetrachloride	Ave	0.7435	0.7491		2.02	2.00	0.8	35.0
2,3-Dimethylpentane	Ave	0.1606	0.1409		1.75	2.00	-12.3	35.0
Thiophene	Ave	0.3988	0.4038		2.02	2.00	1.2	35.0
Tert-amyl methyl ether	Ave	0.6151	0.6035		1.96	2.00	-1.9	35.0
2,2,4-Trimethylpentane	Ave	1.315	1.234		1.88	2.00	-6.1	35.0
Heptane	Ave	0.2306	0.2187		1.90	2.00	-5.2	35.0
1,2-Dichloropropane	Ave	0.2817	0.2693		1.91	2.00	-4.4	35.0
Trichloroethene	Ave	0.3524	0.3368		1.91	2.00	-4.4	35.0
Dibromomethane	Ave	0.3120	0.3077		1.97	2.00	-1.4	35.0
Bromodichloromethane	Ave	0.5687	0.5455		1.92	2.00	-4.1	35.0
1,4-Dioxane	Ave	0.0832	0.0813		1.95	2.00	-2.3	35.0
Methyl methacrylate	Ave	0.2152	0.1781		1.66	2.00	-17.2	35.0
Methylcyclohexane	Ave	0.5358	0.4142		1.55	2.00	-22.7	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.3918		1.66	2.00	-17.1	35.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3528		1.92	2.00	-4.1	35.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3191		1.95	2.00	-2.5	35.0
Toluene	Ave	0.8518	0.7994		1.88	2.00	-6.2	35.0
1,1,2-Trichloroethane	Ave	0.2468	0.2300		1.86	2.00	-6.8	35.0
2-Methylthiophene	Ave	0.7101	0.7046		1.98	2.00	-0.8	35.0
3-Methylthiophene	Ave	0.6812	0.6917		2.03	2.00	1.5	35.0
2-Hexanone	Ave	0.2481	0.2334		1.88	2.00	-5.9	35.0
Octane	Ave	0.2789	0.2635		1.89	2.00	-5.5	35.0
Dibromochloromethane	Ave	0.5906	0.5581		1.89	2.00	-5.5	35.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.4158		1.84	2.00	-7.8	35.0
Tetrachloroethene	Ave	0.3991	0.3509		1.76	2.00	-12.1	35.0
2,3-Dimethylheptane	Ave	0.7942	0.7444		1.87	2.00	-6.3	35.0
Chlorobenzene	Ave	0.6404	0.5994		1.87	2.00	-6.4	35.0
Ethylbenzene	Ave	0.9714	0.8773		1.81	2.00	-9.7	35.0
2-Ethylthiophene	Ave	0.7342	0.6586		1.79	2.00	-10.3	35.0
m-Xylene & p-Xylene	Ave	0.7539	0.6763		3.59	4.00	-10.3	35.0
Nonane	Ave	0.5580	0.5505		1.97	2.00	-1.4	35.0
Bromoform	Ave	0.4442	0.4033		1.82	2.00	-9.2	35.0
Styrene	Ave	0.4637	0.4468		1.93	2.00	-3.6	35.0
o-Xylene	Ave	0.8099	0.7115		1.76	2.00	-12.2	35.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4659		1.81	2.00	-9.7	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: ICV 140-5523/17 Calibration Date: 06/23/2016 09:52

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JF22ICVR.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1320		1.80	2.00	-9.8	35.0
Isopropylbenzene	Ave	1.019	0.9649		1.89	2.00	-5.3	35.0
Propylbenzene	Ave	0.2557	0.2389		1.87	2.00	-6.6	35.0
2-Chlorotoluene	Ave	0.2699	0.2543		1.88	2.00	-5.8	35.0
4-Ethyltoluene	Ave	0.8665	0.7943		1.83	2.00	-8.3	35.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4105		1.79	2.00	-10.5	35.0
Alpha Methyl Styrene	Ave	0.3179	0.2957		1.86	2.00	-7.0	35.0
Decane	Ave	0.5704	0.5426		1.90	2.00	-4.9	35.0
tert-Butylbenzene	Ave	0.9118	0.8387		1.84	2.00	-8.0	35.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7161		1.85	2.00	-7.7	35.0
sec-Butylbenzene	Ave	1.131	1.069		1.89	2.00	-5.5	35.0
1,3-Dichlorobenzene	Ave	0.3965	0.3740		1.89	2.00	-5.7	35.0
Benzyl chloride	Ave	0.3894	0.3692		1.90	2.00	-5.2	35.0
1,4-Dichlorobenzene	Ave	0.3393	0.3250		1.92	2.00	-4.2	35.0
4-Isopropyltoluene	Ave	0.9296	0.8648		1.86	2.00	-7.0	35.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5929		1.92	2.00	-3.9	35.0
Butylcyclohexane	Ave	0.6728	0.6178		1.84	2.00	-8.2	35.0
1,2-Dichlorobenzene	Ave	0.4035	0.3783		1.88	2.00	-6.2	35.0
Indane	Ave	0.6488	0.5699		1.76	2.00	-12.2	35.0
Butylbenzene	Ave	0.7177	0.6878		1.92	2.00	-4.2	35.0
Indene	Ave	0.3721	0.4470		2.40	2.00	20.1	35.0
Undecane	Ave	0.5442	0.4861		1.79	2.00	-10.7	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.6781		2.24	2.00	12.2	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0899		1.36	2.00	-32.3	35.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.7152		1.94	2.00	-3.2	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.4575		1.92	2.00	-4.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.5337		1.81	2.00	-9.3	35.0
Dodecane	Ave	0.4840	0.4518		1.87	2.00	-6.7	35.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.1201		2.24	2.00	12.2	35.0
Naphthalene	Ave	0.2839	0.2802		1.97	2.00	-1.3	35.0
Benzo(b)thiophene	Ave	0.0997	0.1163		2.33	2.00	16.7	35.0
Hexachlorobutadiene	Ave	0.4264	0.3419		1.60	2.00	-19.8	35.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.1161		1.98	2.00	-1.2	35.0
2-Methylnaphthalene	Ave	0.0185	0.0246		8.30	6.25	32.8	50.0
1-Methylnaphthalene	Ave	0.0195	0.0272		8.75	6.25	40.0	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6438		4.36	4.00	9.0	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22ICVR.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 23-Jun-2016 09:52:30 ALS Bottle#: 15 Worklist Smp#: 17
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 044581
Misc. Info.: J062216,T15,,140-0003070-017
Operator ID: 7126 Instrument ID: MJ
Sublist:

Method: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 27-Jun-2016 15:31:06 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK048

First Level Reviewer: barlozhetskayaa Date: 27-Jun-2016 15:11:54

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.388	9.389	-0.001	94	332894	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.551	11.552	-0.001	95	1464991	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.231	16.231	0.000	87	1301938	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.850	17.854	-0.004	91	838201	4.00	4.36	
6 Chlorodifluoromethane	67	3.928	3.925	0.003	95	76174	2.00	1.84	
7 Propene	41	3.939	3.939	0.000	99	173552	2.00	1.81	
8 Dichlorodifluoromethane	85	3.993	3.995	-0.002	99	699548	2.00	1.91	
9 Chloromethane	52	4.197	4.196	0.001	52	49725	2.00	1.92	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.203	4.201	0.002	88	386969	2.00	1.91	
11 Acetaldehyde	44	4.364	4.364	0.000	94	180264	10.0	8.04	
12 Vinyl chloride	62	4.385	4.384	0.001	99	167327	2.00	1.91	
14 Butadiene	54	4.482	4.479	0.003	75	112957	2.00	1.96	
13 Butane	43	4.477	4.480	-0.003	82	190228	2.00	1.99	
15 Bromomethane	94	4.832	4.837	-0.005	98	147988	2.00	1.79	
16 Chloroethane	64	4.988	4.991	-0.003	97	58841	2.00	1.87	
17 Ethanol	31	5.079	5.081	-0.002	91	118344	10.0	9.20	
18 Vinyl bromide	106	5.321	5.323	-0.002	98	195483	2.00	2.00	
19 2-Methylbutane	43	5.370	5.372	-0.002	88	221391	2.00	1.93	
20 Trichlorofluoromethane	101	5.612	5.611	0.001	99	636434	2.00	1.88	
21 Acrolein	56	5.623	5.623	0.000	90	39993	2.00	1.43	
22 Acetonitrile	40	5.693	5.698	-0.005	98	56209	2.00	1.83	
23 Acetone	58	5.741	5.747	-0.006	97	200973	6.00	5.27	
24 Isopropyl alcohol	45	5.816	5.819	-0.003	93	693686	6.00	5.46	
25 Pentane	72	5.843	5.845	-0.002	98	27576	2.00	1.92	
26 Ethyl ether	31	6.021	6.027	-0.006	88	118368	2.00	1.82	
27 1,1-Dichloroethene	96	6.365	6.368	-0.003	93	188420	2.00	1.91	
28 2-Methyl-2-propanol	59	6.446	6.457	-0.011	92	324120	2.00	1.87	
29 Acrylonitrile	53	6.478	6.479	-0.001	93	105174	2.00	1.80	
30 1,1,2-Trichloro-1,2,2-trif	101	6.548	6.548	0.000	97	441155	2.00	1.92	
31 Methylene Chloride	84	6.736	6.739	-0.003	98	169372	2.00	1.85	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.752	6.753	-0.001	97	172874	2.00	1.97	
33 Carbon disulfide	76	6.914	6.916	-0.002	98	539125	2.00	1.93	
34 trans-1,2-Dichloroethene	96	7.586	7.587	-0.001	95	191768	2.00	1.94	
35 2-Methylpentane	43	7.597	7.597	0.000	93	415074	2.00	2.06	
36 Methyl tert-butyl ether	73	7.710	7.715	-0.005	96	373103	2.00	1.84	
37 1,1-Dichloroethane	63	8.022	8.025	-0.003	99	389224	2.00	1.94	
38 Vinyl acetate	43	8.124	8.125	-0.001	100	312665	2.00	1.88	
39 2-Butanone (MEK)	72	8.592	8.597	-0.005	96	55619	2.00	1.74	
40 Hexane	56	8.608	8.613	-0.005	89	166685	2.00	1.92	
41 Isopropyl ether	45	8.770	8.773	-0.003	97	456690	2.00	1.82	
42 cis-1,2-Dichloroethene	96	9.039	9.044	-0.005	98	192561	2.00	1.96	
43 Ethyl acetate	43	9.216	9.224	-0.008	99	240614	2.00	1.81	
44 Chloroform	83	9.394	9.395	-0.001	97	420797	2.00	1.89	
45 Tert-butyl ethyl ether	59	9.469	9.471	-0.002	95	484417	2.00	1.95	
46 Tetrahydrofuran	42	9.813	9.821	-0.008	92	135764	2.00	1.91	
47 1,1,1-Trichloroethane	97	10.443	10.443	0.000	96	496131	2.00	1.92	
48 1,2-Dichloroethane	62	10.550	10.556	-0.006	98	299185	2.00	1.87	
49 n-Butanol	31	10.948	10.957	-0.009	79	44469	2.00	1.99	
50 Cyclohexane	69	11.029	11.031	-0.002	72	87635	2.00	2.04	
51 Benzene	78	11.029	11.031	-0.002	98	504958	2.00	1.97	
52 Carbon tetrachloride	117	11.051	11.055	-0.004	97	548707	2.00	2.02	
53 2,3-Dimethylpentane	71	11.131	11.134	-0.003	89	103196	2.00	1.75	
54 Thiophene	84	11.298	11.302	-0.004	99	295746	2.00	2.02	
55 Tert-amyl methyl ether	73	11.476	11.480	-0.004	97	392868	2.00	1.96	
56 Isooctane	57	11.755	11.759	-0.004	99	904255	2.00	1.88	
57 n-Heptane	71	12.121	12.122	-0.001	89	160192	2.00	1.90	
58 1,2-Dichloropropane	63	12.223	12.227	-0.004	91	197245	2.00	1.91	
59 Trichloroethene	130	12.256	12.257	-0.001	96	246672	2.00	1.91	
60 Dibromomethane	93	12.347	12.348	-0.001	96	225387	2.00	1.97	
62 Dichlorobromomethane	83	12.487	12.487	0.000	99	399538	2.00	1.92	
61 1,4-Dioxane	88	12.492	12.501	-0.009	85	59580	2.00	1.95	
63 Methyl methacrylate	41	12.557	12.558	-0.001	91	130452	2.00	1.66	
64 Methylcyclohexane	83	13.014	13.014	0.000	92	303405	2.00	1.55	
65 4-Methyl-2-pentanone (MIBK	43	13.396	13.399	-0.003	95	286957	2.00	1.66	
66 cis-1,3-Dichloropropene	75	13.466	13.466	0.000	94	258405	2.00	1.92	
67 trans-1,3-Dichloropropene	75	14.149	14.149	0.000	97	207749	2.00	1.95	
68 Toluene	91	14.273	14.277	-0.004	93	520385	2.00	1.88	
69 1,1,2-Trichloroethane	83	14.348	14.349	-0.001	99	149716	2.00	1.86	
70 2-Methylthiophene	97	14.429	14.429	0.000	97	458647	2.00	1.98	
71 3-Methylthiophene	97	14.628	14.628	0.000	99	450272	2.00	2.03	
72 2-Hexanone	58	14.714	14.717	-0.003	96	151934	2.00	1.88	
73 n-Octane	85	14.935	14.931	0.004	91	171506	2.00	1.89	
74 Chlorodibromomethane	129	15.053	15.053	0.000	97	363297	2.00	1.89	
75 Ethylene Dibromide	107	15.343	15.344	-0.001	98	270662	2.00	1.84	
76 Tetrachloroethene	129	15.408	15.408	0.000	95	228453	2.00	1.76	
77 2,3-Dimethylheptane	43	16.269	16.269	0.000	95	484582	2.00	1.87	
78 Chlorobenzene	112	16.279	16.279	0.000	94	390212	2.00	1.87	
79 Ethylbenzene	91	16.559	16.557	0.002	99	571102	2.00	1.81	
80 2-Ethylthiophene	97	16.661	16.661	0.000	98	428757	2.00	1.79	
81 m-Xylene & p-Xylene	91	16.715	16.715	0.000	100	880557	4.00	3.59	
82 n-Nonane	57	17.108	17.109	-0.001	88	358339	2.00	1.97	
83 Bromoform	173	17.183	17.179	0.004	88	262509	2.00	1.82	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.183	17.181	0.002	99	290874	2.00	1.93	
85 o-Xylene	91	17.242	17.242	0.000	98	463178	2.00	1.76	
86 1,1,2,2-Tetrachloroethane	83	17.560	17.563	-0.003	98	303273	2.00	1.81	
87 1,2,3-Trichloropropane	110	17.721	17.720	0.001	98	85923	2.00	1.80	
88 Isopropylbenzene	105	17.818	17.815	0.003	95	628135	2.00	1.89	
89 N-Propylbenzene	120	18.334	18.333	0.001	99	155529	2.00	1.87	
90 2-Chlorotoluene	126	18.383	18.384	-0.001	97	165551	2.00	1.88	
91 4-Ethyltoluene	105	18.474	18.477	-0.003	98	517090	2.00	1.83	
92 1,3,5-Trimethylbenzene	120	18.544	18.545	-0.001	92	267208	2.00	1.79	
93 Alpha Methyl Styrene	118	18.770	18.771	-0.001	87	192479	2.00	1.86	
94 n-Decane	57	18.808	18.805	0.003	89	353180	2.00	1.90	
95 tert-Butylbenzene	119	18.958	18.958	0.000	93	545944	2.00	1.84	
96 1,2,4-Trimethylbenzene	105	18.975	18.971	0.004	96	466148	2.00	1.85	
97 sec-Butylbenzene	105	19.217	19.218	-0.001	98	695824	2.00	1.89	
98 1,3-Dichlorobenzene	146	19.244	19.244	0.000	98	243429	2.00	1.89	
99 Benzyl chloride	91	19.313	19.315	-0.002	98	240331	2.00	1.90	
100 1,4-Dichlorobenzene	146	19.330	19.329	0.001	96	211530	2.00	1.92	
101 4-Isopropyltoluene	119	19.373	19.373	0.000	97	562940	2.00	1.86	
102 1,2,3-Trimethylbenzene	105	19.432	19.432	0.000	99	385932	2.00	1.92	
103 Butylcyclohexane	83	19.475	19.476	-0.001	90	402172	2.00	1.84	
104 2,3-Dihydroindene	117	19.679	19.676	0.003	93	370986	2.00	1.76	
105 1,2-Dichlorobenzene	146	19.679	19.680	-0.001	96	246252	2.00	1.88	
106 n-Butylbenzene	91	19.798	19.797	0.001	98	447753	2.00	1.92	
107 Indene	116	19.803	19.805	-0.002	90	290969	2.00	2.40	
108 Undecane	57	20.083	20.083	0.000	93	316455	2.00	1.79	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.158	20.158	0.000	98	441448	2.00	2.24	
110 1,2-Dibromo-3-Chloropropan	157	20.271	20.271	0.000	96	58509	2.00	1.36	
111 1,2,4,5-Tetramethylbenzene	119	20.545	20.545	0.000	97	465572	2.00	1.94	
112 1,2,3,5-Tetramethylbenzene	119	20.605	20.603	0.002	95	297818	2.00	1.92	
113 1,2,3,4-Tetramethylbenzene	119	21.019	21.019	0.000	97	347396	2.00	1.81	
114 Dodecane	57	21.159	21.159	0.000	97	294080	2.00	1.87	
115 1,2,4-Trichlorobenzene	180	21.401	21.399	0.002	94	78150	2.00	2.24	
116 Naphthalene	128	21.541	21.540	0.001	99	182388	2.00	1.97	
117 Benzo(b)thiophene	134	21.632	21.633	-0.001	99	75685	2.00	2.33	
118 Hexachlorobutadiene	225	21.713	21.713	0.000	95	222583	2.00	1.60	
119 1,2,3-Trichlorobenzene	180	21.777	21.772	0.005	95	75553	2.00	1.98	
120 2-Methylnaphthalene	142	22.315	22.314	0.001	99	50076	6.25	8.30	
121 1-Methylnaphthalene	142	22.439	22.439	0.000	98	55410	6.25	8.75	
A 124 Toluene Range	1	14.277	(14.247-14.307)		0	1214068	2.00	1.97	
A 125 C8 Range	1	14.942	(14.890-14.995)		0	1561171	2.00	1.93	
S 126 Xylenes, Total	100				0		6.00	5.35	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40CV101S_00013	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

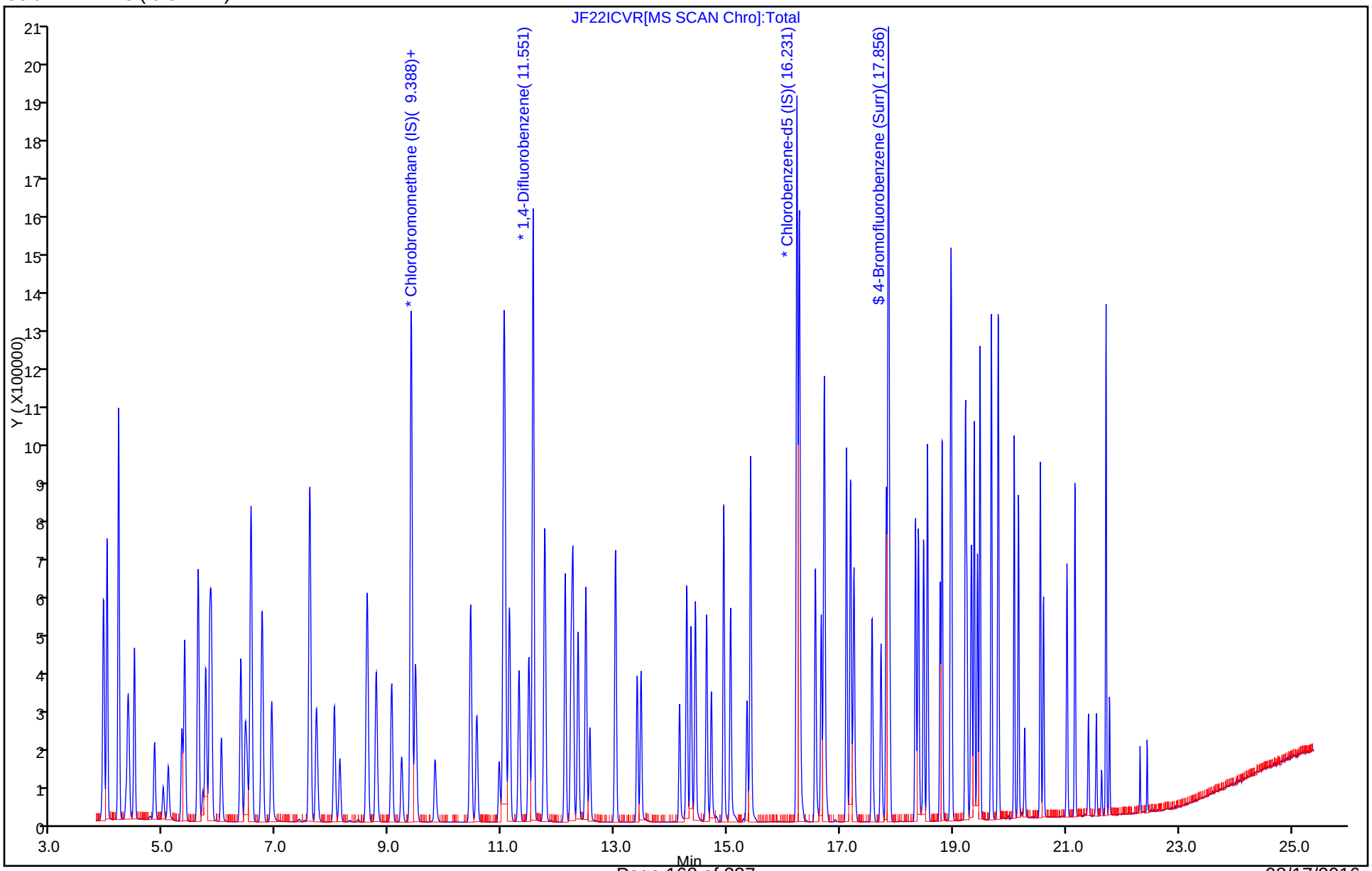
Report Date: 27-Jun-2016 15:36:11 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22ICVR.D

Injection Date:	23-Jun-2016 09:52:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	ICV			Worklist Smp#:	17
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: CCVIS 140-6172/2 Calibration Date: 08/05/2016 16:19

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVF05b.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.4742		1.91	2.00	-4.5	30.0
Propene	Ave	1.154	0.3645		0.632	2.00	-68.4*	30.0
Dichlorodifluoromethane	Ave	4.396	4.378		1.99	2.00	-0.4	30.0
Chloromethane	Ave	0.3106	0.3039		1.96	2.00	-2.2	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.468		2.02	2.00	1.2	30.0
Acetaldehyde	Ave	0.2696	0.2278		8.45	10.0	-15.5	30.0
Vinyl chloride	Ave	1.053	0.9671		1.84	2.00	-8.2	30.0
1,3-Butadiene	Ave	0.6912	0.6890		1.99	2.00	-0.3	30.0
Butane	Ave	1.150	1.162		2.02	2.00	1.0	30.0
Bromomethane	Ave	0.9910	0.8962		1.81	2.00	-9.6	30.0
Chloroethane	Ave	0.3777	0.3369		1.78	2.00	-10.8	30.0
Ethanol	Ave	0.1546	0.1367		8.84	10.0	-11.6	30.0
Vinyl bromide	Ave	1.172	1.093		1.87	2.00	-6.7	30.0
2-Methylbutane	Ave	1.379	1.433		2.08	2.00	3.9	30.0
Trichlorofluoromethane	Ave	4.068	4.045		1.99	2.00	-0.6	30.0
Acrolein	Ave	0.3360	0.3551		2.11	2.00	5.7	30.0
Acetonitrile	Ave	0.3683	0.3886		2.11	2.00	5.5	30.0
Acetone	Ave	0.4583	0.4017		5.26	6.00	-12.3	30.0
Isopropyl alcohol	Ave	1.527	1.298		5.10	6.00	-15.0	30.0
Pentane	Ave	0.1722	0.1613		1.87	2.00	-6.4	30.0
Ethyl ether	Ave	0.7823	0.8732		2.23	2.00	11.6	30.0
1,1-Dichloroethene	Ave	1.183	1.121		1.89	2.00	-5.3	30.0
tert-Butyl alcohol	Ave	2.084	1.838		1.76	2.00	-11.8	30.0
Acrylonitrile	Ave	0.7011	0.7127		2.03	2.00	1.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.669		1.93	2.00	-3.5	30.0
Methylene Chloride	Ave	1.099	1.010		1.84	2.00	-8.1	30.0
3-Chloropropene	Ave	1.055	1.168		2.21	2.00	10.7	30.0
Carbon disulfide	Ave	3.359	3.220		1.92	2.00	-4.1	30.0
trans-1,2-Dichloroethene	Ave	1.188	1.146		1.93	2.00	-3.5	30.0
2-Methylpentane	Ave	2.424	2.555		2.11	2.00	5.4	30.0
Methyl tert-butyl ether	Ave	2.440	2.492		2.04	2.00	2.1	30.0
1,1-Dichloroethane	Ave	2.417	2.512		2.08	2.00	4.0	30.0
Vinyl acetate	Ave	2.001	2.282		2.28	2.00	14.1	30.0
2-Butanone (MEK)	Ave	0.3839	0.3279		1.71	2.00	-14.6	30.0
Hexane	Ave	1.043	1.067		2.05	2.00	2.3	30.0
Isopropyl ether	Ave	3.021	3.165		2.10	2.00	4.8	30.0
cis-1,2-Dichloroethene	Ave	1.183	1.167		1.97	2.00	-1.4	30.0
Ethyl acetate	Ave	1.599	1.698		2.12	2.00	6.2	30.0
Chloroform	Ave	2.678	2.771		2.07	2.00	3.5	30.0
Tert-butyl ethyl ether	Ave	2.990	3.041		2.03	2.00	1.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: CCVIS 140-6172/2 Calibration Date: 08/05/2016 16:19

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVF05b.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.9158		2.15	2.00	7.4	30.0
1,1,1-Trichloroethane	Ave	3.097	3.245		2.10	2.00	4.8	30.0
1,2-Dichloroethane	Ave	0.4369	0.4480		2.05	2.00	2.5	30.0
1-Butanol	Ave	0.0610	0.0555		1.82	2.00	-8.9	30.0
Benzene	Ave	0.6983	0.6774		1.94	2.00	-3.0	30.0
Cyclohexane	Ave	0.1171	0.1164		1.99	2.00	-0.6	30.0
Carbon tetrachloride	Ave	0.7435	0.7443		2.00	2.00	0.1	30.0
2,3-Dimethylpentane	Ave	0.1606	0.1500		1.87	2.00	-6.6	30.0
Thiophene	Ave	0.3988	0.3817		1.91	2.00	-4.3	30.0
Tert-amyl methyl ether	Ave	0.6151	0.5419		1.76	2.00	-11.9	30.0
2,2,4-Trimethylpentane	Ave	1.315	1.302		1.98	2.00	-1.0	30.0
Heptane	Ave	0.2306	0.2239		1.94	2.00	-2.9	30.0
1,2-Dichloropropane	Ave	0.2817	0.2832		2.01	2.00	0.5	30.0
Trichloroethene	Ave	0.3524	0.3194		1.81	2.00	-9.3	30.0
Dibromomethane	Ave	0.3120	0.3071		1.97	2.00	-1.6	30.0
Bromodichloromethane	Ave	0.5687	0.5758		2.02	2.00	1.2	30.0
1,4-Dioxane	Ave	0.0832	0.0725		1.74	2.00	-12.8	30.0
Methyl methacrylate	Ave	0.2152	0.2083		1.94	2.00	-3.2	30.0
Methylcyclohexane	Ave	0.5358	0.5160		1.93	2.00	-3.7	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.3915		1.66	2.00	-17.1	30.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3611		1.96	2.00	-1.8	30.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3185		1.95	2.00	-2.6	30.0
Toluene	Ave	0.8518	0.7852		1.84	2.00	-7.8	30.0
1,1,2-Trichloroethane	Ave	0.2468	0.2327		1.89	2.00	-5.7	30.0
2-Methylthiophene	Ave	0.7101	0.6674		1.88	2.00	-6.0	30.0
3-Methylthiophene	Ave	0.6812	0.6361		1.87	2.00	-6.6	30.0
2-Hexanone	Ave	0.2481	0.2097		1.69	2.00	-15.5	30.0
Octane	Ave	0.2789	0.2645		1.90	2.00	-5.2	30.0
Dibromochloromethane	Ave	0.5906	0.5588		1.89	2.00	-5.4	30.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.4100		1.82	2.00	-9.1	30.0
Tetrachloroethene	Ave	0.3991	0.3515		1.76	2.00	-11.9	30.0
2,3-Dimethylheptane	Ave	0.7942	0.8225		2.07	2.00	3.6	30.0
Chlorobenzene	Ave	0.6404	0.5807		1.81	2.00	-9.3	30.0
Ethylbenzene	Ave	0.9714	0.9318		1.92	2.00	-4.1	30.0
2-Ethylthiophene	Ave	0.7342	0.6889		1.88	2.00	-6.2	30.0
m-Xylene & p-Xylene	Ave	0.7539	0.7107		3.77	4.00	-5.7	30.0
Nonane	Ave	0.5580	0.5692		2.04	2.00	2.0	30.0
Bromoform	Ave	0.4442	0.4096		1.84	2.00	-7.8	30.0
Styrene	Ave	0.4637	0.4525		1.95	2.00	-2.4	30.0
o-Xylene	Ave	0.8099	0.7649		1.89	2.00	-5.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4734		1.84	2.00	-8.2	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: CCVIS 140-6172/2 Calibration Date: 08/05/2016 16:19

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVF05b.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1310		1.79	2.00	-10.4	30.0
Isopropylbenzene	Ave	1.019	0.9886		1.94	2.00	-3.0	30.0
Propylbenzene	Ave	0.2557	0.2347		1.84	2.00	-8.2	30.0
2-Chlorotoluene	Ave	0.2699	0.2416		1.79	2.00	-10.5	30.0
4-Ethyltoluene	Ave	0.8665	0.8345		1.93	2.00	-3.7	30.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4112		1.79	2.00	-10.3	30.0
Alpha Methyl Styrene	Ave	0.3179	0.2950		1.86	2.00	-7.2	30.0
Decane	Ave	0.5704	0.5823		2.04	2.00	2.1	30.0
tert-Butylbenzene	Ave	0.9118	0.8408		1.84	2.00	-7.8	30.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7199		1.85	2.00	-7.3	30.0
sec-Butylbenzene	Ave	1.131	1.072		1.90	2.00	-5.2	30.0
1,3-Dichlorobenzene	Ave	0.3965	0.3284		1.66	2.00	-17.2	30.0
Benzyl chloride	Ave	0.3894	0.3207		1.65	2.00	-17.6	30.0
1,4-Dichlorobenzene	Ave	0.3393	0.2755		1.62	2.00	-18.8	30.0
4-Isopropyltoluene	Ave	0.9296	0.8243		1.77	2.00	-11.3	30.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.5402		1.75	2.00	-12.4	30.0
Butylcyclohexane	Ave	0.6728	0.6292		1.87	2.00	-6.5	30.0
Indane	Ave	0.6488	0.5822		1.79	2.00	-10.3	30.0
1,2-Dichlorobenzene	Ave	0.4035	0.3363		1.67	2.00	-16.7	30.0
Butylbenzene	Ave	0.7177	0.6314		1.76	2.00	-12.0	30.0
Indene	Ave	0.3721	0.3243		1.74	2.00	-12.9	30.0
Undecane	Ave	0.5442	0.4621		1.70	2.00	-15.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.4859		1.61	2.00	-19.6	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0927		1.40	2.00	-30.1*	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.5556		1.50	2.00	-24.8	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.3487		1.46	2.00	-26.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.4104		1.40	2.00	-30.2*	30.0
Dodecane	Ave	0.4840	0.3197		1.32	2.00	-34.0*	30.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.0713		1.33	2.00	-33.4*	30.0
Naphthalene	Ave	0.2839	0.1751		1.23	2.00	-38.3*	30.0
Benzo(b)thiophene	Ave	0.0997	0.0651		1.31	2.00	-34.7*	30.0
Hexachlorobutadiene	Ave	0.4264	0.3001		1.41	2.00	-29.6	30.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.0700		1.19	2.00	-40.4*	30.0
2-Methylnaphthalene	Ave	0.0185	0.0151		5.10	6.25	-18.3	50.0
1-Methylnaphthalene	Ave	0.0195	0.0164		5.26	6.25	-15.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6599		4.47	4.00	11.7	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JCCVF05b.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 05-Aug-2016 16:19:30 ALS Bottle#: 13 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003263-002
Misc. Info.: P23
Operator ID: 403648 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Aug-2016 11:55:32 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: tajh Date: 08-Aug-2016 11:51:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.355	9.355	0.000	97	234888	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.518	11.518	0.000	96	1103464	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.198	16.198	0.000	89	997157	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.822	17.822	0.000	88	658008	4.00	4.47	
6 Chlorodifluoromethane	67	3.911	3.911	0.000	96	55696	2.00	1.91	
7 Propene	41	3.911	3.911	0.000	96	42805	2.00	0.6315	
8 Dichlorodifluoromethane	85	3.981	3.981	0.000	100	514180	2.00	1.99	
9 Chloromethane	52	4.180	4.180	0.000	99	35686	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.191	4.191	0.000	91	289836	2.00	2.02	
11 Acetaldehyde	44	4.352	4.352	0.000	94	133779	10.0	8.45	
12 Vinyl chloride	62	4.368	4.368	0.000	99	113579	2.00	1.84	
14 Butadiene	54	4.465	4.465	0.000	76	80915	2.00	1.99	
13 Butane	43	4.465	4.465	0.000	81	136425	2.00	2.02	
15 Bromomethane	94	4.820	4.820	0.000	98	105253	2.00	1.81	
16 Chloroethane	64	4.971	4.971	0.000	98	39569	2.00	1.78	
17 Ethanol	31	5.068	5.068	0.000	93	80257	10.0	8.84	
18 Vinyl bromide	106	5.304	5.304	0.000	98	128379	2.00	1.87	
19 2-Methylbutane	43	5.353	5.353	0.000	89	168268	2.00	2.08	
20 Trichlorofluoromethane	101	5.589	5.589	0.000	99	475007	2.00	1.99	
21 Acrolein	56	5.600	5.600	0.000	92	41703	2.00	2.11	
22 Acetonitrile	40	5.675	5.675	0.000	98	45634	2.00	2.11	
23 Acetone	58	5.729	5.729	0.000	98	141538	6.00	5.26	
24 Isopropyl alcohol	45	5.799	5.799	0.000	95	457431	6.00	5.10	
25 Pentane	72	5.821	5.821	0.000	97	18942	2.00	1.87	
26 Ethyl ether	31	5.998	5.998	0.000	92	102549	2.00	2.23	
27 1,1-Dichloroethene	96	6.343	6.343	0.000	92	131666	2.00	1.89	
28 2-Methyl-2-propanol	59	6.429	6.429	0.000	93	215912	2.00	1.76	
29 Acrylonitrile	53	6.456	6.456	0.000	92	83701	2.00	2.03	
30 1,1,2-Trichloro-1,2,2-trif	101	6.525	6.525	0.000	95	313416	2.00	1.93	
31 Methylene Chloride	84	6.714	6.714	0.000	97	118613	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.724	6.724	0.000	97	137120	2.00	2.21	
33 Carbon disulfide	76	6.886	6.886	0.000	99	378182	2.00	1.92	
34 trans-1,2-Dichloroethene	96	7.553	7.553	0.000	93	134563	2.00	1.93	
35 2-Methylpentane	43	7.569	7.569	0.000	94	300056	2.00	2.11	
36 Methyl tert-butyl ether	73	7.682	7.682	0.000	97	292650	2.00	2.04	
37 1,1-Dichloroethane	63	7.994	7.994	0.000	100	295057	2.00	2.08	
38 Vinyl acetate	43	8.096	8.096	0.000	100	268062	2.00	2.28	
39 2-Butanone (MEK)	72	8.564	8.564	0.000	95	38507	2.00	1.71	
40 Hexane	56	8.580	8.580	0.000	88	125304	2.00	2.05	
41 Isopropyl ether	45	8.736	8.736	0.000	97	371670	2.00	2.10	
42 cis-1,2-Dichloroethene	96	9.005	9.005	0.000	98	137039	2.00	1.97	
43 Ethyl acetate	43	9.188	9.188	0.000	99	199418	2.00	2.12	
44 Chloroform	83	9.360	9.360	0.000	98	325488	2.00	2.07	
45 Tert-butyl ethyl ether	59	9.430	9.430	0.000	95	357148	2.00	2.03	
46 Tetrahydrofuran	42	9.780	9.780	0.000	93	107555	2.00	2.15	
47 1,1,1-Trichloroethane	97	10.404	10.404	0.000	96	381078	2.00	2.10	
48 1,2-Dichloroethane	62	10.517	10.517	0.000	98	247162	2.00	2.05	
49 n-Butanol	31	10.920	10.920	0.000	83	30634	2.00	1.82	
50 Cyclohexane	69	10.996	10.996	0.000	73	64220	2.00	1.99	
51 Benzene	78	10.996	10.996	0.000	97	373745	2.00	1.94	
52 Carbon tetrachloride	117	11.017	11.017	0.000	98	410672	2.00	2.00	
53 2,3-Dimethylpentane	71	11.098	11.098	0.000	88	82778	2.00	1.87	
54 Thiophene	84	11.265	11.265	0.000	99	210601	2.00	1.91	
55 Tert-amyl methyl ether	73	11.448	11.448	0.000	95	270179	2.00	1.76	
56 Isooctane	57	11.727	11.727	0.000	98	718206	2.00	1.98	
57 n-Heptane	71	12.088	12.088	0.000	91	123552	2.00	1.94	
58 1,2-Dichloropropane	63	12.190	12.190	0.000	89	156233	2.00	2.01	
59 Trichloroethene	130	12.222	12.222	0.000	94	176243	2.00	1.81	
60 Dibromomethane	93	12.314	12.314	0.000	93	169431	2.00	1.97	
62 Dichlorobromomethane	83	12.448	12.448	0.000	100	317680	2.00	2.02	
61 1,4-Dioxane	88	12.464	12.464	0.000	88	40016	2.00	1.74	
63 Methyl methacrylate	41	12.524	12.524	0.000	93	114931	2.00	1.94	
64 Methylcyclohexane	83	12.981	12.981	0.000	90	284672	2.00	1.93	
65 4-Methyl-2-pentanone (MIBK	43	13.363	13.363	0.000	97	215988	2.00	1.66	
66 cis-1,3-Dichloropropene	75	13.433	13.433	0.000	96	199241	2.00	1.96	
67 trans-1,3-Dichloropropene	75	14.116	14.116	0.000	98	158815	2.00	1.95	
68 Toluene	91	14.245	14.245	0.000	92	391471	2.00	1.84	
69 1,1,2-Trichloroethane	83	14.320	14.320	0.000	97	115994	2.00	1.89	
70 2-Methylthiophene	97	14.396	14.396	0.000	97	332728	2.00	1.88	
71 3-Methylthiophene	97	14.595	14.595	0.000	99	317134	2.00	1.87	
72 2-Hexanone	58	14.681	14.681	0.000	94	104551	2.00	1.69	
73 n-Octane	85	14.907	14.907	0.000	93	131867	2.00	1.90	
74 Chlorodibromomethane	129	15.020	15.020	0.000	98	278580	2.00	1.89	
75 Ethylene Dibromide	107	15.310	15.310	0.000	98	204422	2.00	1.82	
76 Tetrachloroethene	129	15.375	15.375	0.000	93	175230	2.00	1.76	
77 2,3-Dimethylheptane	43	16.241	16.241	0.000	95	410070	2.00	2.07	
78 Chlorobenzene	112	16.246	16.246	0.000	94	289500	2.00	1.81	
79 Ethylbenzene	91	16.526	16.526	0.000	99	464579	2.00	1.92	
80 2-Ethylthiophene	97	16.633	16.633	0.000	98	343478	2.00	1.88	
81 m-Xylene & p-Xylene	91	16.687	16.687	0.000	100	708717	4.00	3.77	
82 n-Nonane	57	17.080	17.080	0.000	91	283806	2.00	2.04	
83 Bromoform	173	17.150	17.150	0.000	92	204210	2.00	1.84	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	17.150	17.150	0.000	99	225623	2.00	1.95	
85 o-Xylene	91	17.209	17.209	0.000	98	381360	2.00	1.89	
86 1,1,2,2-Tetrachloroethane	83	17.532	17.532	0.000	98	236006	2.00	1.84	
87 1,2,3-Trichloropropane	110	17.693	17.693	0.000	97	65311	2.00	1.79	
88 Isopropylbenzene	105	17.790	17.790	0.000	97	492884	2.00	1.94	
89 N-Propylbenzene	120	18.306	18.306	0.000	99	117028	2.00	1.84	
90 2-Chlorotoluene	126	18.355	18.355	0.000	97	120475	2.00	1.79	
91 4-Ethyltoluene	105	18.452	18.452	0.000	98	416054	2.00	1.93	
92 1,3,5-Trimethylbenzene	120	18.522	18.522	0.000	92	205031	2.00	1.79	
93 Alpha Methyl Styrene	118	18.742	18.742	0.000	86	147075	2.00	1.86	
94 n-Decane	57	18.780	18.780	0.000	89	290299	2.00	2.04	
95 tert-Butylbenzene	119	18.930	18.930	0.000	91	419209	2.00	1.84	
96 1,2,4-Trimethylbenzene	105	18.947	18.947	0.000	96	358940	2.00	1.85	
97 sec-Butylbenzene	105	19.194	19.194	0.000	98	534606	2.00	1.90	
98 1,3-Dichlorobenzene	146	19.221	19.221	0.000	99	163717	2.00	1.66	
99 Benzyl chloride	91	19.286	19.286	0.000	97	159877	2.00	1.65	
100 1,4-Dichlorobenzene	146	19.302	19.302	0.000	94	137345	2.00	1.62	
101 4-Isopropyltoluene	119	19.350	19.350	0.000	96	410982	2.00	1.77	
102 1,2,3-Trimethylbenzene	105	19.409	19.409	0.000	99	269320	2.00	1.75	
103 Butylcyclohexane	83	19.452	19.452	0.000	88	313682	2.00	1.87	
104 2,3-Dihydroindene	117	19.651	19.651	0.000	93	290246	2.00	1.79	
105 1,2-Dichlorobenzene	146	19.657	19.657	0.000	94	167654	2.00	1.67	
106 n-Butylbenzene	91	19.775	19.775	0.000	98	314812	2.00	1.76	
107 Indene	116	19.780	19.780	0.000	90	161700	2.00	1.74	
108 Undecane	57	20.060	20.060	0.000	94	230398	2.00	1.70	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.135	20.135	0.000	98	242258	2.00	1.61	
110 1,2-Dibromo-3-Chloropropan	157	20.248	20.248	0.000	94	46213	2.00	1.40	
111 1,2,4,5-Tetramethylbenzene	119	20.523	20.523	0.000	96	276983	2.00	1.50	
112 1,2,3,5-Tetramethylbenzene	119	20.577	20.577	0.000	95	173846	2.00	1.46	
113 1,2,3,4-Tetramethylbenzene	119	20.996	20.996	0.000	96	204605	2.00	1.40	
114 Dodecane	57	21.136	21.136	0.000	96	159369	2.00	1.32	
115 1,2,4-Trichlorobenzene	180	21.373	21.373	0.000	94	35523	2.00	1.33	
116 Naphthalene	128	21.518	21.518	0.000	98	87296	2.00	1.23	
117 Benzo(b)thiophene	134	21.609	21.609	0.000	99	32442	2.00	1.31	
118 Hexachlorobutadiene	225	21.696	21.696	0.000	96	149620	2.00	1.41	
119 1,2,3-Trichlorobenzene	180	21.755	21.755	0.000	95	34908	2.00	1.19	
120 2-Methylnaphthalene	142	22.298	22.298	0.000	99	23578	6.25	5.10	
121 1-Methylnaphthalene	142	22.422	22.422	0.000	99	25505	6.25	5.26	
A 124 Toluene Range	1	14.245	(14.215-14.275)		0	951801	2.00	2.02	
A 125 C8 Range	1	14.897	(14.868-14.926)		0	1299034	2.00	2.10	
S 126 Xylenes, Total	100				0		6.00	5.66	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40CV101P_00023	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

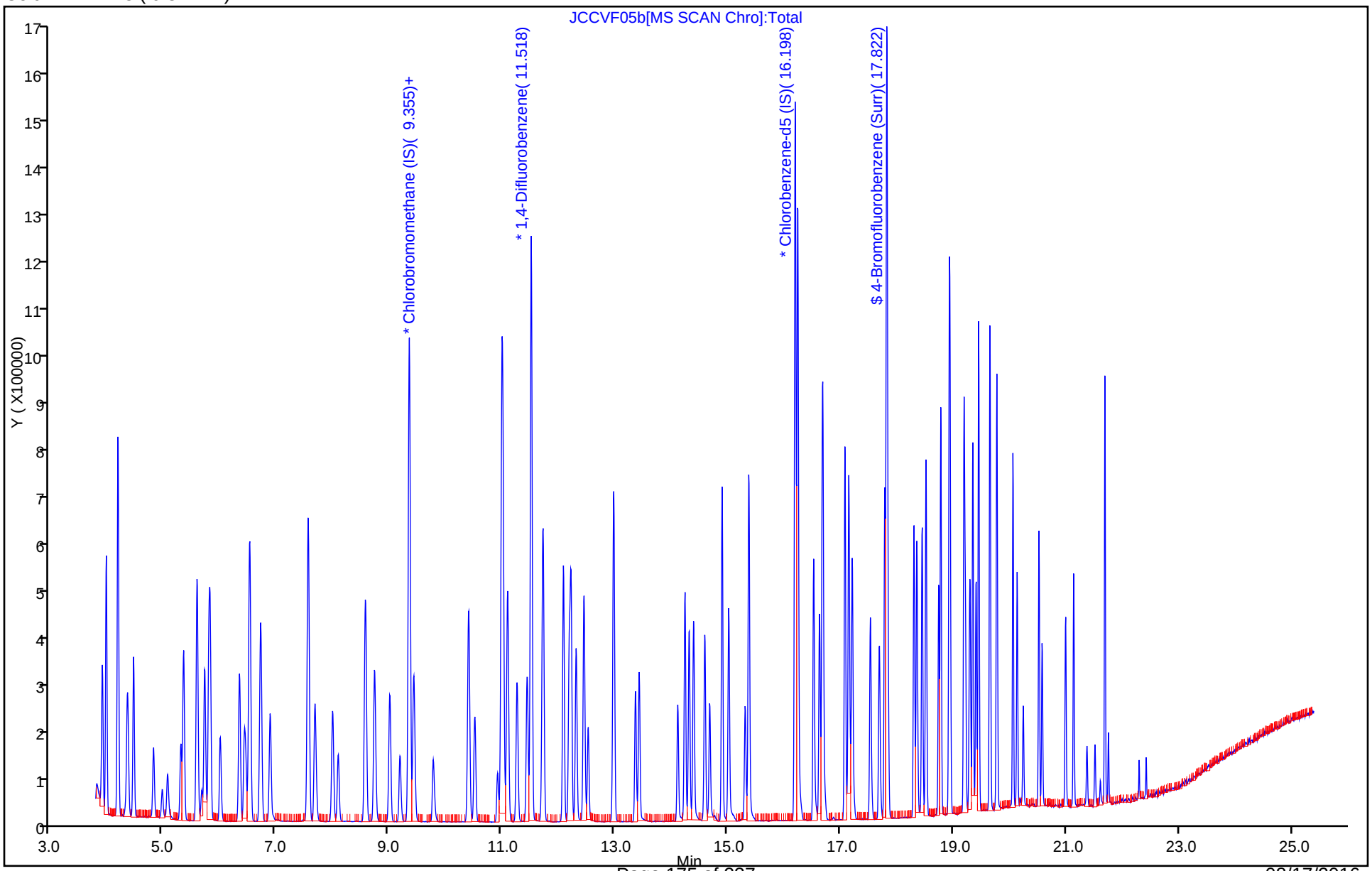
Report Date: 08-Aug-2016 11:55:33 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JCCVF05b.D

Injection Date:	05-Aug-2016 16:19:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: CCVIS 140-6126/6 Calibration Date: 08/08/2016 11:30

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVF08A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4965	0.5246		2.11	2.00	5.7	30.0
Propene	Ave	1.154	1.102		1.91	2.00	-4.6	30.0
Dichlorodifluoromethane	Ave	4.396	4.631		2.11	2.00	5.3	30.0
Chloromethane	Ave	0.3106	0.3143		2.02	2.00	1.2	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.440	2.626		2.15	2.00	7.6	30.0
Acetaldehyde	Ave	0.2696	0.1518		5.63	10.0	-43.7*	30.0
Vinyl chloride	Ave	1.053	1.039		1.97	2.00	-1.3	30.0
1,3-Butadiene	Ave	0.6912	0.6890		1.99	2.00	-0.3	30.0
Butane	Ave	1.150	1.203		2.09	2.00	4.6	30.0
Bromomethane	Ave	0.9910	0.9416		1.90	2.00	-5.0	30.0
Chloroethane	Ave	0.3777	0.3717		1.97	2.00	-1.6	30.0
Ethanol	Ave	0.1546	0.1475		9.55	10.0	-4.6	30.0
Vinyl bromide	Ave	1.172	1.107		1.89	2.00	-5.5	30.0
2-Methylbutane	Ave	1.379	1.418		2.06	2.00	2.8	30.0
Trichlorofluoromethane	Ave	4.068	4.260		2.10	2.00	4.7	30.0
Acrolein	Ave	0.3360	0.2350		1.40	2.00	-30.0	30.0
Acetonitrile	Ave	0.3683	0.2950		1.60	2.00	-19.9	30.0
Acetone	Ave	0.4583	0.2969		3.89	6.00	-35.2*	30.0
Isopropyl alcohol	Ave	1.527	1.231		4.84	6.00	-19.4	30.0
Pentane	Ave	0.1722	0.1578		1.83	2.00	-8.4	30.0
Ethyl ether	Ave	0.7823	0.6458		1.65	2.00	-17.4	30.0
1,1-Dichloroethene	Ave	1.183	1.104		1.87	2.00	-6.7	30.0
tert-Butyl alcohol	Ave	2.084	1.964		1.89	2.00	-5.8	30.0
Acrylonitrile	Ave	0.7011	0.5112		1.46	2.00	-27.1	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.765	2.689		1.95	2.00	-2.8	30.0
Methylene Chloride	Ave	1.099	1.047		1.91	2.00	-4.7	30.0
3-Chloropropene	Ave	1.055	0.998		1.89	2.00	-5.4	30.0
Carbon disulfide	Ave	3.359	3.157		1.88	2.00	-6.0	30.0
trans-1,2-Dichloroethene	Ave	1.188	1.125		1.90	2.00	-5.2	30.0
2-Methylpentane	Ave	2.424	2.842		2.35	2.00	17.2	30.0
Methyl tert-butyl ether	Ave	2.440	2.180		1.79	2.00	-10.7	30.0
1,1-Dichloroethane	Ave	2.417	2.303		1.91	2.00	-4.7	30.0
Vinyl acetate	Ave	2.001	1.796		1.80	2.00	-10.3	30.0
2-Butanone (MEK)	Ave	0.3839	0.3060		1.60	2.00	-20.3	30.0
Hexane	Ave	1.043	1.047		2.01	2.00	0.5	30.0
Isopropyl ether	Ave	3.021	2.802		1.86	2.00	-7.2	30.0
cis-1,2-Dichloroethene	Ave	1.183	1.101		1.86	2.00	-6.9	30.0
Ethyl acetate	Ave	1.599	1.572		1.97	2.00	-1.7	30.0
Chloroform	Ave	2.678	2.455		1.83	2.00	-8.3	30.0
Tert-butyl ethyl ether	Ave	2.990	2.759		1.85	2.00	-7.7	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: CCVIS 140-6126/6 Calibration Date: 08/08/2016 11:30

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVF08A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.8527	0.7981		1.87	2.00	-6.4	30.0
1,1,1-Trichloroethane	Ave	3.097	3.046		1.97	2.00	-1.6	30.0
1,2-Dichloroethane	Ave	0.4369	0.4407		2.02	2.00	0.9	30.0
1-Butanol	Ave	0.0610	0.0693		2.27	2.00	13.7	30.0
Benzene	Ave	0.6983	0.6031		1.73	2.00	-13.6	30.0
Cyclohexane	Ave	0.1171	0.1196		2.04	2.00	2.2	30.0
Carbon tetrachloride	Ave	0.7435	0.8347		2.25	2.00	12.3	30.0
2,3-Dimethylpentane	Ave	0.1606	0.1359		1.69	2.00	-15.4	30.0
Thiophene	Ave	0.3988	0.3561		1.79	2.00	-10.7	30.0
Tert-amyl methyl ether	Ave	0.6151	0.6245		2.03	2.00	1.5	30.0
2,2,4-Trimethylpentane	Ave	1.315	1.245		1.89	2.00	-5.3	30.0
Heptane	Ave	0.2306	0.2063		1.79	2.00	-10.5	30.0
1,2-Dichloropropane	Ave	0.2817	0.2383		1.69	2.00	-15.4	30.0
Trichloroethene	Ave	0.3524	0.3091		1.76	2.00	-12.3	30.0
Dibromomethane	Ave	0.3120	0.2943		1.89	2.00	-5.7	30.0
Bromodichloromethane	Ave	0.5687	0.5380		1.89	2.00	-5.4	30.0
1,4-Dioxane	Ave	0.0832	0.0733		1.76	2.00	-11.9	30.0
Methyl methacrylate	Ave	0.2152	0.2047		1.90	2.00	-4.9	30.0
Methylcyclohexane	Ave	0.5358	0.3953		1.48	2.00	-26.2	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.4724	0.4225		1.79	2.00	-10.6	30.0
cis-1,3-Dichloropropene	Ave	0.3678	0.3315		1.80	2.00	-9.9	30.0
trans-1,3-Dichloropropene	Ave	0.3272	0.3186		1.95	2.00	-2.6	30.0
Toluene	Ave	0.8518	0.7086		1.66	2.00	-16.8	30.0
1,1,2-Trichloroethane	Ave	0.2468	0.2079		1.69	2.00	-15.7	30.0
2-Methylthiophene	Ave	0.7101	0.6276		1.77	2.00	-11.6	30.0
3-Methylthiophene	Ave	0.6812	0.6215		1.83	2.00	-8.8	30.0
2-Hexanone	Ave	0.2481	0.2619		2.11	2.00	5.6	30.0
Octane	Ave	0.2789	0.2605		1.87	2.00	-6.6	30.0
Dibromochloromethane	Ave	0.5906	0.5827		1.97	2.00	-1.3	30.0
1,2-Dibromoethane (EDB)	Ave	0.4509	0.3999		1.77	2.00	-11.3	30.0
Tetrachloroethene	Ave	0.3991	0.3614		1.81	2.00	-9.5	30.0
2,3-Dimethylheptane	Ave	0.7942	0.8210		2.07	2.00	3.4	30.0
Chlorobenzene	Ave	0.6404	0.5668		1.77	2.00	-11.5	30.0
Ethylbenzene	Ave	0.9714	0.8676		1.79	2.00	-10.7	30.0
2-Ethylthiophene	Ave	0.7342	0.6581		1.79	2.00	-10.4	30.0
m-Xylene & p-Xylene	Ave	0.7539	0.6988		3.71	4.00	-7.3	30.0
Nonane	Ave	0.5580	0.5097		1.83	2.00	-8.7	30.0
Bromoform	Ave	0.4442	0.4215		1.90	2.00	-5.1	30.0
Styrene	Ave	0.4637	0.4458		1.92	2.00	-3.9	30.0
o-Xylene	Ave	0.8099	0.7309		1.81	2.00	-9.8	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5159	0.4846		1.88	2.00	-6.1	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Lab Sample ID: CCVIS 140-6126/6 Calibration Date: 08/08/2016 11:30

Instrument ID: MJ Calib Start Date: 06/22/2016 15:49

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 06/22/2016 23:00

Lab File ID: JCCVF08A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.1463	0.1419		1.94	2.00	-3.0	30.0
Isopropylbenzene	Ave	1.019	0.9858		1.94	2.00	-3.2	30.0
Propylbenzene	Ave	0.2557	0.2438		1.91	2.00	-4.6	30.0
2-Chlorotoluene	Ave	0.2699	0.2403		1.78	2.00	-11.0	30.0
4-Ethyltoluene	Ave	0.8665	0.8339		1.93	2.00	-3.8	30.0
1,3,5-Trimethylbenzene	Ave	0.4585	0.4349		1.90	2.00	-5.2	30.0
Alpha Methyl Styrene	Ave	0.3179	0.3166		1.99	2.00	-0.4	30.0
Decane	Ave	0.5704	0.5702		2.00	2.00	-0.0	30.0
tert-Butylbenzene	Ave	0.9118	0.8997		1.97	2.00	-1.3	30.0
1,2,4-Trimethylbenzene	Ave	0.7762	0.7890		2.03	2.00	1.6	30.0
sec-Butylbenzene	Ave	1.131	1.113		1.97	2.00	-1.6	30.0
1,3-Dichlorobenzene	Ave	0.3965	0.3933		1.98	2.00	-0.8	30.0
Benzyl chloride	Ave	0.3894	0.4532		2.33	2.00	16.4	30.0
1,4-Dichlorobenzene	Ave	0.3393	0.3450		2.03	2.00	1.7	30.0
4-Isopropyltoluene	Ave	0.9296	0.9156		1.97	2.00	-1.5	30.0
1,2,3-Trimethylbenzene	Ave	0.6166	0.6455		2.09	2.00	4.7	30.0
Butylcyclohexane	Ave	0.6728	0.5681		1.69	2.00	-15.6	30.0
1,2-Dichlorobenzene	Ave	0.4035	0.3912		1.94	2.00	-3.0	30.0
Indane	Ave	0.6488	0.5950		1.84	2.00	-8.3	30.0
Butylbenzene	Ave	0.7177	0.7925		2.21	2.00	10.4	30.0
Indene	Ave	0.3721	0.4846		2.61	2.00	30.2*	30.0
Undecane	Ave	0.5442	0.6481		2.38	2.00	19.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.6042	0.7532		2.49	2.00	24.7	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.1327	0.0946		1.43	2.00	-28.7	30.0
1,2,4,5-Tetramethylbenzene	Ave	0.7390	0.8183		2.22	2.00	10.7	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.4769	0.5291		2.22	2.00	10.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.5881	0.6440		2.19	2.00	9.5	30.0
Dodecane	Ave	0.4840	0.6101		2.52	2.00	26.1	30.0
1,2,4-Trichlorobenzene	Ave	0.1070	0.1276		2.38	2.00	19.2	30.0
Naphthalene	Ave	0.2839	0.3192		2.25	2.00	12.4	30.0
Benzo(b)thiophene	Ave	0.0997	0.1280		2.57	2.00	28.4	30.0
Hexachlorobutadiene	Ave	0.4264	0.4008		1.88	2.00	-6.0	30.0
1,2,3-Trichlorobenzene	Ave	0.1175	0.1357		2.31	2.00	15.5	30.0
2-Methylnaphthalene	Ave	0.0185	0.0202		6.81	6.25	8.9	50.0
1-Methylnaphthalene	Ave	0.0195	0.0209		6.70	6.25	7.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5906	0.6522		4.42	4.00	10.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JCCVF08A.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 08-Aug-2016 11:30:30 ALS Bottle#: 15 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003264-006
Misc. Info.: S14
Operator ID: 7126 Instrument ID: MJ
Sublist: chrom-MJ_TO15*sub5

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Aug-2016 10:15:25 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 09-Aug-2016 10:15:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.356	9.356	0.000	95	223098	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.519	11.519	0.000	96	957132	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.199	16.199	0.000	92	790881	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.824	17.824	0.000	88	515779	4.00	4.42	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	95	58550	2.00	2.11	
7 Propene	41	3.918	3.918	0.000	97	122939	2.00	1.91	
8 Dichlorodifluoromethane	85	3.988	3.988	0.000	99	516889	2.00	2.11	
9 Chloromethane	52	4.187	4.187	0.000	98	35077	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.192	4.192	0.000	97	293116	2.00	2.15	
11 Acetaldehyde	44	4.359	4.359	0.000	97	84714	10.0	5.63	
12 Vinyl chloride	62	4.375	4.375	0.000	99	115944	2.00	1.97	
14 Butadiene	54	4.472	4.472	0.000	73	76899	2.00	1.99	
13 Butane	43	4.472	4.472	0.000	81	134244	2.00	2.09	
15 Bromomethane	94	4.827	4.827	0.000	97	105085	2.00	1.90	
16 Chloroethane	64	4.978	4.978	0.000	97	41479	2.00	1.97	
17 Ethanol	31	5.074	5.074	0.000	94	82285	10.0	9.55	
18 Vinyl bromide	106	5.306	5.306	0.000	97	123560	2.00	1.89	
19 2-Methylbutane	43	5.354	5.354	0.000	88	158244	2.00	2.06	
20 Trichlorofluoromethane	101	5.591	5.591	0.000	99	475400	2.00	2.10	
21 Acrolein	56	5.607	5.607	0.000	92	26232	2.00	1.40	
22 Acetonitrile	40	5.677	5.677	0.000	97	32925	2.00	1.60	
23 Acetone	58	5.731	5.731	0.000	99	99408	6.00	3.89	
24 Isopropyl alcohol	45	5.801	5.801	0.000	95	412252	6.00	4.84	
25 Pentane	72	5.822	5.822	0.000	98	17613	2.00	1.83	
26 Ethyl ether	31	6.005	6.005	0.000	92	72081	2.00	1.65	
27 1,1-Dichloroethene	96	6.344	6.344	0.000	92	123248	2.00	1.87	
28 2-Methyl-2-propanol	59	6.430	6.430	0.000	94	219231	2.00	1.89	
29 Acrylonitrile	53	6.457	6.457	0.000	92	57053	2.00	1.46	
30 1,1,2-Trichloro-1,2,2-trif	101	6.527	6.527	0.000	96	300087	2.00	1.95	
31 Methylene Chloride	84	6.715	6.715	0.000	96	116896	2.00	1.91	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	6.731	6.731	0.000	97	111429	2.00	1.89	
33 Carbon disulfide	76	6.893	6.893	0.000	99	352326	2.00	1.88	
34 trans-1,2-Dichloroethene	96	7.560	7.560	0.000	92	125614	2.00	1.90	
35 2-Methylpentane	43	7.570	7.570	0.000	94	317224	2.00	2.35	
36 Methyl tert-butyl ether	73	7.689	7.689	0.000	97	243278	2.00	1.79	
37 1,1-Dichloroethane	63	7.995	7.995	0.000	100	256998	2.00	1.91	
38 Vinyl acetate	43	8.098	8.098	0.000	100	200410	2.00	1.80	
39 2-Butanone (MEK)	72	8.566	8.566	0.000	95	34157	2.00	1.60	
40 Hexane	56	8.587	8.587	0.000	88	116885	2.00	2.01	
41 Isopropyl ether	45	8.743	8.743	0.000	97	312779	2.00	1.86	
42 cis-1,2-Dichloroethene	96	9.012	9.012	0.000	98	122922	2.00	1.86	
43 Ethyl acetate	43	9.190	9.190	0.000	99	175500	2.00	1.97	
44 Chloroform	83	9.362	9.362	0.000	97	274005	2.00	1.83	
45 Tert-butyl ethyl ether	59	9.437	9.437	0.000	95	308010	2.00	1.85	
46 Tetrahydrofuran	42	9.781	9.781	0.000	92	89076	2.00	1.87	
47 1,1,1-Trichloroethane	97	10.411	10.411	0.000	96	340008	2.00	1.97	
48 1,2-Dichloroethane	62	10.518	10.518	0.000	98	211021	2.00	2.02	
49 n-Butanol	31	10.922	10.922	0.000	87	33189	2.00	2.27	
50 Cyclohexane	69	10.997	10.997	0.000	78	57281	2.00	2.04	
51 Benzene	78	10.997	10.997	0.000	97	288766	2.00	1.73	
52 Carbon tetrachloride	117	11.019	11.019	0.000	98	399670	2.00	2.25	
53 2,3-Dimethylpentane	71	11.099	11.099	0.000	88	65051	2.00	1.69	
54 Thiophene	84	11.266	11.266	0.000	97	170523	2.00	1.79	
55 Tert-amyl methyl ether	73	11.444	11.444	0.000	95	247121	2.00	2.03	
56 Isooctane	57	11.729	11.729	0.000	98	596214	2.00	1.89	
57 n-Heptane	71	12.095	12.095	0.000	91	98798	2.00	1.79	
58 1,2-Dichloropropane	63	12.191	12.191	0.000	87	114114	2.00	1.69	
59 Trichloroethene	130	12.224	12.224	0.000	94	148016	2.00	1.76	
60 Dibromomethane	93	12.315	12.315	0.000	94	140908	2.00	1.89	
62 Dichlorobromomethane	83	12.450	12.450	0.000	100	257592	2.00	1.89	
61 1,4-Dioxane	88	12.466	12.466	0.000	90	35108	2.00	1.76	
63 Methyl methacrylate	41	12.530	12.530	0.000	92	98020	2.00	1.90	
64 Methylcyclohexane	83	12.982	12.982	0.000	90	189271	2.00	1.48	
65 4-Methyl-2-pentanone (MIBK	43	13.364	13.364	0.000	97	202313	2.00	1.79	
66 cis-1,3-Dichloropropene	75	13.434	13.434	0.000	97	158704	2.00	1.80	
67 trans-1,3-Dichloropropene	75	14.117	14.117	0.000	98	126065	2.00	1.95	
68 Toluene	91	14.246	14.246	0.000	93	280340	2.00	1.66	
69 1,1,2-Trichloroethane	83	14.316	14.316	0.000	96	82257	2.00	1.69	
70 2-Methylthiophene	97	14.397	14.397	0.000	98	248321	2.00	1.77	
71 3-Methylthiophene	97	14.596	14.596	0.000	99	245902	2.00	1.83	
72 2-Hexanone	58	14.682	14.682	0.000	93	103625	2.00	2.11	
73 n-Octane	85	14.903	14.903	0.000	92	103052	2.00	1.87	
74 Chlorodibromomethane	129	15.021	15.021	0.000	98	230534	2.00	1.97	
75 Ethylene Dibromide	107	15.311	15.311	0.000	98	158235	2.00	1.77	
76 Tetrachloroethene	129	15.376	15.376	0.000	93	142994	2.00	1.81	
77 2,3-Dimethylheptane	43	16.242	16.242	0.000	95	324814	2.00	2.07	
78 Chlorobenzene	112	16.248	16.248	0.000	91	224247	2.00	1.77	
79 Ethylbenzene	91	16.527	16.527	0.000	99	343249	2.00	1.79	
80 2-Ethylthiophene	97	16.629	16.629	0.000	98	260384	2.00	1.79	
81 m-Xylene & p-Xylene	91	16.683	16.683	0.000	99	552984	4.00	3.71	
82 n-Nonane	57	17.081	17.081	0.000	90	201660	2.00	1.83	
84 Styrene	104	17.151	17.151	0.000	99	176383	2.00	1.92	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
83 Bromoform	173	17.146	17.146	0.000	93	166763	2.00	1.90	
85 o-Xylene	91	17.210	17.210	0.000	98	289172	2.00	1.81	
86 1,1,2,2-Tetrachloroethane	83	17.533	17.533	0.000	97	191746	2.00	1.88	
87 1,2,3-Trichloropropane	110	17.695	17.695	0.000	97	56144	2.00	1.94	
88 Isopropylbenzene	105	17.786	17.786	0.000	96	390023	2.00	1.94	
89 N-Propylbenzene	120	18.308	18.308	0.000	99	96474	2.00	1.91	
90 2-Chlorotoluene	126	18.356	18.356	0.000	97	95063	2.00	1.78	
91 4-Ethyltoluene	105	18.448	18.448	0.000	98	329935	2.00	1.93	
92 1,3,5-Trimethylbenzene	120	18.518	18.518	0.000	91	172056	2.00	1.90	
93 Alpha Methyl Styrene	118	18.744	18.744	0.000	86	125272	2.00	1.99	
94 n-Decane	57	18.781	18.781	0.000	89	225610	2.00	2.00	
95 tert-Butylbenzene	119	18.932	18.932	0.000	92	355984	2.00	1.97	
96 1,2,4-Trimethylbenzene	105	18.948	18.948	0.000	96	312153	2.00	2.03	
97 sec-Butylbenzene	105	19.195	19.195	0.000	98	440218	2.00	1.97	
98 1,3-Dichlorobenzene	146	19.217	19.217	0.000	98	155616	2.00	1.98	
99 Benzyl chloride	91	19.287	19.287	0.000	97	179308	2.00	2.33	
100 1,4-Dichlorobenzene	146	19.303	19.303	0.000	93	136495	2.00	2.03	
101 4-Isopropyltoluene	119	19.351	19.351	0.000	96	362245	2.00	1.97	
102 1,2,3-Trimethylbenzene	105	19.405	19.405	0.000	99	255385	2.00	2.09	
103 Butylcyclohexane	83	19.454	19.454	0.000	86	224764	2.00	1.69	
104 2,3-Dihydroindene	117	19.653	19.653	0.000	93	235429	2.00	1.84	
105 1,2-Dichlorobenzene	146	19.653	19.653	0.000	92	154765	2.00	1.94	
106 n-Butylbenzene	91	19.771	19.771	0.000	98	313552	2.00	2.21	
107 Indene	116	19.782	19.782	0.000	91	191750	2.00	2.61	
108 Undecane	57	20.062	20.062	0.000	94	256417	2.00	2.38	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.137	20.137	0.000	98	298019	2.00	2.49	
110 1,2-Dibromo-3-Chloropropan	157	20.244	20.244	0.000	91	37427	2.00	1.43	
111 1,2,4,5-Tetramethylbenzene	119	20.524	20.524	0.000	96	323745	2.00	2.22	
112 1,2,3,5-Tetramethylbenzene	119	20.578	20.578	0.000	94	209320	2.00	2.22	
113 1,2,3,4-Tetramethylbenzene	119	20.998	20.998	0.000	97	254779	2.00	2.19	
114 Dodecane	57	21.137	21.137	0.000	95	241386	2.00	2.52	
115 1,2,4-Trichlorobenzene	180	21.374	21.374	0.000	94	50470	2.00	2.38	
116 Naphthalene	128	21.514	21.514	0.000	98	126305	2.00	2.25	
117 Benzo(b)thiophene	134	21.611	21.611	0.000	99	50639	2.00	2.57	
118 Hexachlorobutadiene	225	21.692	21.692	0.000	96	158583	2.00	1.88	
119 1,2,3-Trichlorobenzene	180	21.756	21.756	0.000	94	53691	2.00	2.31	
120 2-Methylnaphthalene	142	22.299	22.299	0.000	99	24940	6.25	6.81	
121 1-Methylnaphthalene	142	22.423	22.423	0.000	99	25786	6.25	6.70	
A 124 Toluene Range	1	14.246	(14.216-14.276)		0	676859	2.00	1.81	
A 125 C8 Range	1	14.904	(14.864-14.943)		0	1024739	2.00	2.08	
S 126 Xylenes, Total	100				0		6.00	5.52	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.76	

Reagents:

40CV101S_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

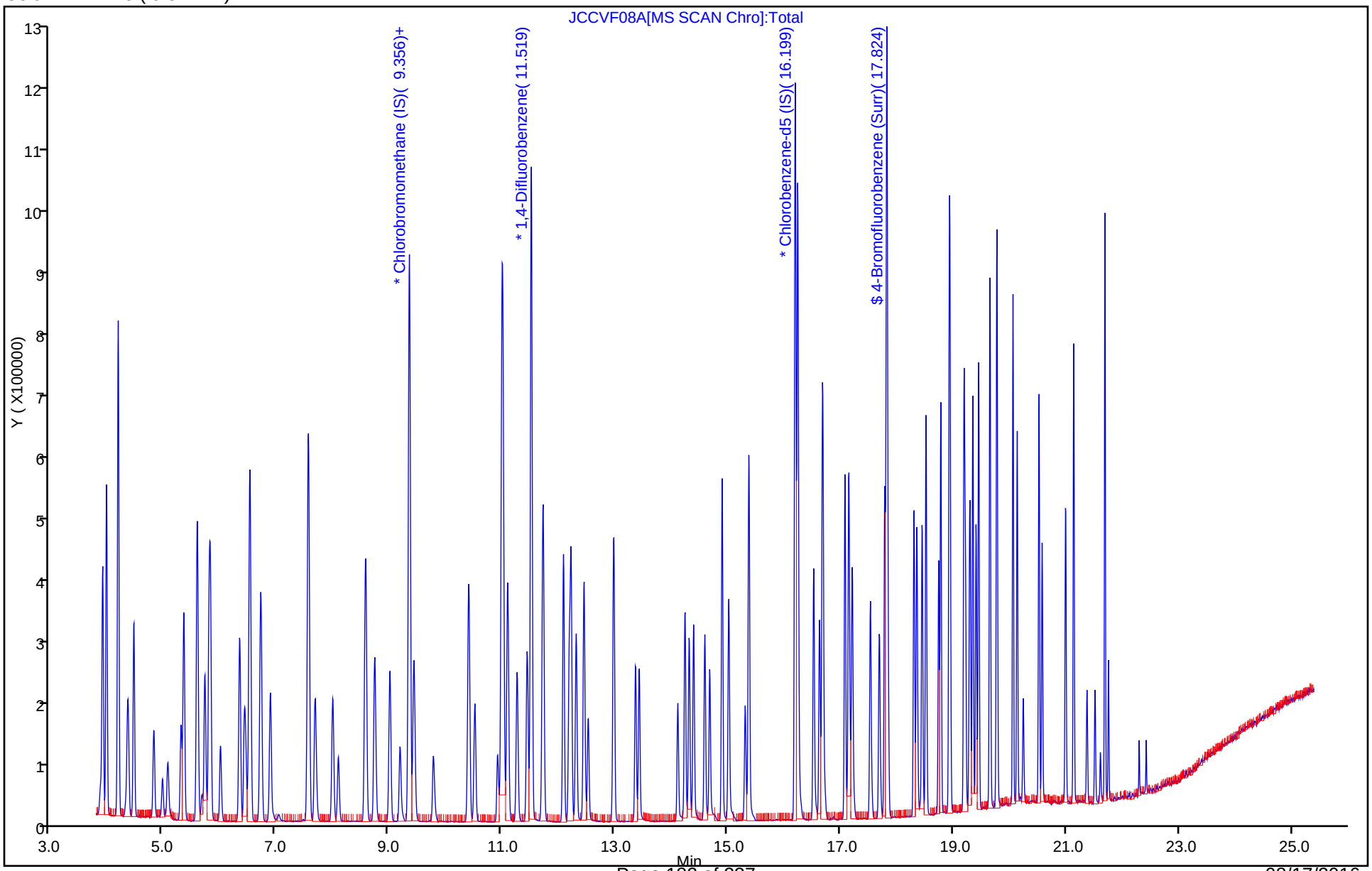
Report Date: 09-Aug-2016 10:15:26 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JCCVF08A.D

Injection Date:	08-Aug-2016 11:30:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	CCVIS			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	22-Jun-2016 15:21:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003070-001				
Misc. Info.:	J062216,BFB,,				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	27-Jun-2016 15:11:57	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK048				

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.055	4.055	0.000	0	236566	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

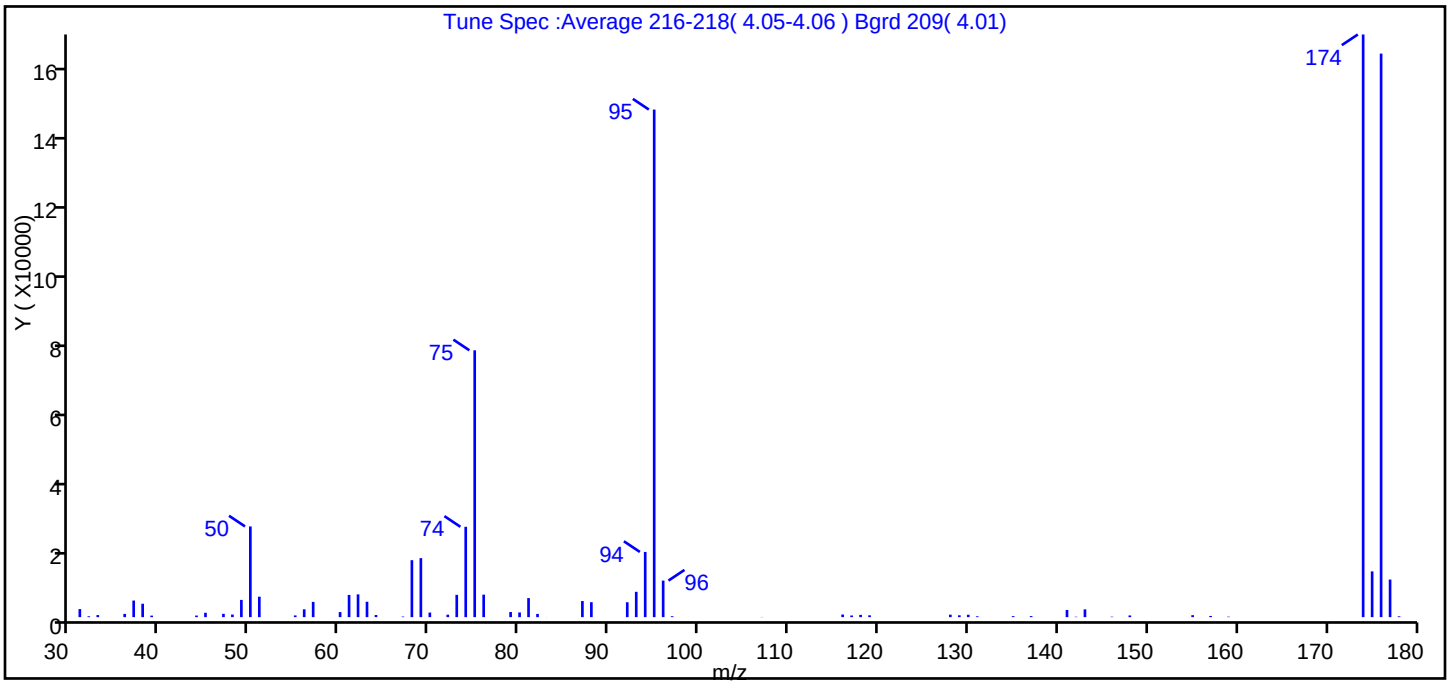
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D
Injection Date: 22-Jun-2016 15:21:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.9
75	30 to 60% of m/z 95	52.6
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	114.8
175	5 to 9% of m/z 174	9.0 (7.9)
176	Greater than 95% but less than 101% of m/z 174	111.0 (96.7)
177	5 to 9% of m/z 176	7.4 (6.7)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D\MJ_TO15.rslt\spectra.d
Injection Date: 22-Jun-2016 15:21:30
Spectrum: Tune Spec :Average 216-218(4.05-4.06) Bgrd 209(4.01)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 68

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2239	60.00	1409	82.00	893	130.00	667
32.00	238	61.00	6173	83.00	14	131.00	234
33.00	574	62.00	6331	87.00	4472	135.00	281
36.00	904	63.00	4276	88.00	4153	137.00	294
37.00	4614	64.00	590	92.00	4134	141.00	1992
38.00	3722	67.00	160	93.00	7037	142.00	116
39.00	425	68.00	15827	94.00	18120	143.00	2165
44.00	445	69.00	16400	95.00	141056	146.00	125
45.00	1222	70.00	1273	96.00	10159	148.00	470
47.00	922	72.00	684	97.00	248	155.00	548
48.00	718	73.00	6192	107.00	52	157.00	333
49.00	4792	74.00	25104	116.00	729	159.00	129
50.00	25208	75.00	74152	117.00	460	174.00	161920
51.00	5688	76.00	6247	118.00	630	175.00	12717
55.00	477	79.00	1421	119.00	512	176.00	156608
56.00	2184	80.00	1307	128.00	684	177.00	10446
57.00	4237	81.00	5299	129.00	516	178.00	229

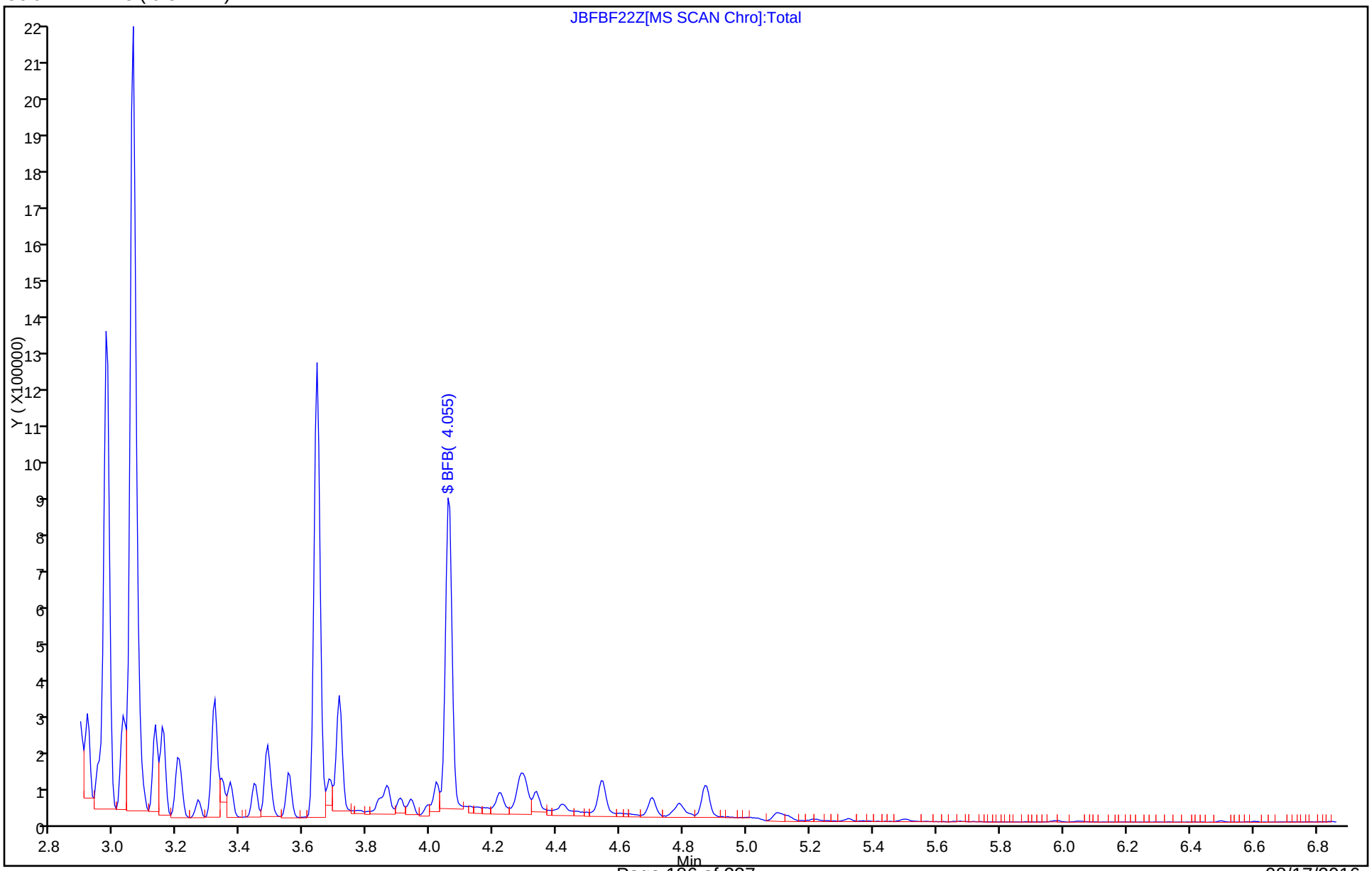
Report Date: 27-Jun-2016 15:11:58 Chrom Revision: 2.2 21-Jun-2016 11:23:50

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JBFBF22Z.D

Injection Date:	22-Jun-2016 15:21:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JBFBF05b.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	05-Aug-2016 15:53:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003263-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Aug-2016 11:55:25	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK049				
First Level Reviewer: tajh		Date:	08-Aug-2016 11:50:14		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.045	4.045	0.000	0	269569	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

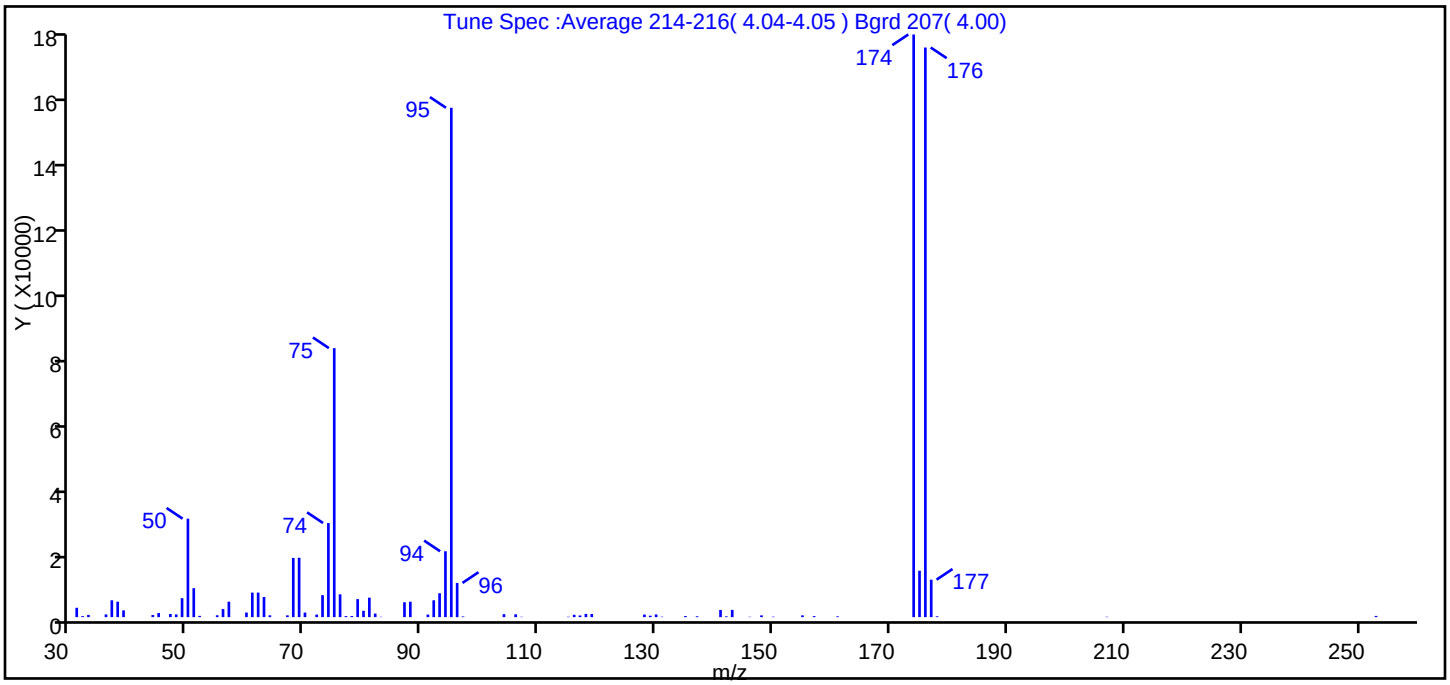
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JBFBF05b.D
Injection Date: 05-Aug-2016 15:53:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	19.3
75	30 to 60% of m/z 95	52.8
96	5 to 9% of m/z 95	6.7
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	114.4
175	5 to 9% of m/z 174	9.1 (8.0)
176	Greater than 95% but less than 101% of m/z 174	111.8 (97.8)
177	5 to 9% of m/z 176	7.4 (6.6)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JBFBF05b.D\MJ_TO15.rslt\spectra.d
Injection Date: 05-Aug-2016 15:53:30
Spectrum: Tune Spec :Average 214-216(4.04-4.05) Bgrd 207(4.00)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 78

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2806	62.00	7357	88.00	4621	135.00	328
32.00	297	63.00	6038	91.00	787	137.00	268
33.00	671	64.00	545	92.00	5044	141.00	2149
36.00	819	67.00	538	93.00	7157	142.00	240
37.00	5055	68.00	17744	94.00	19736	143.00	2183
38.00	4625	69.00	17784	95.00	152576	146.00	108
39.00	2032	70.00	1369	96.00	10252	148.00	534
44.00	650	72.00	769	97.00	209	150.00	142
45.00	1228	73.00	6589	104.00	891	155.00	539
47.00	941	74.00	28192	106.00	852	157.00	308
48.00	811	75.00	80576	107.00	102	161.00	237
49.00	5681	76.00	6836	115.00	124	174.00	174528
50.00	29496	77.00	318	116.00	701	175.00	13896
51.00	8683	78.00	323	117.00	502	176.00	170624
52.00	389	79.00	5401	118.00	959	177.00	11222
55.00	563	80.00	1901	119.00	938	178.00	251
56.00	2425	81.00	5829	128.00	786	207.00	118
57.00	4628	82.00	1068	129.00	432	253.00	373
60.00	1377	83.00	101	130.00	807		
61.00	7345	87.00	4469	131.00	128		

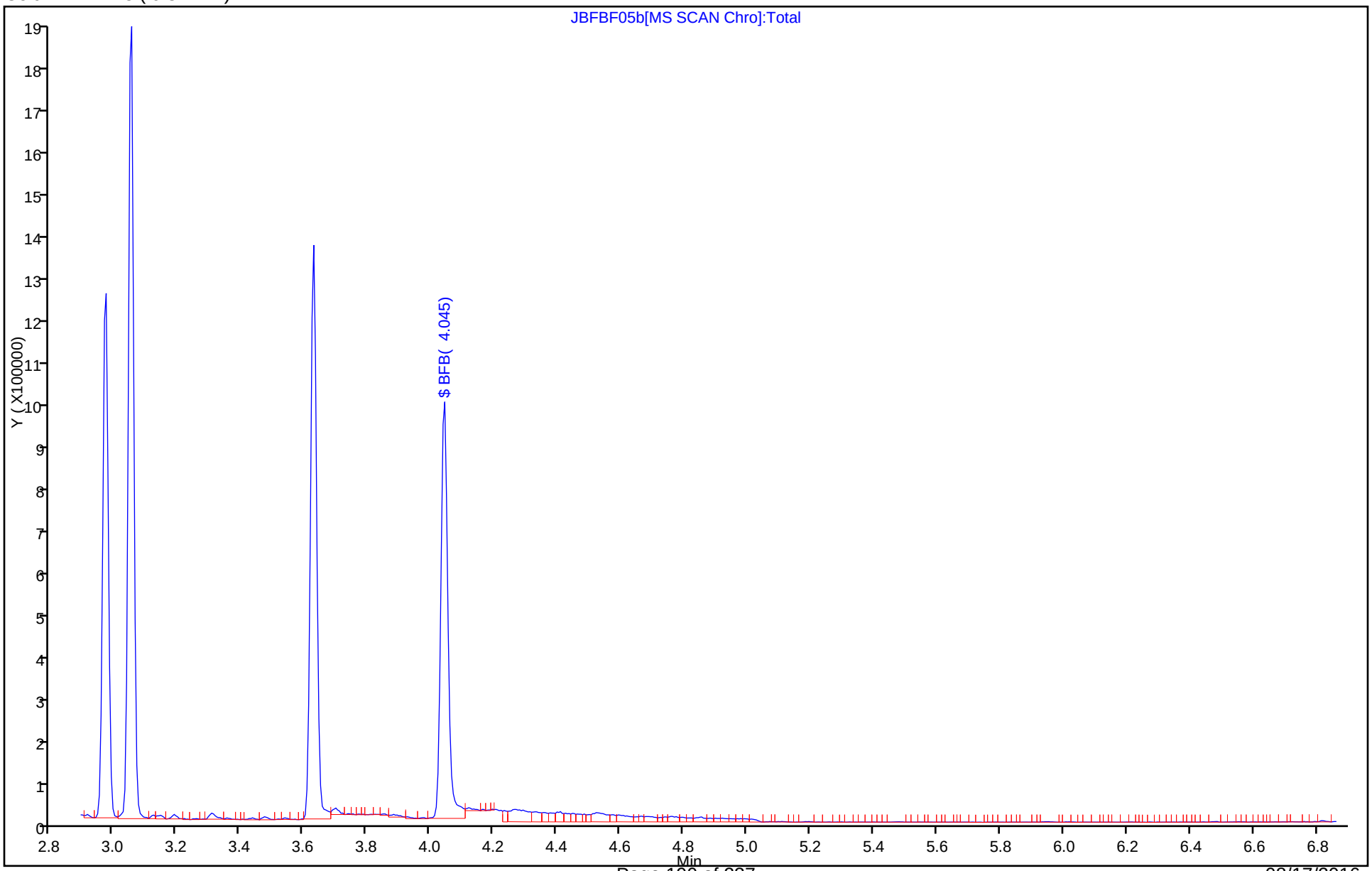
Report Date: 08-Aug-2016 11:55:25 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JBFBF05b.D

Injection Date:	05-Aug-2016 15:53:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JBFBF08A.D
Lims ID: BFB
Client ID:
Sample Type: BFB
Inject. Date: 08-Aug-2016 11:03:30 ALS Bottle#: 16 Worklist Smp#: 5
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Sample Info: 140-0003264-001
Misc. Info.: BFB
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Aug-2016 10:14:00 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 09-Aug-2016 10:14:00

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.061	4.061	0.000	0	246767	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

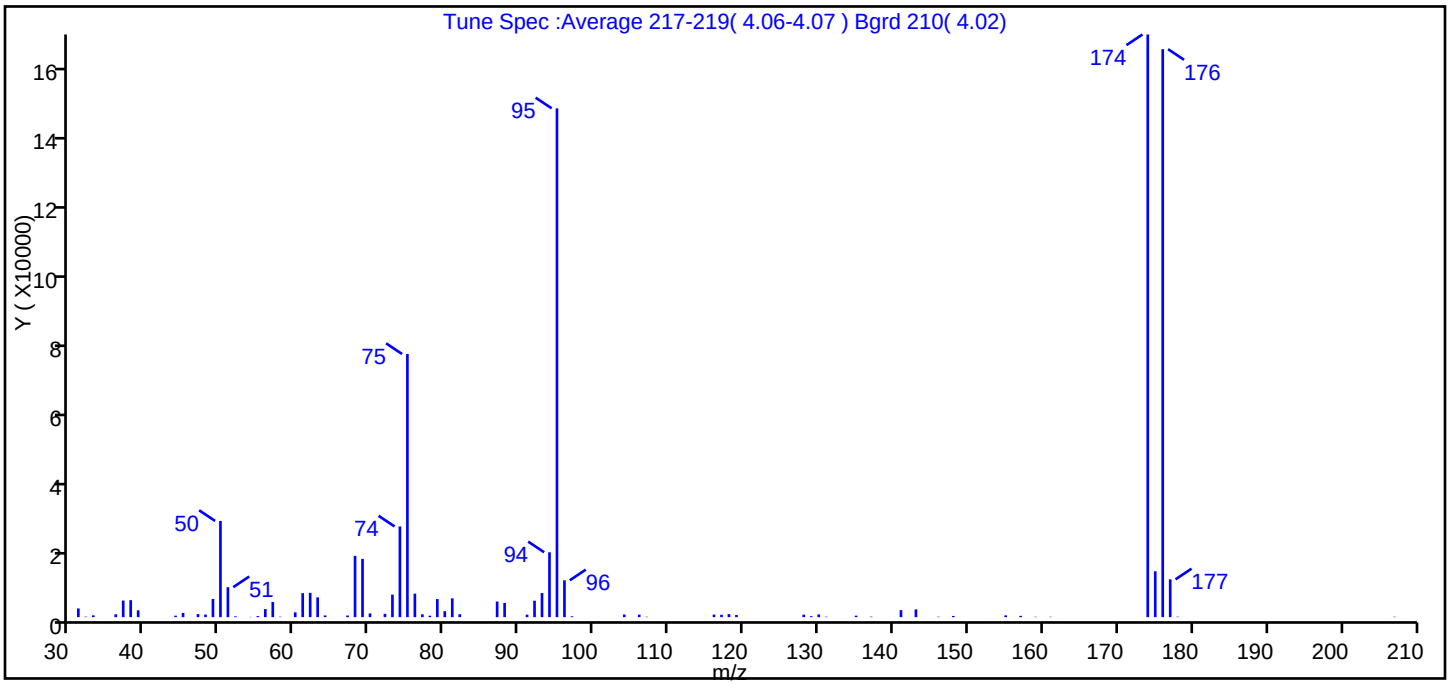
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JBFBF08A.D
Injection Date: 08-Aug-2016 11:03:30 Instrument ID: MJ
Lims ID: BFB
Client ID:
Operator ID: 7126 ALS Bottle#: 16 Worklist Smp#: 5
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: MJ_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.9
75	30 to 60% of m/z 95	51.7
96	5 to 9% of m/z 95	7.2
173	Less than 2% of m/z 174	0.0 (0.0)
174	50 to 120% of m/z 95	114.5
175	5 to 9% of m/z 174	9.0 (7.9)
176	Greater than 95% but less than 101% of m/z 174	111.6 (97.5)
177	5 to 9% of m/z 176	7.4 (6.7)

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JBFBF08A.D\MJ_TO15.rslt\spectra.d
Injection Date: 08-Aug-2016 11:03:30
Spectrum: Tune Spec :Average 217-219(4.06-4.07) Bgrd 210(4.02)
Base Peak: 174.00
Minimum % Base Peak: 0
Number of Points: 76

m/z	Y	m/z	Y	m/z	Y	m/z	Y
31.00	2412	58.00	118	81.00	5239	129.00	262
32.00	133	60.00	1342	82.00	824	130.00	752
33.00	504	61.00	6694	87.00	4357	131.00	123
36.00	795	62.00	6779	88.00	3978	135.00	418
37.00	4620	63.00	5520	91.00	684	137.00	134
38.00	4736	64.00	478	92.00	4572	141.00	1957
39.00	1910	67.00	458	93.00	6722	143.00	2163
44.00	408	68.00	17096	94.00	18096	146.00	125
45.00	1181	69.00	16253	95.00	141952	148.00	334
47.00	854	70.00	1035	96.00	10277	155.00	496
48.00	719	72.00	926	97.00	225	157.00	359
49.00	5073	73.00	6287	104.00	732	159.00	104
50.00	26840	74.00	25296	106.00	699	161.00	103
51.00	8364	75.00	73416	107.00	109	174.00	162560
52.00	228	76.00	6560	116.00	712	175.00	12796
54.00	60	77.00	789	117.00	654	176.00	158464
55.00	293	78.00	401	118.00	847	177.00	10547
56.00	2253	79.00	5048	119.00	597	178.00	118
57.00	4218	80.00	1677	128.00	691	207.00	108

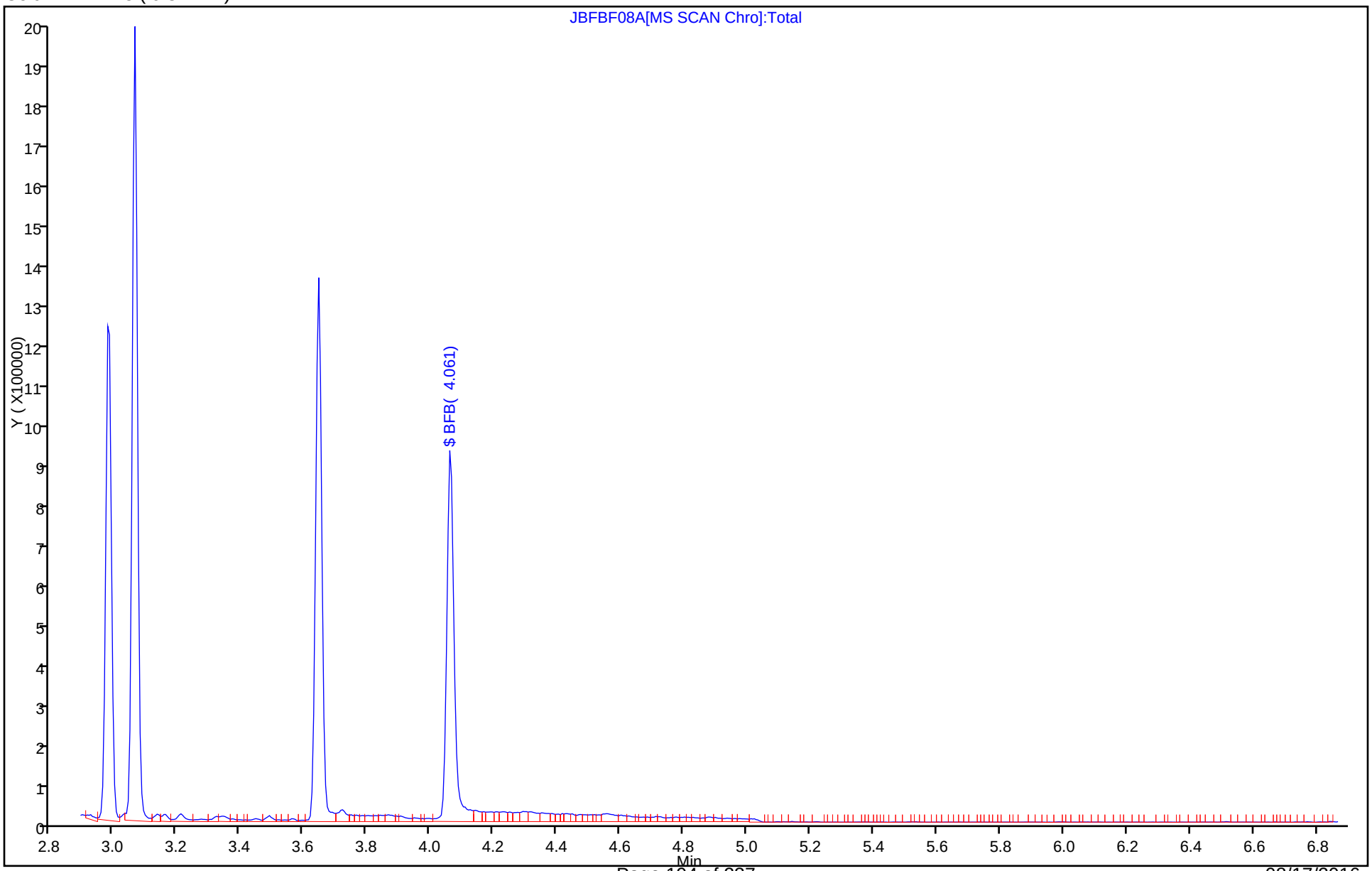
Report Date: 09-Aug-2016 10:14:01 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JBFBF08A.D

Injection Date:	08-Aug-2016 11:03:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	BFB			Worklist Smp#:	5
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6126/8

Matrix: Air Lab File ID: J500BG08.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/08/2016 12:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6126 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6126/8

Matrix: Air Lab File ID: J500BG08.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/08/2016 12:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6126 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	102		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\J500BG08.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	08-Aug-2016 12:57:30	ALS Bottle#:	16	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003264-008				
Misc. Info.:	500ml blk				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Aug-2016 10:15:25	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK027				
First Level Reviewer: tajh		Date:	08-Aug-2016 13:59:42		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.354	9.356	-0.002	92	241773	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.516	11.519	-0.003	96	1048700	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.197	16.199	-0.002	89	844641	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.827	17.824	0.003	89	509403	4.00	4.08	
65 4-Methyl-2-pentanone (MIBK	43	13.372	13.364	0.008	96	20034		0.1618	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

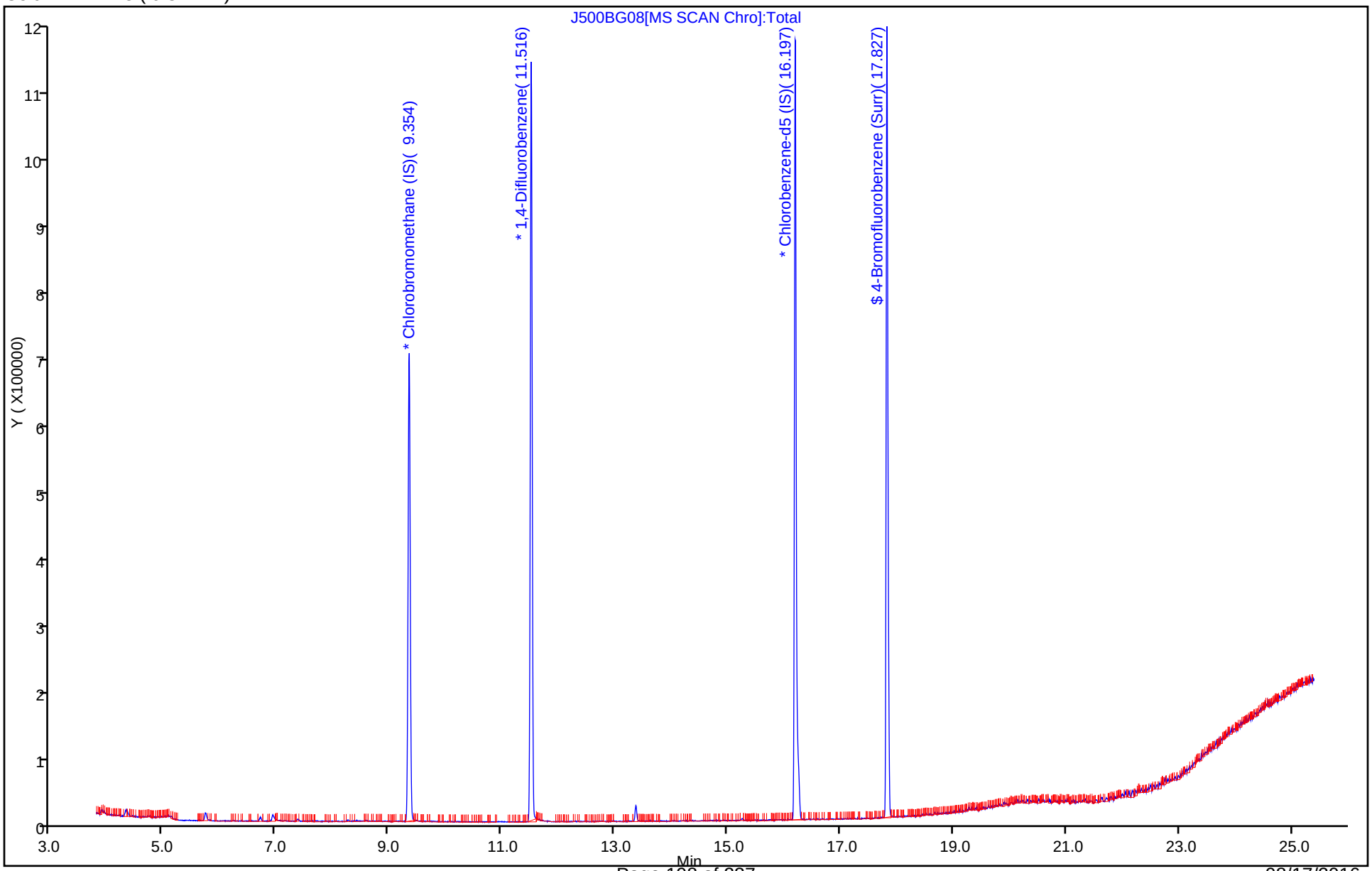
Report Date: 09-Aug-2016 10:15:43 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\J500BG08.D

Injection Date:	08-Aug-2016 12:57:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	mb			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\J500BG08.D				
Lims ID:	mb				
Client ID:					
Sample Type:	MB				
Inject. Date:	08-Aug-2016 12:57:30	ALS Bottle#:	16	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003264-008				
Misc. Info.:	500ml blk				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Aug-2016 10:15:25	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK027				
First Level Reviewer: tajh		Date:	08-Aug-2016 13:59:42		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.08	102.12

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6172/5

Matrix: Air Lab File ID: Jmb500F05.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/05/2016 19:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6172/5

Matrix: Air Lab File ID: Jmb500F05.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/05/2016 19:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\Jmb500F05.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 05-Aug-2016 19:06:30 ALS Bottle#: 16 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003263-005
Misc. Info.: MB500mL
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Aug-2016 11:55:32 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: tajh Date: 08-Aug-2016 11:40:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.356	9.355	0.001	93	286108	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.518	11.518	0.000	96	1244765	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.199	16.198	0.001	88	1027856	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.823	17.822	0.001	88	591025	4.00	3.89	
65 4-Methyl-2-pentanone (MIBK	43	13.374	13.363	0.011	95	17098		0.1163	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

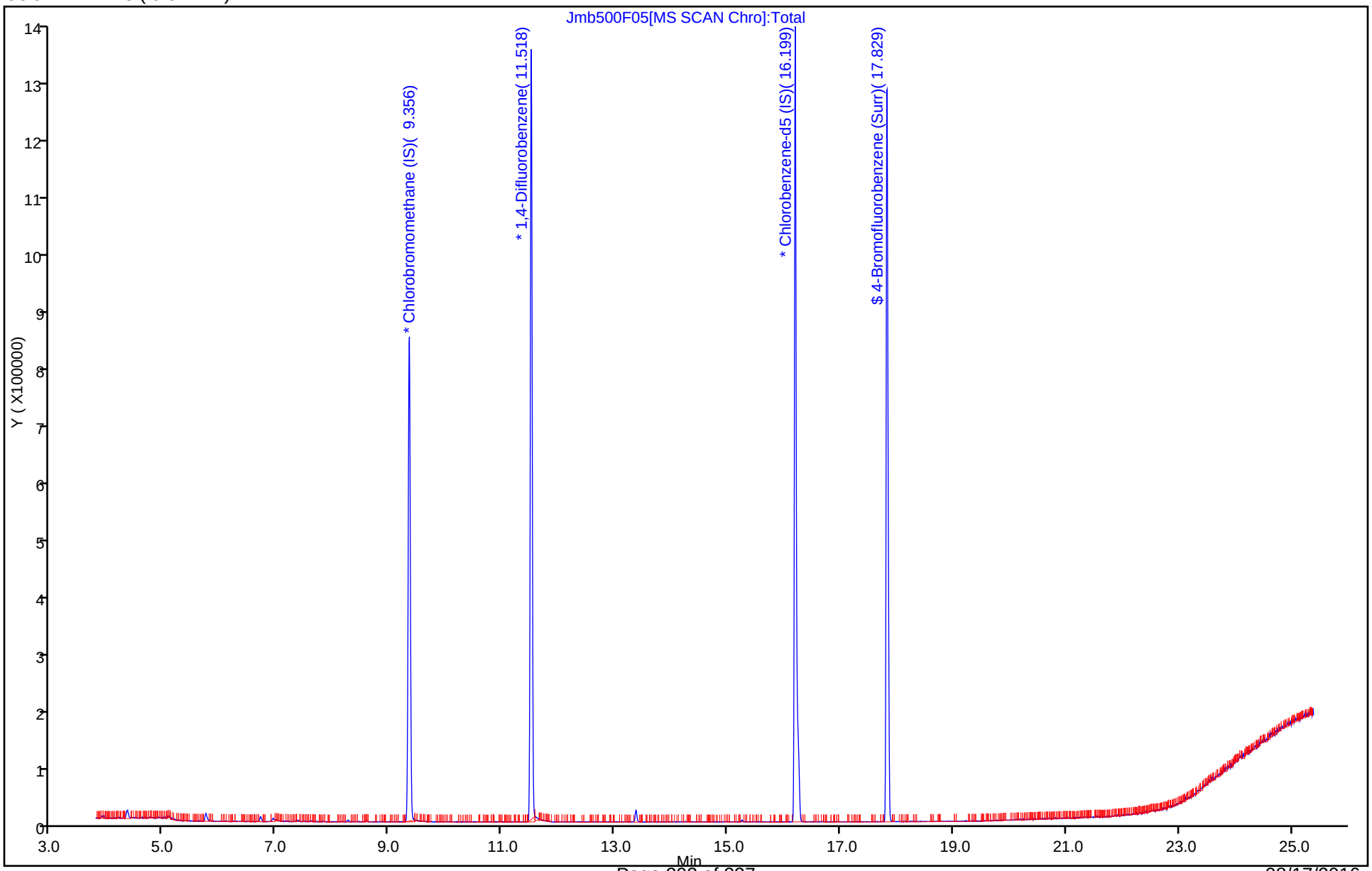
Report Date: 08-Aug-2016 11:55:41 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\Jmb500F05.D

Injection Date:	05-Aug-2016 19:06:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	MB			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\Jmb500F05.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	05-Aug-2016 19:06:30	ALS Bottle#:	16	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003263-005				
Misc. Info.:	MB500mL				
Operator ID:	403648	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	08-Aug-2016 11:55:32	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK049				

First Level Reviewer: tajh Date: 08-Aug-2016 11:40:57

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.89	97.36

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-6126/1006

Matrix: Air Lab File ID: JCCVF08A-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/08/2016 11:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6126 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.73		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.25		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.11		0.080	0.015
67-66-3	Chloroform	119.38	1.83		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.86		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.11		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	1.91		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.02		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.87		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.79		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.91		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.79		0.40	0.068
91-20-3	Naphthalene	128.17	2.25		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.81		0.080	0.016
108-88-3	Toluene	92.14	1.66		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.90		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.38		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.97		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.69		0.080	0.021
79-01-6	Trichloroethene	131.39	1.76		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.09		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.03		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.90		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.97		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.52		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	110		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JCCVF08A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 08-Aug-2016 11:30:30 ALS Bottle#: 15 Worklist Smp#: 1006
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003264-006
Misc. Info.: S14
Operator ID: 7126 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 09-Aug-2016 10:15:25 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK027

First Level Reviewer: tajh Date: 09-Aug-2016 10:15:25

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.356	9.356	0.000	95	223098	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.519	11.519	0.000	96	957132	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.199	16.199	0.000	92	790881	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.824	17.824	0.000	88	515779	4.00	4.42	
7 Propene	41	3.918	3.918	0.000	97	122939	2.00	1.91	
6 Chlorodifluoromethane	67	3.918	3.918	0.000	95	58550	2.00	2.11	
8 Dichlorodifluoromethane	85	3.988	3.988	0.000	99	516889	2.00	2.11	
9 Chloromethane	52	4.187	4.187	0.000	98	35077	2.00	2.02	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.192	4.192	0.000	97	293116	2.00	2.15	
11 Acetaldehyde	44	4.359	4.359	0.000	97	84714	10.0	5.63	
12 Vinyl chloride	62	4.375	4.375	0.000	99	115944	2.00	1.97	
14 Butadiene	54	4.472	4.472	0.000	73	76899	2.00	1.99	
13 Butane	43	4.472	4.472	0.000	81	134244	2.00	2.09	
15 Bromomethane	94	4.827	4.827	0.000	97	105085	2.00	1.90	
16 Chloroethane	64	4.978	4.978	0.000	97	41479	2.00	1.97	
17 Ethanol	31	5.074	5.074	0.000	94	82285	10.0	9.55	
18 Vinyl bromide	106	5.306	5.306	0.000	97	123560	2.00	1.89	
19 2-Methylbutane	43	5.354	5.354	0.000	88	158244	2.00	2.06	
20 Trichlorofluoromethane	101	5.591	5.591	0.000	99	475400	2.00	2.10	
21 Acrolein	56	5.607	5.607	0.000	92	26232	2.00	1.40	
22 Acetonitrile	40	5.677	5.677	0.000	97	32925	2.00	1.60	
23 Acetone	58	5.731	5.731	0.000	99	99408	6.00	3.89	
24 Isopropyl alcohol	45	5.801	5.801	0.000	95	412252	6.00	4.84	
25 Pentane	72	5.822	5.822	0.000	98	17613	2.00	1.83	
26 Ethyl ether	31	6.005	6.005	0.000	92	72081	2.00	1.65	
27 1,1-Dichloroethene	96	6.344	6.344	0.000	92	123248	2.00	1.87	
28 2-Methyl-2-propanol	59	6.430	6.430	0.000	94	219231	2.00	1.89	
29 Acrylonitrile	53	6.457	6.457	0.000	92	57053	2.00	1.46	
30 1,1,2-Trichloro-1,2,2-trif	101	6.527	6.527	0.000	96	300087	2.00	1.95	
31 Methylene Chloride	84	6.715	6.715	0.000	96	116896	2.00	1.91	
32 3-Chloro-1-propene	39	6.731	6.731	0.000	97	111429	2.00	1.89	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.893	6.893	0.000	99	352326	2.00	1.88	
34 trans-1,2-Dichloroethene	96	7.560	7.560	0.000	92	125614	2.00	1.90	
35 2-Methylpentane	43	7.570	7.570	0.000	94	317224	2.00	2.35	
36 Methyl tert-butyl ether	73	7.689	7.689	0.000	97	243278	2.00	1.79	
37 1,1-Dichloroethane	63	7.995	7.995	0.000	100	256998	2.00	1.91	
38 Vinyl acetate	43	8.098	8.098	0.000	100	200410	2.00	1.80	
39 2-Butanone (MEK)	72	8.566	8.566	0.000	95	34157	2.00	1.60	
40 Hexane	56	8.587	8.587	0.000	88	116885	2.00	2.01	
41 Isopropyl ether	45	8.743	8.743	0.000	97	312779	2.00	1.86	
42 cis-1,2-Dichloroethene	96	9.012	9.012	0.000	98	122922	2.00	1.86	
43 Ethyl acetate	43	9.190	9.190	0.000	99	175500	2.00	1.97	
44 Chloroform	83	9.362	9.362	0.000	97	274005	2.00	1.83	
45 Tert-butyl ethyl ether	59	9.437	9.437	0.000	95	308010	2.00	1.85	
46 Tetrahydrofuran	42	9.781	9.781	0.000	92	89076	2.00	1.87	
47 1,1,1-Trichloroethane	97	10.411	10.411	0.000	96	340008	2.00	1.97	
48 1,2-Dichloroethane	62	10.518	10.518	0.000	98	211021	2.00	2.02	
49 n-Butanol	31	10.922	10.922	0.000	87	33189	2.00	2.27	
50 Cyclohexane	69	10.997	10.997	0.000	78	57281	2.00	2.04	
51 Benzene	78	10.997	10.997	0.000	97	288766	2.00	1.73	
52 Carbon tetrachloride	117	11.019	11.019	0.000	98	399670	2.00	2.25	
53 2,3-Dimethylpentane	71	11.099	11.099	0.000	88	65051	2.00	1.69	
54 Thiophene	84	11.266	11.266	0.000	97	170523	2.00	1.79	
55 Tert-amyl methyl ether	73	11.444	11.444	0.000	95	247121	2.00	2.03	
56 Isooctane	57	11.729	11.729	0.000	98	596214	2.00	1.89	
57 n-Heptane	71	12.095	12.095	0.000	91	98798	2.00	1.79	
58 1,2-Dichloropropane	63	12.191	12.191	0.000	87	114114	2.00	1.69	
59 Trichloroethene	130	12.224	12.224	0.000	94	148016	2.00	1.76	
60 Dibromomethane	93	12.315	12.315	0.000	94	140908	2.00	1.89	
62 Dichlorobromomethane	83	12.450	12.450	0.000	100	257592	2.00	1.89	
61 1,4-Dioxane	88	12.466	12.466	0.000	90	35108	2.00	1.76	
63 Methyl methacrylate	41	12.530	12.530	0.000	92	98020	2.00	1.90	
64 Methylcyclohexane	83	12.982	12.982	0.000	90	189271	2.00	1.48	
65 4-Methyl-2-pentanone (MIBK	43	13.364	13.364	0.000	97	202313	2.00	1.79	
66 cis-1,3-Dichloropropene	75	13.434	13.434	0.000	97	158704	2.00	1.80	
67 trans-1,3-Dichloropropene	75	14.117	14.117	0.000	98	126065	2.00	1.95	
68 Toluene	91	14.246	14.246	0.000	93	280340	2.00	1.66	
69 1,1,2-Trichloroethane	83	14.316	14.316	0.000	96	82257	2.00	1.69	
70 2-Methylthiophene	97	14.397	14.397	0.000	98	248321	2.00	1.77	
71 3-Methylthiophene	97	14.596	14.596	0.000	99	245902	2.00	1.83	
72 2-Hexanone	58	14.682	14.682	0.000	93	103625	2.00	2.11	
73 n-Octane	85	14.903	14.903	0.000	92	103052	2.00	1.87	
74 Chlorodibromomethane	129	15.021	15.021	0.000	98	230534	2.00	1.97	
75 Ethylene Dibromide	107	15.311	15.311	0.000	98	158235	2.00	1.77	
76 Tetrachloroethene	129	15.376	15.376	0.000	93	142994	2.00	1.81	
77 2,3-Dimethylheptane	43	16.242	16.242	0.000	95	324814	2.00	2.07	
78 Chlorobenzene	112	16.248	16.248	0.000	91	224247	2.00	1.77	
79 Ethylbenzene	91	16.527	16.527	0.000	99	343249	2.00	1.79	
80 2-Ethylthiophene	97	16.629	16.629	0.000	98	260384	2.00	1.79	
81 m-Xylene & p-Xylene	91	16.683	16.683	0.000	99	552984	4.00	3.71	
82 n-Nonane	57	17.081	17.081	0.000	90	201660	2.00	1.83	
83 Bromoform	173	17.146	17.146	0.000	93	166763	2.00	1.90	
84 Styrene	104	17.151	17.151	0.000	99	176383	2.00	1.92	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	17.210	17.210	0.000	98	289172	2.00	1.81	
86 1,1,2,2-Tetrachloroethane	83	17.533	17.533	0.000	97	191746	2.00	1.88	
87 1,2,3-Trichloropropane	110	17.695	17.695	0.000	97	56144	2.00	1.94	
88 Isopropylbenzene	105	17.786	17.786	0.000	96	390023	2.00	1.94	
89 N-Propylbenzene	120	18.308	18.308	0.000	99	96474	2.00	1.91	
90 2-Chlorotoluene	126	18.356	18.356	0.000	97	95063	2.00	1.78	
91 4-Ethyltoluene	105	18.448	18.448	0.000	98	329935	2.00	1.93	
92 1,3,5-Trimethylbenzene	120	18.518	18.518	0.000	91	172056	2.00	1.90	
93 Alpha Methyl Styrene	118	18.744	18.744	0.000	86	125272	2.00	1.99	
94 n-Decane	57	18.781	18.781	0.000	89	225610	2.00	2.00	
95 tert-Butylbenzene	119	18.932	18.932	0.000	92	355984	2.00	1.97	
96 1,2,4-Trimethylbenzene	105	18.948	18.948	0.000	96	312153	2.00	2.03	
97 sec-Butylbenzene	105	19.195	19.195	0.000	98	440218	2.00	1.97	
98 1,3-Dichlorobenzene	146	19.217	19.217	0.000	98	155616	2.00	1.98	
99 Benzyl chloride	91	19.287	19.287	0.000	97	179308	2.00	2.33	
100 1,4-Dichlorobenzene	146	19.303	19.303	0.000	93	136495	2.00	2.03	
101 4-Isopropyltoluene	119	19.351	19.351	0.000	96	362245	2.00	1.97	
102 1,2,3-Trimethylbenzene	105	19.405	19.405	0.000	99	255385	2.00	2.09	
103 Butylcyclohexane	83	19.454	19.454	0.000	86	224764	2.00	1.69	
105 1,2-Dichlorobenzene	146	19.653	19.653	0.000	92	154765	2.00	1.94	
104 2,3-Dihydroindene	117	19.653	19.653	0.000	93	235429	2.00	1.84	
106 n-Butylbenzene	91	19.771	19.771	0.000	98	313552	2.00	2.21	
107 Indene	116	19.782	19.782	0.000	91	191750	2.00	2.61	
108 Undecane	57	20.062	20.062	0.000	94	256417	2.00	2.38	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.137	20.137	0.000	98	298019	2.00	2.49	
110 1,2-Dibromo-3-Chloropropan	157	20.244	20.244	0.000	91	37427	2.00	1.43	
111 1,2,4,5-Tetramethylbenzene	119	20.524	20.524	0.000	96	323745	2.00	2.22	
112 1,2,3,5-Tetramethylbenzene	119	20.578	20.578	0.000	94	209320	2.00	2.22	
113 1,2,3,4-Tetramethylbenzene	119	20.998	20.998	0.000	97	254779	2.00	2.19	
114 Dodecane	57	21.137	21.137	0.000	95	241386	2.00	2.52	
115 1,2,4-Trichlorobenzene	180	21.374	21.374	0.000	94	50470	2.00	2.38	
116 Naphthalene	128	21.514	21.514	0.000	98	126305	2.00	2.25	
117 Benzo(b)thiophene	134	21.611	21.611	0.000	99	50639	2.00	2.57	
118 Hexachlorobutadiene	225	21.692	21.692	0.000	96	158583	2.00	1.88	
119 1,2,3-Trichlorobenzene	180	21.756	21.756	0.000	94	53691	2.00	2.31	
120 2-Methylnaphthalene	142	22.299	22.299	0.000	99	24940	6.25	6.81	
121 1-Methylnaphthalene	142	22.423	22.423	0.000	99	25786	6.25	6.70	
A 124 Toluene Range	1	14.246	(14.216-14.276)		0	676859	2.00	1.81	
A 125 C8 Range	1	14.904	(14.864-14.943)		0	1024739	2.00	2.08	
S 126 Xylenes, Total	100				0		6.00	5.52	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.76	

Reagents:

40CV101S_00015	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

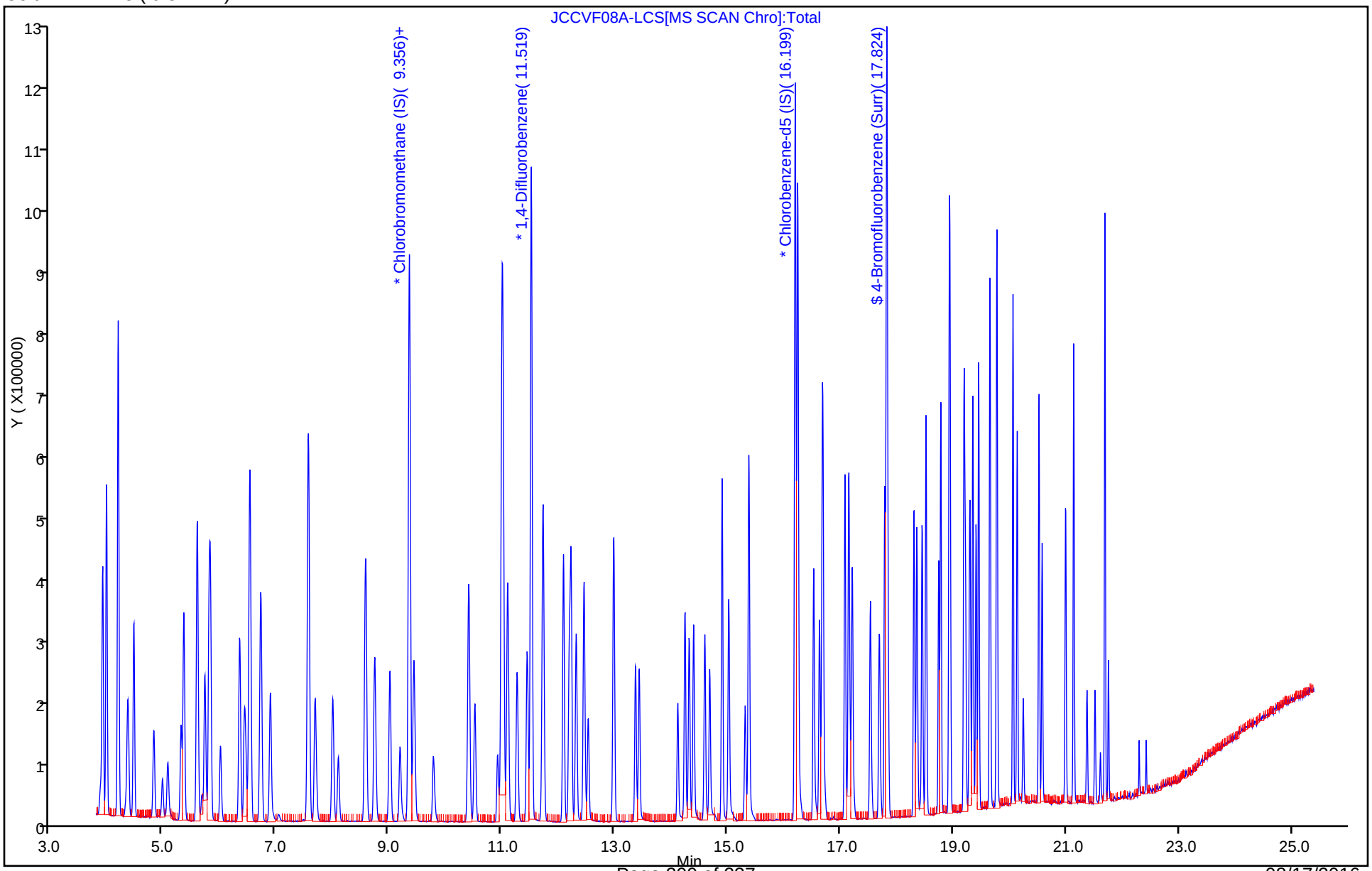
Report Date: 09-Aug-2016 10:15:29 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JCCVF08A-LCS.d

Injection Date:	08-Aug-2016 11:30:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	LCS			Worklist Smp#:	1006
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\JCCVF08A-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	08-Aug-2016 11:30:30	ALS Bottle#:	15	Worklist Smp#:	1006
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003264-006				
Misc. Info.:	S14				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160803-3264.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	09-Aug-2016 10:15:25	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK027				
First Level Reviewer: tajh		Date:	09-Aug-2016 10:15:25		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.42	110.43

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-6172/1002

Matrix: Air Lab File ID: JCCVF05b-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 08/05/2016 16:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6172 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.94		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.00		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	1.91		0.080	0.015
67-66-3	Chloroform	119.38	2.07		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	1.97		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	1.99		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.08		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.05		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	1.89		0.080	0.014
100-41-4	Ethylbenzene	106.17	1.92		0.080	0.027
75-09-2	Methylene Chloride	84.93	1.84		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.04		0.40	0.068
91-20-3	Naphthalene	128.17	1.23		0.040	0.040
127-18-4	Tetrachloroethene	165.83	1.76		0.080	0.016
108-88-3	Toluene	92.14	1.84		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	1.93		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	1.33		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.10		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	1.89		0.080	0.021
79-01-6	Trichloroethene	131.39	1.81		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	1.75		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	1.85		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	1.79		0.080	0.026
75-01-4	Vinyl chloride	62.50	1.84		0.040	0.029
1330-20-7	Xylenes, Total	106.17	5.66		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	112		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JCCVF05b-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 05-Aug-2016 16:19:30 ALS Bottle#: 13 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003263-002
Misc. Info.: P23
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Aug-2016 11:55:32 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: tajh Date: 08-Aug-2016 11:51:31

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.355	9.355	0.000	97	234888	4.00	4.00	
* 2 1,4-Difluorobenzene	114	11.518	11.518	0.000	96	1103464	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.198	16.198	0.000	89	997157	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.822	17.822	0.000	88	658008	4.00	4.47	
6 Chlorodifluoromethane	67	3.911	3.911	0.000	96	55696	2.00	1.91	
7 Propene	41	3.911	3.911	0.000	96	42805	2.00	0.6315	
8 Dichlorodifluoromethane	85	3.981	3.981	0.000	100	514180	2.00	1.99	
9 Chloromethane	52	4.180	4.180	0.000	99	35686	2.00	1.96	
10 1,2-Dichloro-1,1,2,2-tetra	135	4.191	4.191	0.000	91	289836	2.00	2.02	
11 Acetaldehyde	44	4.352	4.352	0.000	94	133779	10.0	8.45	
12 Vinyl chloride	62	4.368	4.368	0.000	99	113579	2.00	1.84	
14 Butadiene	54	4.465	4.465	0.000	76	80915	2.00	1.99	
13 Butane	43	4.465	4.465	0.000	81	136425	2.00	2.02	
15 Bromomethane	94	4.820	4.820	0.000	98	105253	2.00	1.81	
16 Chloroethane	64	4.971	4.971	0.000	98	39569	2.00	1.78	
17 Ethanol	31	5.068	5.068	0.000	93	80257	10.0	8.84	
18 Vinyl bromide	106	5.304	5.304	0.000	98	128379	2.00	1.87	
19 2-Methylbutane	43	5.353	5.353	0.000	89	168268	2.00	2.08	
20 Trichlorofluoromethane	101	5.589	5.589	0.000	99	475007	2.00	1.99	
21 Acrolein	56	5.600	5.600	0.000	92	41703	2.00	2.11	
22 Acetonitrile	40	5.675	5.675	0.000	98	45634	2.00	2.11	
23 Acetone	58	5.729	5.729	0.000	98	141538	6.00	5.26	
24 Isopropyl alcohol	45	5.799	5.799	0.000	95	457431	6.00	5.10	
25 Pentane	72	5.821	5.821	0.000	97	18942	2.00	1.87	
26 Ethyl ether	31	5.998	5.998	0.000	92	102549	2.00	2.23	
27 1,1-Dichloroethene	96	6.343	6.343	0.000	92	131666	2.00	1.89	
28 2-Methyl-2-propanol	59	6.429	6.429	0.000	93	215912	2.00	1.76	
29 Acrylonitrile	53	6.456	6.456	0.000	92	83701	2.00	2.03	
30 1,1,2-Trichloro-1,2,2-trif	101	6.525	6.525	0.000	95	313416	2.00	1.93	
31 Methylene Chloride	84	6.714	6.714	0.000	97	118613	2.00	1.84	
32 3-Chloro-1-propene	39	6.724	6.724	0.000	97	137120	2.00	2.21	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	6.886	6.886	0.000	99	378182	2.00	1.92	
34 trans-1,2-Dichloroethene	96	7.553	7.553	0.000	93	134563	2.00	1.93	
35 2-Methylpentane	43	7.569	7.569	0.000	94	300056	2.00	2.11	
36 Methyl tert-butyl ether	73	7.682	7.682	0.000	97	292650	2.00	2.04	
37 1,1-Dichloroethane	63	7.994	7.994	0.000	100	295057	2.00	2.08	
38 Vinyl acetate	43	8.096	8.096	0.000	100	268062	2.00	2.28	
39 2-Butanone (MEK)	72	8.564	8.564	0.000	95	38507	2.00	1.71	
40 Hexane	56	8.580	8.580	0.000	88	125304	2.00	2.05	
41 Isopropyl ether	45	8.736	8.736	0.000	97	371670	2.00	2.10	
42 cis-1,2-Dichloroethene	96	9.005	9.005	0.000	98	137039	2.00	1.97	
43 Ethyl acetate	43	9.188	9.188	0.000	99	199418	2.00	2.12	
44 Chloroform	83	9.360	9.360	0.000	98	325488	2.00	2.07	
45 Tert-butyl ethyl ether	59	9.430	9.430	0.000	95	357148	2.00	2.03	
46 Tetrahydrofuran	42	9.780	9.780	0.000	93	107555	2.00	2.15	
47 1,1,1-Trichloroethane	97	10.404	10.404	0.000	96	381078	2.00	2.10	
48 1,2-Dichloroethane	62	10.517	10.517	0.000	98	247162	2.00	2.05	
49 n-Butanol	31	10.920	10.920	0.000	83	30634	2.00	1.82	
50 Cyclohexane	69	10.996	10.996	0.000	73	64220	2.00	1.99	
51 Benzene	78	10.996	10.996	0.000	97	373745	2.00	1.94	
52 Carbon tetrachloride	117	11.017	11.017	0.000	98	410672	2.00	2.00	
53 2,3-Dimethylpentane	71	11.098	11.098	0.000	88	82778	2.00	1.87	
54 Thiophene	84	11.265	11.265	0.000	99	210601	2.00	1.91	
55 Tert-amyl methyl ether	73	11.448	11.448	0.000	95	270179	2.00	1.76	
56 Isooctane	57	11.727	11.727	0.000	98	718206	2.00	1.98	
57 n-Heptane	71	12.088	12.088	0.000	91	123552	2.00	1.94	
58 1,2-Dichloropropane	63	12.190	12.190	0.000	89	156233	2.00	2.01	
59 Trichloroethene	130	12.222	12.222	0.000	94	176243	2.00	1.81	
60 Dibromomethane	93	12.314	12.314	0.000	93	169431	2.00	1.97	
62 Dichlorobromomethane	83	12.448	12.448	0.000	100	317680	2.00	2.02	
61 1,4-Dioxane	88	12.464	12.464	0.000	88	40016	2.00	1.74	
63 Methyl methacrylate	41	12.524	12.524	0.000	93	114931	2.00	1.94	
64 Methylcyclohexane	83	12.981	12.981	0.000	90	284672	2.00	1.93	
65 4-Methyl-2-pentanone (MIBK	43	13.363	13.363	0.000	97	215988	2.00	1.66	
66 cis-1,3-Dichloropropene	75	13.433	13.433	0.000	96	199241	2.00	1.96	
67 trans-1,3-Dichloropropene	75	14.116	14.116	0.000	98	158815	2.00	1.95	
68 Toluene	91	14.245	14.245	0.000	92	391471	2.00	1.84	
69 1,1,2-Trichloroethane	83	14.320	14.320	0.000	97	115994	2.00	1.89	
70 2-Methylthiophene	97	14.396	14.396	0.000	97	332728	2.00	1.88	
71 3-Methylthiophene	97	14.595	14.595	0.000	99	317134	2.00	1.87	
72 2-Hexanone	58	14.681	14.681	0.000	94	104551	2.00	1.69	
73 n-Octane	85	14.907	14.907	0.000	93	131867	2.00	1.90	
74 Chlorodibromomethane	129	15.020	15.020	0.000	98	278580	2.00	1.89	
75 Ethylene Dibromide	107	15.310	15.310	0.000	98	204422	2.00	1.82	
76 Tetrachloroethene	129	15.375	15.375	0.000	93	175230	2.00	1.76	
77 2,3-Dimethylheptane	43	16.241	16.241	0.000	95	410070	2.00	2.07	
78 Chlorobenzene	112	16.246	16.246	0.000	94	289500	2.00	1.81	
79 Ethylbenzene	91	16.526	16.526	0.000	99	464579	2.00	1.92	
80 2-Ethylthiophene	97	16.633	16.633	0.000	98	343478	2.00	1.88	
81 m-Xylene & p-Xylene	91	16.687	16.687	0.000	100	708717	4.00	3.77	
82 n-Nonane	57	17.080	17.080	0.000	91	283806	2.00	2.04	
83 Bromoform	173	17.150	17.150	0.000	92	204210	2.00	1.84	
84 Styrene	104	17.150	17.150	0.000	99	225623	2.00	1.95	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	17.209	17.209	0.000	98	381360	2.00	1.89	
86 1,1,2,2-Tetrachloroethane	83	17.532	17.532	0.000	98	236006	2.00	1.84	
87 1,2,3-Trichloropropane	110	17.693	17.693	0.000	97	65311	2.00	1.79	
88 Isopropylbenzene	105	17.790	17.790	0.000	97	492884	2.00	1.94	
89 N-Propylbenzene	120	18.306	18.306	0.000	99	117028	2.00	1.84	
90 2-Chlorotoluene	126	18.355	18.355	0.000	97	120475	2.00	1.79	
91 4-Ethyltoluene	105	18.452	18.452	0.000	98	416054	2.00	1.93	
92 1,3,5-Trimethylbenzene	120	18.522	18.522	0.000	92	205031	2.00	1.79	
93 Alpha Methyl Styrene	118	18.742	18.742	0.000	86	147075	2.00	1.86	
94 n-Decane	57	18.780	18.780	0.000	89	290299	2.00	2.04	
95 tert-Butylbenzene	119	18.930	18.930	0.000	91	419209	2.00	1.84	
96 1,2,4-Trimethylbenzene	105	18.947	18.947	0.000	96	358940	2.00	1.85	
97 sec-Butylbenzene	105	19.194	19.194	0.000	98	534606	2.00	1.90	
98 1,3-Dichlorobenzene	146	19.221	19.221	0.000	99	163717	2.00	1.66	
99 Benzyl chloride	91	19.286	19.286	0.000	97	159877	2.00	1.65	
100 1,4-Dichlorobenzene	146	19.302	19.302	0.000	94	137345	2.00	1.62	
101 4-Isopropyltoluene	119	19.350	19.350	0.000	96	410982	2.00	1.77	
102 1,2,3-Trimethylbenzene	105	19.409	19.409	0.000	99	269320	2.00	1.75	
103 Butylcyclohexane	83	19.452	19.452	0.000	88	313682	2.00	1.87	
104 2,3-Dihydroindene	117	19.651	19.651	0.000	93	290246	2.00	1.79	
105 1,2-Dichlorobenzene	146	19.657	19.657	0.000	94	167654	2.00	1.67	
106 n-Butylbenzene	91	19.775	19.775	0.000	98	314812	2.00	1.76	
107 Indene	116	19.780	19.780	0.000	90	161700	2.00	1.74	
108 Undecane	57	20.060	20.060	0.000	94	230398	2.00	1.70	
109 1,2-Dimethyl-4-Ethylbenzen	119	20.135	20.135	0.000	98	242258	2.00	1.61	
110 1,2-Dibromo-3-Chloropropan	157	20.248	20.248	0.000	94	46213	2.00	1.40	
111 1,2,4,5-Tetramethylbenzene	119	20.523	20.523	0.000	96	276983	2.00	1.50	
112 1,2,3,5-Tetramethylbenzene	119	20.577	20.577	0.000	95	173846	2.00	1.46	
113 1,2,3,4-Tetramethylbenzene	119	20.996	20.996	0.000	96	204605	2.00	1.40	
114 Dodecane	57	21.136	21.136	0.000	96	159369	2.00	1.32	
115 1,2,4-Trichlorobenzene	180	21.373	21.373	0.000	94	35523	2.00	1.33	
116 Naphthalene	128	21.518	21.518	0.000	98	87296	2.00	1.23	
117 Benzo(b)thiophene	134	21.609	21.609	0.000	99	32442	2.00	1.31	
118 Hexachlorobutadiene	225	21.696	21.696	0.000	96	149620	2.00	1.41	
119 1,2,3-Trichlorobenzene	180	21.755	21.755	0.000	95	34908	2.00	1.19	
120 2-Methylnaphthalene	142	22.298	22.298	0.000	99	23578	6.25	5.10	
121 1-Methylnaphthalene	142	22.422	22.422	0.000	99	25505	6.25	5.26	
A 124 Toluene Range	1	14.245	(14.215-14.275)		0	951801	2.00	2.02	
A 125 C8 Range	1	14.897	(14.868-14.926)		0	1299034	2.00	2.10	
S 126 Xylenes, Total	100				0		6.00	5.66	
S 127 1,2-Dichloroethene, Total	1				0		4.00	3.90	

Reagents:

40CV101P_00023	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

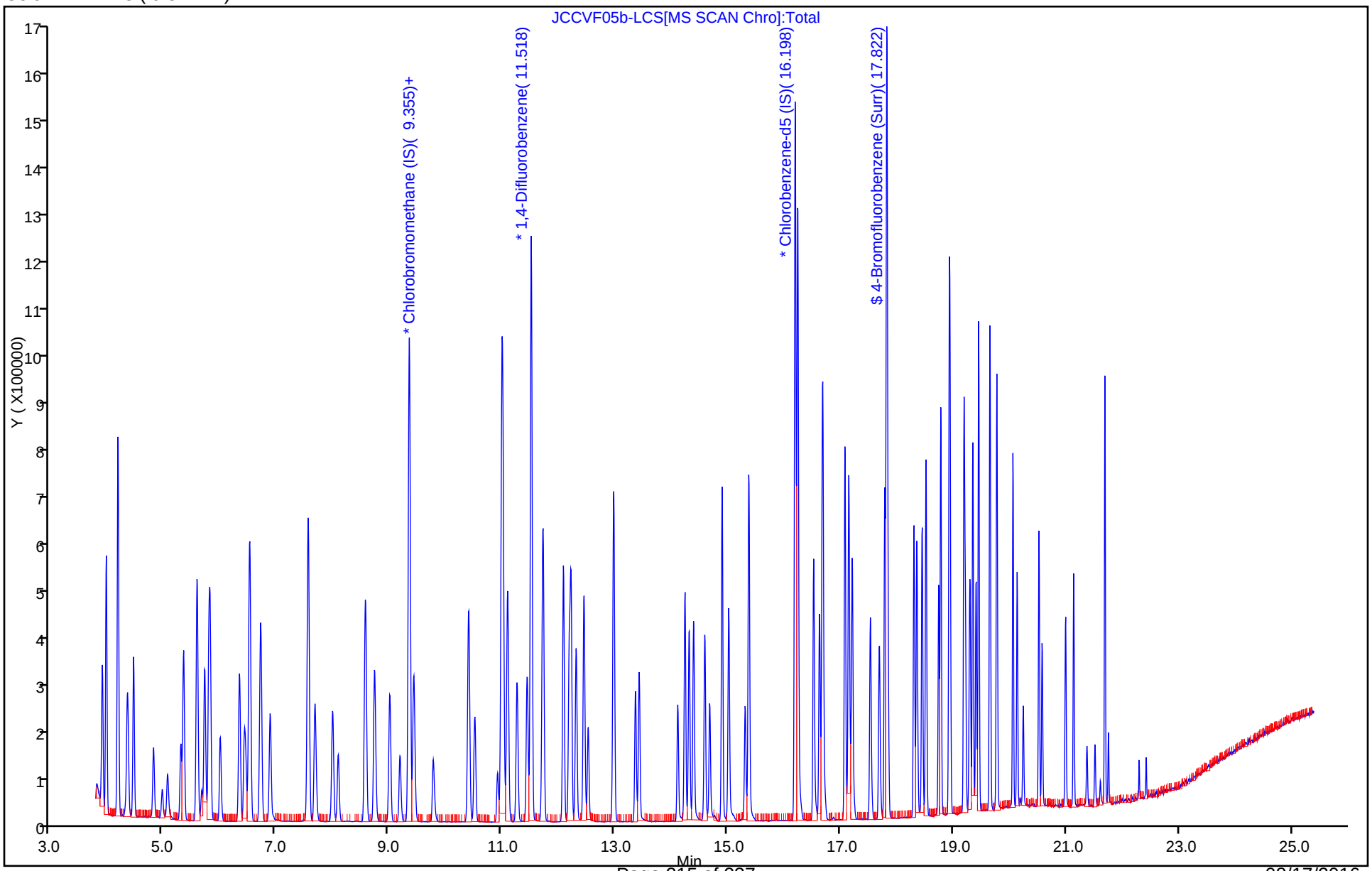
Report Date: 08-Aug-2016 11:55:36 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JCCVF05b-LCS.d

Injection Date:	05-Aug-2016 16:19:30	Instrument ID:	MJ	Operator ID:	403648
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\JCCVF05b-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 05-Aug-2016 16:19:30 ALS Bottle#: 13 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003263-002
Misc. Info.: P23
Operator ID: 403648 Instrument ID: MJ

Method: \\ChromNA\Knoxville\ChromData\MJ\20160803-3263.b\MJ_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 08-Aug-2016 11:55:32 Calib Date: 22-Jun-2016 23:00:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK049

First Level Reviewer: tajh Date: 08-Aug-2016 11:51:31

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.47	111.73

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Instrument ID: MJ Start Date: 06/22/2016 15:21

Analysis Batch Number: 5523 End Date: 06/23/2016 09:52

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5523/1		06/22/2016 15:21	1	JBFBF22Z.D	RTX-5 0.32(mm)
IC 140-5523/2		06/22/2016 15:49	1	JF22IC01.D	RTX-5 0.32(mm)
IC 140-5523/3		06/22/2016 16:44	1	JF22IC02.D	RTX-5 0.32(mm)
IC 140-5523/4		06/22/2016 17:38	1	JF22IC03.D	RTX-5 0.32(mm)
IC 140-5523/5		06/22/2016 18:32	1	JF22IC04.D	RTX-5 0.32(mm)
IC 140-5523/6		06/22/2016 19:26	1	JF22IC05.D	RTX-5 0.32(mm)
ICIS 140-5523/7		06/22/2016 20:20	1	JF22IC06.D	RTX-5 0.32(mm)
IC 140-5523/8		06/22/2016 21:14	1	JF22IC07.D	RTX-5 0.32(mm)
IC 140-5523/9		06/22/2016 22:07	1	JF22IC08.D	RTX-5 0.32(mm)
IC 140-5523/10		06/22/2016 23:00	1	JF22IC09.D	RTX-5 0.32(mm)
ICV 140-5523/17		06/23/2016 09:52	1	JF22ICVR.D	RTX-5 0.32(mm)

160622

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	21.6	6/22/2016	3:21:41 PM
ICAL01	7 - 102 mL	33.5	6/22/2016	3:49:35 PM
ICAL02	7 - 201 mL	32.7	6/22/2016	4:44:18 PM
ICAL03	8 - 201 mL	33.6	6/22/2016	5:38:34 PM
ICAL04	9 - 201 mL	34.1	6/22/2016	6:32:36 PM
ICAL05	10 - 201 mL	33.9	6/22/2016	7:26:38 PM
ICAL06	11 - 201 mL	34.1	6/22/2016	8:20:39 PM
ICAL07	12 - 200 mL	32.1	6/22/2016	9:14:20 PM
ICAL08	13 - 200 mL	30.6	6/22/2016	10:07:38 PM
ICAL09	14 - 202 mL	33.7	6/22/2016	11:00:52 PM
PRIME	15 - 51 mL	31.4	6/22/2016	11:53:57 PM
ICV	15 - 100 mL	30.6	6/23/2016	12:47:06 AM
DNUFLUSH	16 - 100 mL	21.2	6/23/2016	1:35:22 AM
MB	16 - 500 mL	20.2	6/23/2016	2:04:58 AM
MDL	7 - 50 mL	32.1	6/23/2016	2:58:15 AM
LCS	5 - 100 mL	33.5	6/23/2016	9:06:17 AM
ICV	15 - 100 mL	29.7	6/23/2016	9:52:34 AM

ICAL MJ WL3070

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	6/23/16	Instrument:	MJ	Chrom WL #:	3070	TALS Batch & Event #	TO14/15: 5523 642	AFCEE: 5522 / 641
							DOD: 5520 / 639	OHIO: 5521 / 640

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	NA		NA
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DNU TPH as Hexane	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 Σ]	✓	→	→	→	naph @ 33	✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	→	→	→		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	→	→	→		✓	✓	✓	✓
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→				NA	→		
21. Is the second source analysis within limits? [F8 , icv]	✓	→	→	→		✓	✓	✓	✓
22. Analyst/Date: 6/23/16	2nd Level Reviewer/Date: ATB 6/27/16								

Comments:

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL			✓						
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events –'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	
27. If criteria not met, was a NCM generated?	NA	→	→	→		NA	→	→	→
28. After review in TALS, approve the method in TALS.									
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>	✓	✓	✓	✓					
30. Checklist & Entech report scanned, attached & assigned properly?					OK	✓	✓	✓	✓

Analyst: ATB Date: 6/27/16 | 2nd Level Reviewer : | Date: 6/28/16

Comments: 6/23/16

UR 48 1,2,4 TCBZ, UR8 benzo(b) thiophene

~~UR C8. 8WL~~ 6/23/16 M

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Instrument ID: MJ Start Date: 08/08/2016 11:03

Analysis Batch Number: 6126 End Date: 08/09/2016 06:03

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6126/5		08/08/2016 11:03	1	JBFBF08A.D	RTX-5 0.32(mm)
CCVIS 140-6126/6		08/08/2016 11:30	1	JCCVF08A.D	RTX-5 0.32(mm)
LCS 140-6126/1006		08/08/2016 11:30	1	JCCVF08A-LCS.d	RTX-5 0.32(mm)
MB 140-6126/8		08/08/2016 12:57	1	J500BG08.D	RTX-5 0.32(mm)
ZZZZZ		08/08/2016 13:50	1		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 15:47	1		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 16:40	1		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 17:33	1		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 18:27	1		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 19:20	1		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 20:14	1.64		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 21:07	1.64		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 22:00	1.61		RTX-5 0.32(mm)
ZZZZZ		08/08/2016 22:54	1.64		RTX-5 0.32(mm)
140-5545-3		08/08/2016 23:47	1	JG08P109.D	RTX-5 0.32(mm)
ZZZZZ		08/09/2016 00:40	1		RTX-5 0.32(mm)
ZZZZZ		08/09/2016 01:34	1		RTX-5 0.32(mm)
ZZZZZ		08/09/2016 02:27	1		RTX-5 0.32(mm)
ZZZZZ		08/09/2016 03:21	1		RTX-5 0.32(mm)
ZZZZZ		08/09/2016 04:15	1		RTX-5 0.32(mm)
ZZZZZ		08/09/2016 05:09	1		RTX-5 0.32(mm)
ZZZZZ		08/09/2016 06:03	1		RTX-5 0.32(mm)

160808

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 101 mL	31.5	8/8/2016	11:03:40 AM
CCV	15 - 100 mL	12.2	8/8/2016	11:30:37 AM
dnuflush	16 - 100 mL	30.5	8/8/2016	12:27:57 PM
mb500	16 - 501 mL	30.3	8/8/2016	12:57:05 PM
mb200	16 - 200 mL	26.6	8/8/2016	1:50:28 PM
dnuLEAK	16 - 100 mL	27.5	8/8/2016	3:20:44 PM
5547-01	1 - 20 mL	3.7	8/8/2016	3:47:32 PM
5547-02	2 - 20 mL	8.2	8/8/2016	4:40:48 PM
5547-03	3 - 22 mL	4.4	8/8/2016	5:33:52 PM
5547-04	4 - 21 mL	1.5	8/8/2016	6:27:03 PM
5547-05	5 - 20 mL	1.3	8/8/2016	7:20:25 PM
5555-01	6 - 328 mL	1.6	8/8/2016	8:14:35 PM
5555-01	6 - 329 mL	7.2	8/8/2016	9:07:49 PM
5555-02	7 - 323 mL	5.3	8/8/2016	10:00:55 PM
5555-03	8 - 328 mL	1.7	8/8/2016	10:54:24 PM
5545-03	9 - 100 mL	1.1	8/8/2016	11:47:49 PM
5549BK01	10 - 201 mL	25.3	8/9/2016	12:40:50 AM
5549BK02	11 - 201 mL	25.3	8/9/2016	1:34:45 AM
5549BK03	12 - 201 mL	23.9	8/9/2016	2:27:57 AM
5549BK04	13 - 200 mL	23.4	8/9/2016	3:21:47 AM
5549BK05	14 - 201 mL	25.5	8/9/2016	4:15:45 AM
5549BK06	15 - 201 mL	24.7	8/9/2016	5:09:38 AM
5549BK07	16 - 200 mL	21.8	8/9/2016	6:03:04 AM

MJ WL 3264

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MJ 8/8/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3264	CCAL Batch #	6126			
ICAL Chrom WL #	3075	ICAL Batch # / Event #	5523 / 642	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] Acetone	✓	□ CCV - %D - LCS criteria met (NCM# 4826) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	N/		N/
7. Has the RT been updated to the method?			✓
Analyst:	**Date:** 8/9/16	**2nd Level Reviewer :**	**Date:** 08/09/16
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]			✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g.,* 1 thru 5*):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	NA	□ ICAL – Range Exceeded; Minimum Dilution	NA
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	NA		NA
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NA		MS
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	NA		MS
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 8 **200 mL blank ID:** 9	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 8/9/16	**2nd Level Reviewer:**	**Date:** 8/29/16
Comments:		**Comments:**	

Example Calculation: 5527-5 TO1.

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

0.1181 x 20mL x 1 = 2.95

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5545-1

SDG No.:

Instrument ID: MJ Start Date: 08/05/2016 15:53

Analysis Batch Number: 6172 End Date: 08/06/2016 07:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6172/1		08/05/2016 15:53	1	JBFBF05b.D	RTX-5 0.32(mm)
CCVIS 140-6172/2		08/05/2016 16:19	1	JCCVF05b.D	RTX-5 0.32(mm)
LCS 140-6172/1002		08/05/2016 16:19	1	JCCVF05b-LCS.d	RTX-5 0.32(mm)
ZZZZZ		08/05/2016 18:13	1		RTX-5 0.32(mm)
MB 140-6172/5		08/05/2016 19:06	1	Jmb500F05.D	RTX-5 0.32(mm)
140-5545-1		08/05/2016 20:00	1	JF05P101.D	RTX-5 0.32(mm)
140-5545-2		08/05/2016 20:53	1	JF05P102.D	RTX-5 0.32(mm)
ZZZZZ		08/05/2016 22:40	15.12		RTX-5 0.32(mm)
ZZZZZ		08/05/2016 23:33	15.16		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 00:28	1		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 01:21	62.75		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 04:03	1		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 04:57	1		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 05:51	76.73		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 06:45	17.51		RTX-5 0.32(mm)
ZZZZZ		08/06/2016 07:39	17.28		RTX-5 0.32(mm)

160805

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	32.8	8/5/2016	3:53:13 PM
CCV	13 - 102 mL	26.8	8/5/2016	4:19:58 PM
FLUSH	16 - 101 mL	32.2	8/5/2016	5:46:48 PM
MB200	16 - 201 mL	32.1	8/5/2016	6:13:16 PM
MB500	16 - 502 mL	31.9	8/5/2016	7:06:36 PM
5545-01	1 - 21 mL	6.2	8/5/2016	8:00:14 PM
5545-02	2 - 101 mL	1.3	8/5/2016	8:53:30 PM
5545-03	3 - 50 mL	1.9	8/5/2016	9:47:00 PM
5537-01	4 - 41 mL	4.8	8/5/2016	10:40:12 PM
5537-02	5 - 31 mL	12.1	8/5/2016	11:33:29 PM
5537-03	6 - 51 mL	1.8	8/6/2016	12:28:24 AM
5537-04	7 - 20 mL	10.7	8/6/2016	1:21:23 AM
5540-04	8 - 50 mL	1	8/6/2016	2:15:13 AM
5540-05	9 - 500 mL	1.5	8/6/2016	3:08:49 AM
5536-01DU	10 - 22 mL	5.2	8/6/2016	4:03:50 AM
5536-01	10 - 21 mL	3.5	8/6/2016	4:57:30 AM
5508-01	11 - 301 mL	2	8/6/2016	5:51:15 AM
5501-01	12 - 51 mL	10.3	8/6/2016	6:45:22 AM
5501-02	13 - 101 mL	1.9	8/6/2016	7:39:24 AM
5484-01	14 - 10 mL	13.2	8/6/2016	8:33:36 AM
5484-02	15 - 20 mL	9.8	8/6/2016	9:28:28 AM

MJ WL 3263

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	MJ 8/5/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3263	CCAL Batch #	6172	X	X	6182
ICAL Chrom WL #	3070	ICAL Batch # / Event #	5583 / 642	/	/	5581 / 640

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓		✓
2. Did BFB meet tune criteria? [F8]	✓	□ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab] 124 naph	✓	□ CCV - %D - LCS criteria met (NCM# 4817) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	RT DR		✓
7. Has the RT been updated to the method?	✓		✓
Analyst: **Date:** 8/8/16		**2nd Level Reviewer :** **Date:** 8/9/16	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason: 5581-2 elev 4815	✓	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		✓
18. Obvious non-TPH peaks excluded?	✓		✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	✓		✓
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓	NA SX RL	✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** ____ **200 mL blank ID:**	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		-
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Number of target analytes in LCS	# marginal exceedances of LCS control limits allowed
>90	5
71 - 90	4
51 - 70	3
31 - 50	2
11 - 30	1
< 11	0

Analyst:	**Date:** 8/8/16
Comments:	
CA at ncm 4814 5537-3	
Example Calculation: 5508-1 #01,	
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF	
3.3556 x 300mL x 76.73 = 489.13	

2nd Level Reviewer :	**Date:** 8/8/16
Comments:	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5269-1

SDG No.:

Client Sample ID: 10502 | Lab Sample ID: 140-5269-1

Matrix: Air | Lab File ID: LOT5269.D

Analysis Method: TO-15 | Date Collected: 07/05/2016 15:00

Sample wt/vol: 200(mL) | Date Analyzed: 07/06/2016 20:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 5621 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND	*	1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5269-1

SDG No.:

Client Sample ID: 10502 Lab Sample ID: 140-5269-1

Matrix: Air Lab File ID: LOT5269.D

Analysis Method: TO-15 Date Collected: 07/05/2016 15:00

Sample wt/vol: 200(mL) Date Analyzed: 07/06/2016 20:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5621 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND		0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5269-1

SDG No.:

Client Sample ID: 10502 Lab Sample ID: 140-5269-1

Matrix: Air Lab File ID: LOT5269.D

Analysis Method: TO-15 Date Collected: 07/05/2016 15:00

Sample wt/vol: 200(mL) Date Analyzed: 07/06/2016 20:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5621 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5269-1

SDG No.:

Client Sample ID: 10502 Lab Sample ID: 140-5269-1

Matrix: Air Lab File ID: LOT5269.D

Analysis Method: TO-15 Date Collected: 07/05/2016 15:00

Sample wt/vol: 200(mL) Date Analyzed: 07/06/2016 20:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 5621 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MJ\20160630-3112.b\LOT5269.D				
Lims ID:	140-5269-A-1				
Client ID:	10502				
Sample Type:	Client				
Inject. Date:	06-Jul-2016 20:23:30	ALS Bottle#:	5	Worklist Smp#:	16
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	10502				
Misc. Info.:	J070616,TO15,,140-0003112-016				
Operator ID:	7126	Instrument ID:	MJ		
Method:	\\ChromNA\Knoxville\ChromData\MJ\20160630-3112.b\MJ_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	07-Jul-2016 09:41:44	Calib Date:	22-Jun-2016 23:00:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MJ\20160622-3070.b\JF22IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK035				
First Level Reviewer: tajh		Date:	07-Jul-2016 08:11:19		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	9.375	9.377	-0.002	92	331938	4.00	
* 2 1,4-Difluorobenzene	114	11.543	11.545	-0.002	96	1499643	4.00	
* 3 Chlorobenzene-d5 (IS)	117	16.223	16.220	0.003	88	1290582	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.848	17.845	0.003	95	704832	3.70	
9 Chloromethane	52	4.184	4.191	-0.007	96	2039	0.0791	
31 Methylene Chloride	84	6.723	6.731	-0.008	97	5102	0.0559	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

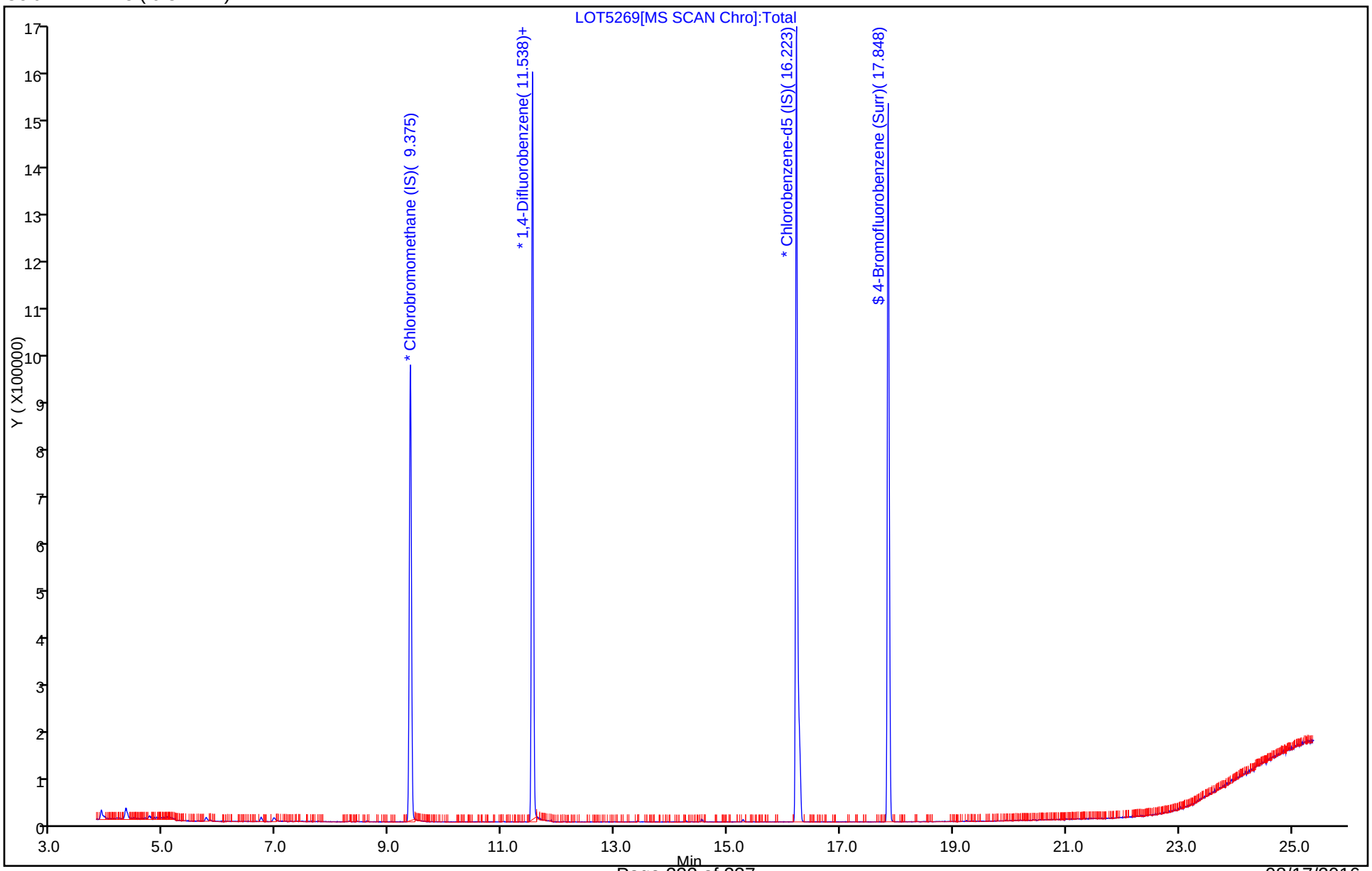
Report Date: 07-Jul-2016 09:43:03 Chrom Revision: 2.2 06-Jul-2016 12:49:26

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MJ\20160630-3112.b\LOT5269.D

Injection Date:	06-Jul-2016 20:23:30	Instrument ID:	MJ	Operator ID:	7126
Lims ID:	140-5269-A-1	Lab Sample ID:	140-5269-1	Worklist Smp#:	16
Client ID:	10502				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MJ_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180325

BALTIMORE

Canister Samples Chain of Custody Record

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Contact Information	**Project Manager:** Belissi Chang	**Sampled By:** J. Michael Wilks	___ of ___ COCs
Company: Tetra Tech	**Phone:** 410-990-4607		
Address: 51 Franklin St	**Site Contact:**		
City/State/Zip Annapolis MD/21401	**TAL Contact:**		
Phone: 410-990-4607			
FAX:			
Project Name: LMMRC SSDS	**Analysis Turnaround Time**		
Site/location: Middle River	Standard (Specify)		
PO # 117-0512124	Rush (Specify)		

140-5545 Chain of Custody

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
Building-A-Influent	8/4/16	1400	1402	-29.0	0.0	10901	09831	✓											
Building-A-MEDGAC	8/4/16	1405	1407	-29.1	0.0	W930	09647	✓											
Building-A-Effluent	8/4/16	1410	1412	-29.0	0.0	10911	09797	✓											

Sampled by :

Temperature (Fahrenheit)	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 Cooler
Fedex SO, trk# 7769 2213 9337
Custody seal intact, KL 8/5/16

Special Instructions/QC Requirements & Comments:

Canisters Shipped by:	Date/Time:	Canisters Received by:
Samples Relinquished by: J. Michael Wilks	Date/Time: 8-4-2016 1520	Received by:
Relinquished by:	Date/Time: 8-4-2016 1525	Received by: 8/5/16 0845

3 cans
JKR

08/17/2016

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 8/5/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-5545-a-1	09831	5269	B	1	0	1325	
AFB	140-5545-a-2	09647	5269	B	1	0	1326	
AFB	140-5545-a-3	09797	5269	B	1	0	1327	

Login Sample Receipt Checklist

Client: Tetra Tech GEO

Job Number: 140-5545-1

Login Number: 5545
List Number: 1
Creator: Wilson, Ken

List Source: TestAmerica Knoxville

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	N/A	
Cooler Temperature is acceptable.	N/A	
Cooler Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	N/A	This is checked in the lab.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	N/A	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	N/A	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

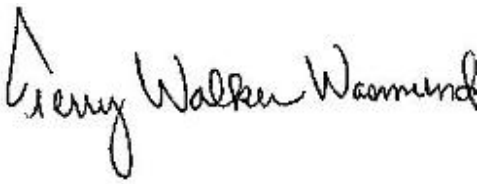
ANALYTICAL REPORT

Job Number: 140-5782-1

Job Description: LMMRC SSDS - Middle River, MD

For:
Tetra Tech GEO
51 Franklin Street
Suite 400
Annapolis, MD 21401

Attention: Peter Rich



Approved for release.
Terry Walker Wasmund
Project Manager II
9/16/2016 2:28 PM

Terry Walker Wasmund, Project Manager II
5815 Middlebrook Pike, Knoxville, TN, 37921
(865)291-3000
terry.wasmund@testamericainc.com
09/16/2016

cc: Belssi Chang
Ms. Dawn Monico
Amy Thomson
Michael Wilks

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Qualifiers

Air - GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job Narrative
140-5782-1

Receipt
The samples were received on 9/8/2016 at 9:25 AM. The samples arrived in good condition and properly preserved.

Air - GC/MS VOA
Method(s) D1946, TO 15 LL, TO-15: EPA methods TO-14A and TO-15 specify the use of humidified “zero air” as the blank reagent for canister cleaning, instrument calibration and sample analysis. Ultra-high purity humidified nitrogen from a cryogenic reservoir is used in place of “zero air” by TestAmerica Knoxville.

Method(s) TO 15 LL, TO-15: Although the BFB is flagged as outside control limits for TO-14A on batches 140-6539 and 140-6540, the results are within limits for TO-15, which is required for this project.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Comments
No additional comments.

Detection Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River, MD

TestAmerica Job ID: 140-5782-1

Client Sample ID: A-INFLUENT — Lab Sample ID: 140-5782-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	12		1.0	0.29	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.43	J	1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.24	J	1.0	0.19	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	22		1.0	0.30	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.47	J	1.0	0.34	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	3.5		1.0	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	17		1.0	0.18	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	4.3		2.5	1.6	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.46	J	1.0	0.25	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	74		1.0	0.15	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	140		0.50	0.18	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	38		3.2	0.92	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.5	J	3.5	0.66	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.2	J	4.9	0.92	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	88		4.0	1.2	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.3	J	4.9	1.7	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	14		4.0	0.51	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	66		4.0	0.69	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	15		8.7	5.6	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	1.8	J	4.0	0.99	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	400		5.5	0.82	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	760		2.7	0.94	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-MID GAC — Lab Sample ID: 140-5782-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	1.8		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.092	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.45		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.58		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	41		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.57		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	5.4		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,2-Dichloroethane	0.27	J	0.40	0.095	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	19		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.0		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.25	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.73		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	110	E	0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.20		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.24	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Vinyl chloride	0.16	J	0.20	0.15	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	0.41	J	0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	88		1.0	0.15	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	5.8		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.58	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.8		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-MID GAC (Continued) — Lab Sample ID: 140-5782-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
cis-1,2-Dichloroethene	160		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.8		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	22		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,2-Dichloroethane	1.1	J	1.6	0.38	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	77		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	3.6		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.7	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	2.9		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	610	E	2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	1.1		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.2	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
Vinyl chloride	0.40	J	0.51	0.37	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	1.8	J	3.5	0.52	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane - DL	480		5.5	0.82	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: A-EFFLUENT — Lab Sample ID: 140-5782-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.21	J	0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.46		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.71		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	52		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.52		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	8.6		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	28		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	0.88		0.40	0.10	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	18		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.7		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.21	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	0.68	J	1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.6		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	3.5		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	200		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.6		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	35		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	110		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.8		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
trans-1,2-Dichloroethene	3.5		1.6	0.40	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	100		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	9.1		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-INFLUENT — Lab Sample ID: 140-5782-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.083	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.1		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-INFLUENT (Continued) — Lab Sample ID: 140-5782-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloroform	0.52		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.64		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.49		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.0		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.49		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Ethylbenzene	0.33	J	0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.5		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.15	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.84		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	5.3		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	8.4		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.19	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.71		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.30	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
Xylenes, Total	1.4		0.80	0.12	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	8.6		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.52	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	4.0		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	2.5		2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.5		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.4		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	4.2		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	1.9		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Ethylbenzene	1.4	J	1.7	0.59	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	5.3		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.0	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
Toluene	3.2		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	29		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	45		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.93	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	3.5		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.5	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA
Xylenes, Total	6.2		3.5	0.52	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-MID GAC — Lab Sample ID: 140-5782-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	3.7		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.10	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	1.0		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.30	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.67		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.41		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.7		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.68		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.4		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Tetrachloroethene	0.16	J	0.40	0.080	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.8		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	0.59		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: C-MID GAC (Continued) — Lab Sample ID: 140-5782-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,4-Trimethylbenzene	0.23	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	12		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Carbon tetrachloride	0.65	J	2.5	0.47	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.5	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.7		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.0		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	7.0		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	2.7		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.7		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Tetrachloroethene	1.1	J	2.7	0.54	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	16		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	3.2		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	1.1	J	2.0	0.61	ug/m3	1		TO 15 LL	Total/NA

Client Sample ID: C-EFFLUENT — Lab Sample ID: 140-5782-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	2.3		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Chlorodifluoromethane	0.99		0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
Chloroform	0.25	J	0.40	0.075	ppb v/v	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	0.59		0.40	0.12	ppb v/v	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	0.43		0.40	0.14	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethane	1.5		0.40	0.050	ppb v/v	1		TO 15 LL	Total/NA
1,1-Dichloroethene	0.62		0.40	0.070	ppb v/v	1		TO 15 LL	Total/NA
Methylene Chloride	1.2		1.0	0.65	ppb v/v	1		TO 15 LL	Total/NA
Toluene	0.71		0.60	0.60	ppb v/v	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	2.4		0.40	0.060	ppb v/v	1		TO 15 LL	Total/NA
Trichloroethene	1.3		0.20	0.070	ppb v/v	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	0.24	J	0.40	0.17	ppb v/v	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	0.95		0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	0.37	J	0.40	0.13	ppb v/v	1		TO 15 LL	Total/NA

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzene	7.5		1.3	0.37	ug/m3	1		TO 15 LL	Total/NA
Chlorodifluoromethane	3.5		1.4	0.27	ug/m3	1		TO 15 LL	Total/NA
Chloroform	1.2	J	2.0	0.37	ug/m3	1		TO 15 LL	Total/NA
cis-1,2-Dichloroethene	2.3		1.6	0.48	ug/m3	1		TO 15 LL	Total/NA
Dichlorodifluoromethane	2.1		2.0	0.67	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethane	6.1		1.6	0.20	ug/m3	1		TO 15 LL	Total/NA
1,1-Dichloroethene	2.5		1.6	0.28	ug/m3	1		TO 15 LL	Total/NA
Methylene Chloride	4.3		3.5	2.3	ug/m3	1		TO 15 LL	Total/NA
Toluene	2.7		2.3	2.3	ug/m3	1		TO 15 LL	Total/NA
1,1,1-Trichloroethane	13		2.2	0.33	ug/m3	1		TO 15 LL	Total/NA
Trichloroethene	6.9		1.1	0.38	ug/m3	1		TO 15 LL	Total/NA
1,2,3-Trimethylbenzene	1.2	J	2.0	0.84	ug/m3	1		TO 15 LL	Total/NA
1,2,4-Trimethylbenzene	4.7		2.0	0.61	ug/m3	1		TO 15 LL	Total/NA
1,3,5-Trimethylbenzene	1.8	J	2.0	0.64	ug/m3	1		TO 15 LL	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-5782-1

Date Collected: 09/07/16 10:00
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**12**		1.0	0.29	ppb v/v			09/13/16 00:14	1
Carbon tetrachloride	ND		1.0	0.19	ppb v/v			09/13/16 00:14	1
Chlorodifluoromethane	**0.43**	**J**	1.0	0.19	ppb v/v			09/13/16 00:14	1
Chloroform	**0.24**	**J**	1.0	0.19	ppb v/v			09/13/16 00:14	1
cis-1,2-Dichloroethene	**22**		1.0	0.30	ppb v/v			09/13/16 00:14	1
Dichlorodifluoromethane	**0.47**	**J**	1.0	0.34	ppb v/v			09/13/16 00:14	1
1,1-Dichloroethane	**3.5**		1.0	0.13	ppb v/v			09/13/16 00:14	1
1,2-Dichloroethane	ND		1.0	0.24	ppb v/v			09/13/16 00:14	1
1,1-Dichloroethene	**17**		1.0	0.18	ppb v/v			09/13/16 00:14	1
Ethylbenzene	ND		1.0	0.34	ppb v/v			09/13/16 00:14	1
Methylene Chloride	**4.3**		2.5	1.6	ppb v/v			09/13/16 00:14	1
Methyl tert-butyl ether	ND		5.0	0.85	ppb v/v			09/13/16 00:14	1
Naphthalene	ND		0.50	0.50	ppb v/v			09/13/16 00:14	1
Tetrachloroethene	ND		1.0	0.20	ppb v/v			09/13/16 00:14	1
Toluene	ND		1.5	1.5	ppb v/v			09/13/16 00:14	1
trans-1,2-Dichloroethene	**0.46**	**J**	1.0	0.25	ppb v/v			09/13/16 00:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.49	ppb v/v			09/13/16 00:14	1
1,1,1-Trichloroethane	**74**		1.0	0.15	ppb v/v			09/13/16 00:14	1
1,1,2-Trichloroethane	ND		1.0	0.26	ppb v/v			09/13/16 00:14	1
Trichloroethene	**140**		0.50	0.18	ppb v/v			09/13/16 00:14	1
1,2,3-Trimethylbenzene	ND		1.0	0.43	ppb v/v			09/13/16 00:14	1
1,2,4-Trimethylbenzene	ND		1.0	0.31	ppb v/v			09/13/16 00:14	1
1,3,5-Trimethylbenzene	ND		1.0	0.33	ppb v/v			09/13/16 00:14	1
Vinyl chloride	ND		0.50	0.36	ppb v/v			09/13/16 00:14	1
Xylenes, Total	ND		2.0	0.30	ppb v/v			09/13/16 00:14	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**38**		3.2	0.92	ug/m3			09/13/16 00:14	1
Carbon tetrachloride	ND		6.3	1.2	ug/m3			09/13/16 00:14	1
Chlorodifluoromethane	**1.5**	**J**	3.5	0.66	ug/m3			09/13/16 00:14	1
Chloroform	**1.2**	**J**	4.9	0.92	ug/m3			09/13/16 00:14	1
cis-1,2-Dichloroethene	**88**		4.0	1.2	ug/m3			09/13/16 00:14	1
Dichlorodifluoromethane	**2.3**	**J**	4.9	1.7	ug/m3			09/13/16 00:14	1
1,1-Dichloroethane	**14**		4.0	0.51	ug/m3			09/13/16 00:14	1
1,2-Dichloroethane	ND		4.0	0.96	ug/m3			09/13/16 00:14	1
1,1-Dichloroethene	**66**		4.0	0.69	ug/m3			09/13/16 00:14	1
Ethylbenzene	ND		4.3	1.5	ug/m3			09/13/16 00:14	1
Methylene Chloride	**15**		8.7	5.6	ug/m3			09/13/16 00:14	1
Methyl tert-butyl ether	ND		18	3.1	ug/m3			09/13/16 00:14	1
Naphthalene	ND		2.6	2.6	ug/m3			09/13/16 00:14	1
Tetrachloroethene	ND		6.8	1.4	ug/m3			09/13/16 00:14	1
Toluene	ND		5.7	5.7	ug/m3			09/13/16 00:14	1
trans-1,2-Dichloroethene	**1.8**	**J**	4.0	0.99	ug/m3			09/13/16 00:14	1
1,2,4-Trichlorobenzene	ND		7.4	3.6	ug/m3			09/13/16 00:14	1
1,1,1-Trichloroethane	**400**		5.5	0.82	ug/m3			09/13/16 00:14	1
1,1,2-Trichloroethane	ND		5.5	1.4	ug/m3			09/13/16 00:14	1
Trichloroethene	**760**		2.7	0.94	ug/m3			09/13/16 00:14	1
1,2,3-Trimethylbenzene	ND		4.9	2.1	ug/m3			09/13/16 00:14	1
1,2,4-Trimethylbenzene	ND		4.9	1.5	ug/m3			09/13/16 00:14	1

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-5782-1
Date Collected: 09/07/16 10:00
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		4.9	1.6	ug/m3			09/13/16 00:14	1
Vinyl chloride	ND		1.3	0.93	ug/m3			09/13/16 00:14	1
Xylenes, Total	ND		8.7	1.3	ug/m3			09/13/16 00:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*09/13/16 00:14*	*1*

Client Sample ID: A-MID GAC
Lab Sample ID: 140-5782-2

Date Collected: 09/07/16 09:58
Matrix: Air

Date Received: 09/08/16 09:25

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**1.8**		0.40	0.12	ppb v/v			09/10/16 19:02	1
Carbon tetrachloride	**0.092**	**J**	0.40	0.075	ppb v/v			09/10/16 19:02	1
Chlorodifluoromethane	**0.45**		0.40	0.075	ppb v/v			09/10/16 19:02	1
Chloroform	**0.58**		0.40	0.075	ppb v/v			09/10/16 19:02	1
cis-1,2-Dichloroethene	**41**		0.40	0.12	ppb v/v			09/10/16 19:02	1
Dichlorodifluoromethane	**0.57**		0.40	0.14	ppb v/v			09/10/16 19:02	1
1,1-Dichloroethane	**5.4**		0.40	0.050	ppb v/v			09/10/16 19:02	1
1,2-Dichloroethane	**0.27**	**J**	0.40	0.095	ppb v/v			09/10/16 19:02	1
1,1-Dichloroethene	**19**		0.40	0.070	ppb v/v			09/10/16 19:02	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			09/10/16 19:02	1
Methylene Chloride	**1.0**		1.0	0.65	ppb v/v			09/10/16 19:02	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			09/10/16 19:02	1
Naphthalene	ND		0.20	0.20	ppb v/v			09/10/16 19:02	1
Tetrachloroethene	**0.25**	**J**	0.40	0.080	ppb v/v			09/10/16 19:02	1
Toluene	ND		0.60	0.60	ppb v/v			09/10/16 19:02	1
trans-1,2-Dichloroethene	**0.73**		0.40	0.10	ppb v/v			09/10/16 19:02	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			09/10/16 19:02	1
1,1,1-Trichloroethane	**110**	**E**	0.40	0.060	ppb v/v			09/10/16 19:02	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			09/10/16 19:02	1
Trichloroethene	**0.20**		0.20	0.070	ppb v/v			09/10/16 19:02	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			09/10/16 19:02	1
1,2,4-Trimethylbenzene	**0.24**	**J**	0.40	0.13	ppb v/v			09/10/16 19:02	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/10/16 19:02	1
Vinyl chloride	**0.16**	**J**	0.20	0.15	ppb v/v			09/10/16 19:02	1
Xylenes, Total	**0.41**	**J**	0.80	0.12	ppb v/v			09/10/16 19:02	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**5.8**		1.3	0.37	ug/m3			09/10/16 19:02	1
Carbon tetrachloride	**0.58**	**J**	2.5	0.47	ug/m3			09/10/16 19:02	1
Chlorodifluoromethane	**1.6**		1.4	0.27	ug/m3			09/10/16 19:02	1
Chloroform	**2.8**		2.0	0.37	ug/m3			09/10/16 19:02	1
cis-1,2-Dichloroethene	**160**		1.6	0.48	ug/m3			09/10/16 19:02	1
Dichlorodifluoromethane	**2.8**		2.0	0.67	ug/m3			09/10/16 19:02	1
1,1-Dichloroethane	**22**		1.6	0.20	ug/m3			09/10/16 19:02	1
1,2-Dichloroethane	**1.1**	**J**	1.6	0.38	ug/m3			09/10/16 19:02	1
1,1-Dichloroethene	**77**		1.6	0.28	ug/m3			09/10/16 19:02	1
Ethylbenzene	ND		1.7	0.59	ug/m3			09/10/16 19:02	1
Methylene Chloride	**3.6**		3.5	2.3	ug/m3			09/10/16 19:02	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			09/10/16 19:02	1
Naphthalene	ND		1.0	1.0	ug/m3			09/10/16 19:02	1
Tetrachloroethene	**1.7**	**J**	2.7	0.54	ug/m3			09/10/16 19:02	1
Toluene	ND		2.3	2.3	ug/m3			09/10/16 19:02	1
trans-1,2-Dichloroethene	**2.9**		1.6	0.40	ug/m3			09/10/16 19:02	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			09/10/16 19:02	1
1,1,1-Trichloroethane	**610**	**E**	2.2	0.33	ug/m3			09/10/16 19:02	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			09/10/16 19:02	1
Trichloroethene	**1.1**		1.1	0.38	ug/m3			09/10/16 19:02	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			09/10/16 19:02	1
1,2,4-Trimethylbenzene	**1.2**	**J**	2.0	0.61	ug/m3			09/10/16 19:02	1

Client Sample ID: A-MID GAC
Lab Sample ID: 140-5782-2

Date Collected: 09/07/16 09:58
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			09/10/16 19:02	1
Vinyl chloride	**0.40**	**J**	0.51	0.37	ug/m3			09/10/16 19:02	1
Xylenes, Total	**1.8**	**J**	3.5	0.52	ug/m3			09/10/16 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*09/10/16 19:02*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**88**		1.0	0.15	ppb v/v			09/12/16 23:28	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	**480**		5.5	0.82	ug/m3			09/12/16 23:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*60 - 140*		*09/12/16 23:28*	*1*

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-5782-3

Date Collected: 09/07/16 09:56
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.21**	**J**	0.40	0.12	ppb v/v			09/10/16 19:49	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			09/10/16 19:49	1
Chlorodifluoromethane	**0.46**		0.40	0.075	ppb v/v			09/10/16 19:49	1
Chloroform	**0.71**		0.40	0.075	ppb v/v			09/10/16 19:49	1
cis-1,2-Dichloroethene	**52**		0.40	0.12	ppb v/v			09/10/16 19:49	1
Dichlorodifluoromethane	**0.52**		0.40	0.14	ppb v/v			09/10/16 19:49	1
1,1-Dichloroethane	**8.6**		0.40	0.050	ppb v/v			09/10/16 19:49	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			09/10/16 19:49	1
1,1-Dichloroethene	**28**		0.40	0.070	ppb v/v			09/10/16 19:49	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			09/10/16 19:49	1
Methylene Chloride	**1.4**		1.0	0.65	ppb v/v			09/10/16 19:49	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			09/10/16 19:49	1
Naphthalene	ND		0.20	0.20	ppb v/v			09/10/16 19:49	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			09/10/16 19:49	1
Toluene	ND		0.60	0.60	ppb v/v			09/10/16 19:49	1
trans-1,2-Dichloroethene	**0.88**		0.40	0.10	ppb v/v			09/10/16 19:49	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			09/10/16 19:49	1
1,1,1-Trichloroethane	**18**		0.40	0.060	ppb v/v			09/10/16 19:49	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			09/10/16 19:49	1
Trichloroethene	**1.7**		0.20	0.070	ppb v/v			09/10/16 19:49	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			09/10/16 19:49	1
1,2,4-Trimethylbenzene	**0.21**	**J**	0.40	0.13	ppb v/v			09/10/16 19:49	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/10/16 19:49	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			09/10/16 19:49	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			09/10/16 19:49	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**0.68**	**J**	1.3	0.37	ug/m3			09/10/16 19:49	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			09/10/16 19:49	1
Chlorodifluoromethane	**1.6**		1.4	0.27	ug/m3			09/10/16 19:49	1
Chloroform	**3.5**		2.0	0.37	ug/m3			09/10/16 19:49	1
cis-1,2-Dichloroethene	**200**		1.6	0.48	ug/m3			09/10/16 19:49	1
Dichlorodifluoromethane	**2.6**		2.0	0.67	ug/m3			09/10/16 19:49	1
1,1-Dichloroethane	**35**		1.6	0.20	ug/m3			09/10/16 19:49	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			09/10/16 19:49	1
1,1-Dichloroethene	**110**		1.6	0.28	ug/m3			09/10/16 19:49	1
Ethylbenzene	ND		1.7	0.59	ug/m3			09/10/16 19:49	1
Methylene Chloride	**4.8**		3.5	2.3	ug/m3			09/10/16 19:49	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			09/10/16 19:49	1
Naphthalene	ND		1.0	1.0	ug/m3			09/10/16 19:49	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			09/10/16 19:49	1
Toluene	ND		2.3	2.3	ug/m3			09/10/16 19:49	1
trans-1,2-Dichloroethene	**3.5**		1.6	0.40	ug/m3			09/10/16 19:49	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			09/10/16 19:49	1
1,1,1-Trichloroethane	**100**		2.2	0.33	ug/m3			09/10/16 19:49	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			09/10/16 19:49	1
Trichloroethene	**9.1**		1.1	0.38	ug/m3			09/10/16 19:49	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			09/10/16 19:49	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	0.61	ug/m3			09/10/16 19:49	1

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-5782-3

Date Collected: 09/07/16 09:56
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			09/10/16 19:49	1
Vinyl chloride	ND		0.51	0.37	ug/m3			09/10/16 19:49	1
Xylenes, Total	ND		3.5	0.52	ug/m3			09/10/16 19:49	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*09/10/16 19:49*	*1*

Client Sample ID: C-INFLUENT

Lab Sample ID: 140-5782-4

Date Collected: 09/07/16 10:24

Matrix: Air

Date Received: 09/08/16 09:25

Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.7**		0.40	0.12	ppb v/v			09/10/16 20:34	1
Carbon tetrachloride	**0.083**	**J**	0.40	0.075	ppb v/v			09/10/16 20:34	1
Chlorodifluoromethane	**1.1**		0.40	0.075	ppb v/v			09/10/16 20:34	1
Chloroform	**0.52**		0.40	0.075	ppb v/v			09/10/16 20:34	1
cis-1,2-Dichloroethene	**0.64**		0.40	0.12	ppb v/v			09/10/16 20:34	1
Dichlorodifluoromethane	**0.49**		0.40	0.14	ppb v/v			09/10/16 20:34	1
1,1-Dichloroethane	**1.0**		0.40	0.050	ppb v/v			09/10/16 20:34	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			09/10/16 20:34	1
1,1-Dichloroethene	**0.49**		0.40	0.070	ppb v/v			09/10/16 20:34	1
Ethylbenzene	**0.33**	**J**	0.40	0.14	ppb v/v			09/10/16 20:34	1
Methylene Chloride	**1.5**		1.0	0.65	ppb v/v			09/10/16 20:34	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			09/10/16 20:34	1
Naphthalene	ND		0.20	0.20	ppb v/v			09/10/16 20:34	1
Tetrachloroethene	**0.15**	**J**	0.40	0.080	ppb v/v			09/10/16 20:34	1
Toluene	**0.84**		0.60	0.60	ppb v/v			09/10/16 20:34	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/10/16 20:34	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			09/10/16 20:34	1
1,1,1-Trichloroethane	**5.3**		0.40	0.060	ppb v/v			09/10/16 20:34	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			09/10/16 20:34	1
Trichloroethene	**8.4**		0.20	0.070	ppb v/v			09/10/16 20:34	1
1,2,3-Trimethylbenzene	**0.19**	**J**	0.40	0.17	ppb v/v			09/10/16 20:34	1
1,2,4-Trimethylbenzene	**0.71**		0.40	0.13	ppb v/v			09/10/16 20:34	1
1,3,5-Trimethylbenzene	**0.30**	**J**	0.40	0.13	ppb v/v			09/10/16 20:34	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			09/10/16 20:34	1
Xylenes, Total	**1.4**		0.80	0.12	ppb v/v			09/10/16 20:34	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**8.6**		1.3	0.37	ug/m3			09/10/16 20:34	1
Carbon tetrachloride	**0.52**	**J**	2.5	0.47	ug/m3			09/10/16 20:34	1
Chlorodifluoromethane	**4.0**		1.4	0.27	ug/m3			09/10/16 20:34	1
Chloroform	**2.5**		2.0	0.37	ug/m3			09/10/16 20:34	1
cis-1,2-Dichloroethene	**2.5**		1.6	0.48	ug/m3			09/10/16 20:34	1
Dichlorodifluoromethane	**2.4**		2.0	0.67	ug/m3			09/10/16 20:34	1
1,1-Dichloroethane	**4.2**		1.6	0.20	ug/m3			09/10/16 20:34	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			09/10/16 20:34	1
1,1-Dichloroethene	**1.9**		1.6	0.28	ug/m3			09/10/16 20:34	1
Ethylbenzene	**1.4**	**J**	1.7	0.59	ug/m3			09/10/16 20:34	1
Methylene Chloride	**5.3**		3.5	2.3	ug/m3			09/10/16 20:34	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			09/10/16 20:34	1
Naphthalene	ND		1.0	1.0	ug/m3			09/10/16 20:34	1
Tetrachloroethene	**1.0**	**J**	2.7	0.54	ug/m3			09/10/16 20:34	1
Toluene	**3.2**		2.3	2.3	ug/m3			09/10/16 20:34	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			09/10/16 20:34	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			09/10/16 20:34	1
1,1,1-Trichloroethane	**29**		2.2	0.33	ug/m3			09/10/16 20:34	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			09/10/16 20:34	1
Trichloroethene	**45**		1.1	0.38	ug/m3			09/10/16 20:34	1
1,2,3-Trimethylbenzene	**0.93**	**J**	2.0	0.84	ug/m3			09/10/16 20:34	1
1,2,4-Trimethylbenzene	**3.5**		2.0	0.61	ug/m3			09/10/16 20:34	1

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-5782-4
Date Collected: 09/07/16 10:24
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.5**	**J**	2.0	0.64	ug/m3			09/10/16 20:34	1
Vinyl chloride	ND		0.51	0.37	ug/m3			09/10/16 20:34	1
Xylenes, Total	**6.2**		3.5	0.52	ug/m3			09/10/16 20:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*		*09/10/16 20:34*	*1*

Client Sample ID: C-MID GAC

Date Collected: 09/07/16 10:22
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Lab Sample ID: 140-5782-5

Matrix: Air

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**3.7**		0.40	0.12	ppb v/v			09/10/16 21:19	1
Carbon tetrachloride	**0.10**	**J**	0.40	0.075	ppb v/v			09/10/16 21:19	1
Chlorodifluoromethane	**1.0**		0.40	0.075	ppb v/v			09/10/16 21:19	1
Chloroform	**0.30**	**J**	0.40	0.075	ppb v/v			09/10/16 21:19	1
cis-1,2-Dichloroethene	**0.67**		0.40	0.12	ppb v/v			09/10/16 21:19	1
Dichlorodifluoromethane	**0.41**		0.40	0.14	ppb v/v			09/10/16 21:19	1
1,1-Dichloroethane	**1.7**		0.40	0.050	ppb v/v			09/10/16 21:19	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			09/10/16 21:19	1
1,1-Dichloroethene	**0.68**		0.40	0.070	ppb v/v			09/10/16 21:19	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			09/10/16 21:19	1
Methylene Chloride	**1.4**		1.0	0.65	ppb v/v			09/10/16 21:19	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			09/10/16 21:19	1
Naphthalene	ND		0.20	0.20	ppb v/v			09/10/16 21:19	1
Tetrachloroethene	**0.16**	**J**	0.40	0.080	ppb v/v			09/10/16 21:19	1
Toluene	ND		0.60	0.60	ppb v/v			09/10/16 21:19	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/10/16 21:19	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			09/10/16 21:19	1
1,1,1-Trichloroethane	**2.8**		0.40	0.060	ppb v/v			09/10/16 21:19	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			09/10/16 21:19	1
Trichloroethene	**0.59**		0.20	0.070	ppb v/v			09/10/16 21:19	1
1,2,3-Trimethylbenzene	ND		0.40	0.17	ppb v/v			09/10/16 21:19	1
1,2,4-Trimethylbenzene	**0.23**	**J**	0.40	0.13	ppb v/v			09/10/16 21:19	1
1,3,5-Trimethylbenzene	ND		0.40	0.13	ppb v/v			09/10/16 21:19	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			09/10/16 21:19	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			09/10/16 21:19	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**12**		1.3	0.37	ug/m3			09/10/16 21:19	1
Carbon tetrachloride	**0.65**	**J**	2.5	0.47	ug/m3			09/10/16 21:19	1
Chlorodifluoromethane	**3.5**		1.4	0.27	ug/m3			09/10/16 21:19	1
Chloroform	**1.5**	**J**	2.0	0.37	ug/m3			09/10/16 21:19	1
cis-1,2-Dichloroethene	**2.7**		1.6	0.48	ug/m3			09/10/16 21:19	1
Dichlorodifluoromethane	**2.0**		2.0	0.67	ug/m3			09/10/16 21:19	1
1,1-Dichloroethane	**7.0**		1.6	0.20	ug/m3			09/10/16 21:19	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			09/10/16 21:19	1
1,1-Dichloroethene	**2.7**		1.6	0.28	ug/m3			09/10/16 21:19	1
Ethylbenzene	ND		1.7	0.59	ug/m3			09/10/16 21:19	1
Methylene Chloride	**4.7**		3.5	2.3	ug/m3			09/10/16 21:19	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			09/10/16 21:19	1
Naphthalene	ND		1.0	1.0	ug/m3			09/10/16 21:19	1
Tetrachloroethene	**1.1**	**J**	2.7	0.54	ug/m3			09/10/16 21:19	1
Toluene	ND		2.3	2.3	ug/m3			09/10/16 21:19	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			09/10/16 21:19	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			09/10/16 21:19	1
1,1,1-Trichloroethane	**16**		2.2	0.33	ug/m3			09/10/16 21:19	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			09/10/16 21:19	1
Trichloroethene	**3.2**		1.1	0.38	ug/m3			09/10/16 21:19	1
1,2,3-Trimethylbenzene	ND		2.0	0.84	ug/m3			09/10/16 21:19	1
1,2,4-Trimethylbenzene	**1.1**	**J**	2.0	0.61	ug/m3			09/10/16 21:19	1

Client Sample ID: C-MID GAC
Lab Sample ID: 140-5782-5
Date Collected: 09/07/16 10:22
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		2.0	0.64	ug/m3			09/10/16 21:19	1
Vinyl chloride	ND		0.51	0.37	ug/m3			09/10/16 21:19	1
Xylenes, Total	ND		3.5	0.52	ug/m3			09/10/16 21:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*		*09/10/16 21:19*	*1*

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-5782-6

Date Collected: 09/07/16 10:20
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**2.3**		0.40	0.12	ppb v/v			09/10/16 22:04	1
Carbon tetrachloride	ND		0.40	0.075	ppb v/v			09/10/16 22:04	1
Chlorodifluoromethane	**0.99**		0.40	0.075	ppb v/v			09/10/16 22:04	1
Chloroform	**0.25**	**J**	0.40	0.075	ppb v/v			09/10/16 22:04	1
cis-1,2-Dichloroethene	**0.59**		0.40	0.12	ppb v/v			09/10/16 22:04	1
Dichlorodifluoromethane	**0.43**		0.40	0.14	ppb v/v			09/10/16 22:04	1
1,1-Dichloroethane	**1.5**		0.40	0.050	ppb v/v			09/10/16 22:04	1
1,2-Dichloroethane	ND		0.40	0.095	ppb v/v			09/10/16 22:04	1
1,1-Dichloroethene	**0.62**		0.40	0.070	ppb v/v			09/10/16 22:04	1
Ethylbenzene	ND		0.40	0.14	ppb v/v			09/10/16 22:04	1
Methylene Chloride	**1.2**		1.0	0.65	ppb v/v			09/10/16 22:04	1
Methyl tert-butyl ether	ND		2.0	0.34	ppb v/v			09/10/16 22:04	1
Naphthalene	ND		0.20	0.20	ppb v/v			09/10/16 22:04	1
Tetrachloroethene	ND		0.40	0.080	ppb v/v			09/10/16 22:04	1
Toluene	**0.71**		0.60	0.60	ppb v/v			09/10/16 22:04	1
trans-1,2-Dichloroethene	ND		0.40	0.10	ppb v/v			09/10/16 22:04	1
1,2,4-Trichlorobenzene	ND		0.40	0.20	ppb v/v			09/10/16 22:04	1
1,1,1-Trichloroethane	**2.4**		0.40	0.060	ppb v/v			09/10/16 22:04	1
1,1,2-Trichloroethane	ND		0.40	0.11	ppb v/v			09/10/16 22:04	1
Trichloroethene	**1.3**		0.20	0.070	ppb v/v			09/10/16 22:04	1
1,2,3-Trimethylbenzene	**0.24**	**J**	0.40	0.17	ppb v/v			09/10/16 22:04	1
1,2,4-Trimethylbenzene	**0.95**		0.40	0.13	ppb v/v			09/10/16 22:04	1
1,3,5-Trimethylbenzene	**0.37**	**J**	0.40	0.13	ppb v/v			09/10/16 22:04	1
Vinyl chloride	ND		0.20	0.15	ppb v/v			09/10/16 22:04	1
Xylenes, Total	ND		0.80	0.12	ppb v/v			09/10/16 22:04	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	**7.5**		1.3	0.37	ug/m3			09/10/16 22:04	1
Carbon tetrachloride	ND		2.5	0.47	ug/m3			09/10/16 22:04	1
Chlorodifluoromethane	**3.5**		1.4	0.27	ug/m3			09/10/16 22:04	1
Chloroform	**1.2**	**J**	2.0	0.37	ug/m3			09/10/16 22:04	1
cis-1,2-Dichloroethene	**2.3**		1.6	0.48	ug/m3			09/10/16 22:04	1
Dichlorodifluoromethane	**2.1**		2.0	0.67	ug/m3			09/10/16 22:04	1
1,1-Dichloroethane	**6.1**		1.6	0.20	ug/m3			09/10/16 22:04	1
1,2-Dichloroethane	ND		1.6	0.38	ug/m3			09/10/16 22:04	1
1,1-Dichloroethene	**2.5**		1.6	0.28	ug/m3			09/10/16 22:04	1
Ethylbenzene	ND		1.7	0.59	ug/m3			09/10/16 22:04	1
Methylene Chloride	**4.3**		3.5	2.3	ug/m3			09/10/16 22:04	1
Methyl tert-butyl ether	ND		7.2	1.2	ug/m3			09/10/16 22:04	1
Naphthalene	ND		1.0	1.0	ug/m3			09/10/16 22:04	1
Tetrachloroethene	ND		2.7	0.54	ug/m3			09/10/16 22:04	1
Toluene	**2.7**		2.3	2.3	ug/m3			09/10/16 22:04	1
trans-1,2-Dichloroethene	ND		1.6	0.40	ug/m3			09/10/16 22:04	1
1,2,4-Trichlorobenzene	ND		3.0	1.4	ug/m3			09/10/16 22:04	1
1,1,1-Trichloroethane	**13**		2.2	0.33	ug/m3			09/10/16 22:04	1
1,1,2-Trichloroethane	ND		2.2	0.57	ug/m3			09/10/16 22:04	1
Trichloroethene	**6.9**		1.1	0.38	ug/m3			09/10/16 22:04	1
1,2,3-Trimethylbenzene	**1.2**	**J**	2.0	0.84	ug/m3			09/10/16 22:04	1
1,2,4-Trimethylbenzene	**4.7**		2.0	0.61	ug/m3			09/10/16 22:04	1

Client Sample ID: C-EFFLUENT
Lab Sample ID: 140-5782-6
Date Collected: 09/07/16 10:20
Matrix: Air
Date Received: 09/08/16 09:25
Sample Container: Summa Canister 1L

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	**1.8**	**J**	2.0	0.64	ug/m3			09/10/16 22:04	1
Vinyl chloride	ND		0.51	0.37	ug/m3			09/10/16 22:04	1
Xylenes, Total	ND		3.5	0.52	ug/m3			09/10/16 22:04	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*		*09/10/16 22:04*	*1*

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Analyte	RL	MDL	Units	Method
1,1,1-Trichloroethane	0.080	0.012	ppb v/v	TO 15 LL
1,1,1-Trichloroethane	0.44	0.065	ug/m3	TO 15 LL
1,1,2-Trichloroethane	0.080	0.021	ppb v/v	TO 15 LL
1,1,2-Trichloroethane	0.44	0.11	ug/m3	TO 15 LL
1,1-Dichloroethane	0.080	0.010	ppb v/v	TO 15 LL
1,1-Dichloroethane	0.32	0.040	ug/m3	TO 15 LL
1,1-Dichloroethene	0.080	0.014	ppb v/v	TO 15 LL
1,1-Dichloroethene	0.32	0.056	ug/m3	TO 15 LL
1,2,3-Trimethylbenzene	0.080	0.034	ppb v/v	TO 15 LL
1,2,3-Trimethylbenzene	0.39	0.17	ug/m3	TO 15 LL
1,2,4-Trichlorobenzene	0.080	0.039	ppb v/v	TO 15 LL
1,2,4-Trichlorobenzene	0.59	0.29	ug/m3	TO 15 LL
1,2,4-Trimethylbenzene	0.080	0.025	ppb v/v	TO 15 LL
1,2,4-Trimethylbenzene	0.39	0.12	ug/m3	TO 15 LL
1,2-Dichloroethane	0.080	0.019	ppb v/v	TO 15 LL
1,2-Dichloroethane	0.32	0.077	ug/m3	TO 15 LL
1,3,5-Trimethylbenzene	0.080	0.026	ppb v/v	TO 15 LL
1,3,5-Trimethylbenzene	0.39	0.13	ug/m3	TO 15 LL
Benzene	0.080	0.023	ppb v/v	TO 15 LL
Benzene	0.26	0.073	ug/m3	TO 15 LL
Carbon tetrachloride	0.080	0.015	ppb v/v	TO 15 LL
Carbon tetrachloride	0.50	0.094	ug/m3	TO 15 LL
Chlorodifluoromethane	0.080	0.015	ppb v/v	TO 15 LL
Chlorodifluoromethane	0.28	0.053	ug/m3	TO 15 LL
Chloroform	0.080	0.015	ppb v/v	TO 15 LL
Chloroform	0.39	0.073	ug/m3	TO 15 LL
cis-1,2-Dichloroethene	0.080	0.024	ppb v/v	TO 15 LL
cis-1,2-Dichloroethene	0.32	0.095	ug/m3	TO 15 LL
Dichlorodifluoromethane	0.080	0.027	ppb v/v	TO 15 LL
Dichlorodifluoromethane	0.40	0.13	ug/m3	TO 15 LL
Ethylbenzene	0.080	0.027	ppb v/v	TO 15 LL
Ethylbenzene	0.35	0.12	ug/m3	TO 15 LL
Methyl tert-butyl ether	0.40	0.068	ppb v/v	TO 15 LL
Methyl tert-butyl ether	1.4	0.25	ug/m3	TO 15 LL
Methylene Chloride	0.20	0.13	ppb v/v	TO 15 LL
Methylene Chloride	0.69	0.45	ug/m3	TO 15 LL
Naphthalene	0.040	0.040	ppb v/v	TO 15 LL
Naphthalene	0.21	0.21	ug/m3	TO 15 LL
Tetrachloroethene	0.080	0.016	ppb v/v	TO 15 LL
Tetrachloroethene	0.54	0.11	ug/m3	TO 15 LL
Toluene	0.12	0.12	ppb v/v	TO 15 LL
Toluene	0.45	0.45	ug/m3	TO 15 LL
trans-1,2-Dichloroethene	0.080	0.020	ppb v/v	TO 15 LL
trans-1,2-Dichloroethene	0.32	0.079	ug/m3	TO 15 LL
Trichloroethene	0.040	0.014	ppb v/v	TO 15 LL
Trichloroethene	0.21	0.075	ug/m3	TO 15 LL
Vinyl chloride	0.040	0.029	ppb v/v	TO 15 LL
Vinyl chloride	0.10	0.074	ug/m3	TO 15 LL
Xylenes, Total	0.16	0.024	ppb v/v	TO 15 LL
Xylenes, Total	0.69	0.10	ug/m3	TO 15 LL

Surrogate Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River, MD

TestAmerica Job ID: 140-5782-1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Matrix: Air **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
Lab Sample ID	Client Sample ID	BFB (60-140)
140-5782-1	A-INFLUENT	99
140-5782-2	A-MID GAC	105
140-5782-2 - DL	A-MID GAC	96
140-5782-3	A-EFFLUENT	101
140-5782-4	C-INFLUENT	103
140-5782-5	C-MID GAC	99
140-5782-6	C-EFFLUENT	101
LCS 140-6539/1004	Lab Control Sample	100
LCS 140-6540/1002	Lab Control Sample	103
MB 140-6539/7	Method Blank	100
MB 140-6540/4	Method Blank	97

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)

Lab Sample ID: MB 140-6539/7
Matrix: Air
Analysis Batch: 6539

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			09/10/16 17:31	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			09/10/16 17:31	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			09/10/16 17:31	1
Chloroform	ND		0.080	0.015	ppb v/v			09/10/16 17:31	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			09/10/16 17:31	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			09/10/16 17:31	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			09/10/16 17:31	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			09/10/16 17:31	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			09/10/16 17:31	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			09/10/16 17:31	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			09/10/16 17:31	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			09/10/16 17:31	1
Naphthalene	ND		0.040	0.040	ppb v/v			09/10/16 17:31	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			09/10/16 17:31	1
Toluene	ND		0.12	0.12	ppb v/v			09/10/16 17:31	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			09/10/16 17:31	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			09/10/16 17:31	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			09/10/16 17:31	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			09/10/16 17:31	1
Trichloroethene	ND		0.040	0.014	ppb v/v			09/10/16 17:31	1
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			09/10/16 17:31	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			09/10/16 17:31	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			09/10/16 17:31	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			09/10/16 17:31	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			09/10/16 17:31	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			09/10/16 17:31	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			09/10/16 17:31	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			09/10/16 17:31	1
Chloroform	ND		0.39	0.073	ug/m3			09/10/16 17:31	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			09/10/16 17:31	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			09/10/16 17:31	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			09/10/16 17:31	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			09/10/16 17:31	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			09/10/16 17:31	1
Ethylbenzene	ND		0.35	0.12	ug/m3			09/10/16 17:31	1
Methylene Chloride	ND		0.69	0.45	ug/m3			09/10/16 17:31	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			09/10/16 17:31	1
Naphthalene	ND		0.21	0.21	ug/m3			09/10/16 17:31	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			09/10/16 17:31	1
Toluene	ND		0.45	0.45	ug/m3			09/10/16 17:31	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			09/10/16 17:31	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			09/10/16 17:31	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			09/10/16 17:31	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			09/10/16 17:31	1
Trichloroethene	ND		0.21	0.075	ug/m3			09/10/16 17:31	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			09/10/16 17:31	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-6539/7
Matrix: Air
Analysis Batch: 6539

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			09/10/16 17:31	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			09/10/16 17:31	1
Vinyl chloride	ND		0.10	0.074	ug/m3			09/10/16 17:31	1
Xylenes, Total	ND		0.69	0.10	ug/m3			09/10/16 17:31	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*		*09/10/16 17:31*	*1*

Lab Sample ID: LCS 140-6539/1004
Matrix: Air
Analysis Batch: 6539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.15		ppb v/v		108	70 - 130
Carbon tetrachloride	2.00	2.07		ppb v/v		103	70 - 130
Chlorodifluoromethane	2.00	2.15		ppb v/v		107	60 - 140
Chloroform	2.00	2.12		ppb v/v		106	70 - 130
cis-1,2-Dichloroethene	2.00	2.25		ppb v/v		112	70 - 130
Dichlorodifluoromethane	2.00	2.32		ppb v/v		116	60 - 140
1,1-Dichloroethane	2.00	2.21		ppb v/v		110	70 - 130
1,2-Dichloroethane	2.00	2.07		ppb v/v		104	70 - 130
1,1-Dichloroethene	2.00	2.16		ppb v/v		108	70 - 130
Ethylbenzene	2.00	2.18		ppb v/v		109	70 - 130
Methylene Chloride	2.00	2.12		ppb v/v		106	70 - 130
Methyl tert-butyl ether	2.00	2.06		ppb v/v		103	60 - 140
Naphthalene	2.00	2.54		ppb v/v		127	60 - 140
Tetrachloroethene	2.00	2.17		ppb v/v		109	70 - 130
Toluene	2.00	2.15		ppb v/v		107	70 - 130
trans-1,2-Dichloroethene	2.00	2.24		ppb v/v		112	70 - 130
1,2,4-Trichlorobenzene	2.00	2.55		ppb v/v		128	60 - 140
1,1,1-Trichloroethane	2.00	2.08		ppb v/v		104	70 - 130
1,1,2-Trichloroethane	2.00	2.17		ppb v/v		109	70 - 130
Trichloroethene	2.00	2.15		ppb v/v		107	70 - 130
1,2,3-Trimethylbenzene	2.00	2.23		ppb v/v		112	70 - 130
1,2,4-Trimethylbenzene	2.00	2.25		ppb v/v		112	70 - 130
1,3,5-Trimethylbenzene	2.00	2.26		ppb v/v		113	70 - 130
Vinyl chloride	2.00	2.44		ppb v/v		122	70 - 130
Xylenes, Total	6.00	6.52		ppb v/v		109	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.88		ug/m3		108	70 - 130
Carbon tetrachloride	13	13.0		ug/m3		103	70 - 130
Chlorodifluoromethane	7.1	7.59		ug/m3		107	60 - 140
Chloroform	9.8	10.3		ug/m3		106	70 - 130
cis-1,2-Dichloroethene	7.9	8.91		ug/m3		112	70 - 130
Dichlorodifluoromethane	9.9	11.5		ug/m3		116	60 - 140
1,1-Dichloroethane	8.1	8.94		ug/m3		110	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6539/1004
Matrix: Air
Analysis Batch: 6539

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2-Dichloroethane	8.1	8.38		ug/m3		104	70 - 130
1,1-Dichloroethene	7.9	8.57		ug/m3		108	70 - 130
Ethylbenzene	8.7	9.47		ug/m3		109	70 - 130
Methylene Chloride	7.0	7.37		ug/m3		106	70 - 130
Methyl tert-butyl ether	7.2	7.44		ug/m3		103	60 - 140
Naphthalene	10	13.3		ug/m3		127	60 - 140
Tetrachloroethene	14	14.7		ug/m3		109	70 - 130
Toluene	7.5	8.10		ug/m3		107	70 - 130
trans-1,2-Dichloroethene	7.9	8.86		ug/m3		112	70 - 130
1,2,4-Trichlorobenzene	15	18.9		ug/m3		128	60 - 140
1,1,1-Trichloroethane	11	11.4		ug/m3		104	70 - 130
1,1,2-Trichloroethane	11	11.9		ug/m3		109	70 - 130
Trichloroethene	11	11.6		ug/m3		107	70 - 130
1,2,3-Trimethylbenzene	9.8	11.0		ug/m3		112	70 - 130
1,2,4-Trimethylbenzene	9.8	11.1		ug/m3		112	70 - 130
1,3,5-Trimethylbenzene	9.8	11.1		ug/m3		113	70 - 130
Vinyl chloride	5.1	6.24		ug/m3		122	70 - 130
Xylenes, Total	26	28.3		ug/m3		109	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*60 - 140*

Lab Sample ID: MB 140-6540/4
Matrix: Air
Analysis Batch: 6540

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.080	0.023	ppb v/v			09/12/16 12:21	1
Carbon tetrachloride	ND		0.080	0.015	ppb v/v			09/12/16 12:21	1
Chlorodifluoromethane	ND		0.080	0.015	ppb v/v			09/12/16 12:21	1
Chloroform	ND		0.080	0.015	ppb v/v			09/12/16 12:21	1
cis-1,2-Dichloroethene	ND		0.080	0.024	ppb v/v			09/12/16 12:21	1
Dichlorodifluoromethane	ND		0.080	0.027	ppb v/v			09/12/16 12:21	1
1,1-Dichloroethane	ND		0.080	0.010	ppb v/v			09/12/16 12:21	1
1,2-Dichloroethane	ND		0.080	0.019	ppb v/v			09/12/16 12:21	1
1,1-Dichloroethene	ND		0.080	0.014	ppb v/v			09/12/16 12:21	1
Ethylbenzene	ND		0.080	0.027	ppb v/v			09/12/16 12:21	1
Methylene Chloride	ND		0.20	0.13	ppb v/v			09/12/16 12:21	1
Methyl tert-butyl ether	ND		0.40	0.068	ppb v/v			09/12/16 12:21	1
Naphthalene	ND		0.040	0.040	ppb v/v			09/12/16 12:21	1
Tetrachloroethene	ND		0.080	0.016	ppb v/v			09/12/16 12:21	1
Toluene	ND		0.12	0.12	ppb v/v			09/12/16 12:21	1
trans-1,2-Dichloroethene	ND		0.080	0.020	ppb v/v			09/12/16 12:21	1
1,2,4-Trichlorobenzene	ND		0.080	0.039	ppb v/v			09/12/16 12:21	1
1,1,1-Trichloroethane	ND		0.080	0.012	ppb v/v			09/12/16 12:21	1
1,1,2-Trichloroethane	ND		0.080	0.021	ppb v/v			09/12/16 12:21	1
Trichloroethene	ND		0.040	0.014	ppb v/v			09/12/16 12:21	1

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: MB 140-6540/4
Matrix: Air
Analysis Batch: 6540

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trimethylbenzene	ND		0.080	0.034	ppb v/v			09/12/16 12:21	1
1,2,4-Trimethylbenzene	ND		0.080	0.025	ppb v/v			09/12/16 12:21	1
1,3,5-Trimethylbenzene	ND		0.080	0.026	ppb v/v			09/12/16 12:21	1
Vinyl chloride	ND		0.040	0.029	ppb v/v			09/12/16 12:21	1
Xylenes, Total	ND		0.16	0.024	ppb v/v			09/12/16 12:21	1

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.26	0.073	ug/m3			09/12/16 12:21	1
Carbon tetrachloride	ND		0.50	0.094	ug/m3			09/12/16 12:21	1
Chlorodifluoromethane	ND		0.28	0.053	ug/m3			09/12/16 12:21	1
Chloroform	ND		0.39	0.073	ug/m3			09/12/16 12:21	1
cis-1,2-Dichloroethene	ND		0.32	0.095	ug/m3			09/12/16 12:21	1
Dichlorodifluoromethane	ND		0.40	0.13	ug/m3			09/12/16 12:21	1
1,1-Dichloroethane	ND		0.32	0.040	ug/m3			09/12/16 12:21	1
1,2-Dichloroethane	ND		0.32	0.077	ug/m3			09/12/16 12:21	1
1,1-Dichloroethene	ND		0.32	0.056	ug/m3			09/12/16 12:21	1
Ethylbenzene	ND		0.35	0.12	ug/m3			09/12/16 12:21	1
Methylene Chloride	ND		0.69	0.45	ug/m3			09/12/16 12:21	1
Methyl tert-butyl ether	ND		1.4	0.25	ug/m3			09/12/16 12:21	1
Naphthalene	ND		0.21	0.21	ug/m3			09/12/16 12:21	1
Tetrachloroethene	ND		0.54	0.11	ug/m3			09/12/16 12:21	1
Toluene	ND		0.45	0.45	ug/m3			09/12/16 12:21	1
trans-1,2-Dichloroethene	ND		0.32	0.079	ug/m3			09/12/16 12:21	1
1,2,4-Trichlorobenzene	ND		0.59	0.29	ug/m3			09/12/16 12:21	1
1,1,1-Trichloroethane	ND		0.44	0.065	ug/m3			09/12/16 12:21	1
1,1,2-Trichloroethane	ND		0.44	0.11	ug/m3			09/12/16 12:21	1
Trichloroethene	ND		0.21	0.075	ug/m3			09/12/16 12:21	1
1,2,3-Trimethylbenzene	ND		0.39	0.17	ug/m3			09/12/16 12:21	1
1,2,4-Trimethylbenzene	ND		0.39	0.12	ug/m3			09/12/16 12:21	1
1,3,5-Trimethylbenzene	ND		0.39	0.13	ug/m3			09/12/16 12:21	1
Vinyl chloride	ND		0.10	0.074	ug/m3			09/12/16 12:21	1
Xylenes, Total	ND		0.69	0.10	ug/m3			09/12/16 12:21	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*60 - 140*		*09/12/16 12:21*	*1*

Lab Sample ID: LCS 140-6540/1002
Matrix: Air
Analysis Batch: 6540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	2.00	2.12		ppb v/v		106	70 - 130
Carbon tetrachloride	2.00	1.96		ppb v/v		98	70 - 130
Chlorodifluoromethane	2.00	2.18		ppb v/v		109	60 - 140
Chloroform	2.00	2.09		ppb v/v		104	70 - 130
cis-1,2-Dichloroethene	2.00	2.20		ppb v/v		110	70 - 130
Dichlorodifluoromethane	2.00	2.42		ppb v/v		121	60 - 140

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6540/1002
Matrix: Air
Analysis Batch: 6540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	2.00	2.24		ppb v/v		112	70 - 130
1,2-Dichloroethane	2.00	2.00		ppb v/v		100	70 - 130
1,1-Dichloroethene	2.00	2.05		ppb v/v		102	70 - 130
Ethylbenzene	2.00	2.09		ppb v/v		105	70 - 130
Methylene Chloride	2.00	2.16		ppb v/v		108	70 - 130
Methyl tert-butyl ether	2.00	1.97		ppb v/v		99	60 - 140
Naphthalene	2.00	2.25		ppb v/v		112	60 - 140
Tetrachloroethene	2.00	2.04		ppb v/v		102	70 - 130
Toluene	2.00	2.10		ppb v/v		105	70 - 130
trans-1,2-Dichloroethene	2.00	2.23		ppb v/v		112	70 - 130
1,2,4-Trichlorobenzene	2.00	2.22		ppb v/v		111	60 - 140
1,1,1-Trichloroethane	2.00	1.99		ppb v/v		100	70 - 130
1,1,2-Trichloroethane	2.00	2.16		ppb v/v		108	70 - 130
Trichloroethene	2.00	2.01		ppb v/v		101	70 - 130
1,2,3-Trimethylbenzene	2.00	2.08		ppb v/v		104	70 - 130
1,2,4-Trimethylbenzene	2.00	2.10		ppb v/v		105	70 - 130
1,3,5-Trimethylbenzene	2.00	2.10		ppb v/v		105	70 - 130
Vinyl chloride	2.00	2.54		ppb v/v		127	70 - 130
Xylenes, Total	6.00	6.28		ppb v/v		105	70 - 130

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Benzene	6.4	6.76		ug/m3		106	70 - 130
Carbon tetrachloride	13	12.3		ug/m3		98	70 - 130
Chlorodifluoromethane	7.1	7.71		ug/m3		109	60 - 140
Chloroform	9.8	10.2		ug/m3		104	70 - 130
cis-1,2-Dichloroethene	7.9	8.71		ug/m3		110	70 - 130
Dichlorodifluoromethane	9.9	12.0		ug/m3		121	60 - 140
1,1-Dichloroethane	8.1	9.06		ug/m3		112	70 - 130
1,2-Dichloroethane	8.1	8.10		ug/m3		100	70 - 130
1,1-Dichloroethene	7.9	8.12		ug/m3		102	70 - 130
Ethylbenzene	8.7	9.09		ug/m3		105	70 - 130
Methylene Chloride	7.0	7.50		ug/m3		108	70 - 130
Methyl tert-butyl ether	7.2	7.12		ug/m3		99	60 - 140
Naphthalene	10	11.8		ug/m3		112	60 - 140
Tetrachloroethene	14	13.8		ug/m3		102	70 - 130
Toluene	7.5	7.93		ug/m3		105	70 - 130
trans-1,2-Dichloroethene	7.9	8.86		ug/m3		112	70 - 130
1,2,4-Trichlorobenzene	15	16.4		ug/m3		111	60 - 140
1,1,1-Trichloroethane	11	10.9		ug/m3		100	70 - 130
1,1,2-Trichloroethane	11	11.8		ug/m3		108	70 - 130
Trichloroethene	11	10.8		ug/m3		101	70 - 130
1,2,3-Trimethylbenzene	9.8	10.2		ug/m3		104	70 - 130
1,2,4-Trimethylbenzene	9.8	10.3		ug/m3		105	70 - 130
1,3,5-Trimethylbenzene	9.8	10.3		ug/m3		105	70 - 130
Vinyl chloride	5.1	6.49		ug/m3		127	70 - 130
Xylenes, Total	26	27.3		ug/m3		105	70 - 130

Method: TO 15 LL - Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS) (Continued)

Lab Sample ID: LCS 140-6540/1002
Matrix: Air
Analysis Batch: 6540

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	*103*		*60 - 140*

QC Association Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River, MD

TestAmerica Job ID: 140-5782-1

Air - GC/MS VOA

Analysis Batch: 6539

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5782-2	A-MID GAC	Total/NA	Air	TO 15 LL	
140-5782-3	A-EFFLUENT	Total/NA	Air	TO 15 LL	
140-5782-4	C-INFLUENT	Total/NA	Air	TO 15 LL	
140-5782-5	C-MID GAC	Total/NA	Air	TO 15 LL	
140-5782-6	C-EFFLUENT	Total/NA	Air	TO 15 LL	
MB 140-6539/7	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-6539/1004	Lab Control Sample	Total/NA	Air	TO 15 LL	

Analysis Batch: 6540

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
140-5782-1	A-INFLUENT	Total/NA	Air	TO 15 LL	
140-5782-2 - DL	A-MID GAC	Total/NA	Air	TO 15 LL	
MB 140-6540/4	Method Blank	Total/NA	Air	TO 15 LL	
LCS 140-6540/1002	Lab Control Sample	Total/NA	Air	TO 15 LL	

Lab Chronicle

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River, MD

TestAmerica Job ID: 140-5782-1

Client Sample ID: A-INFLUENT
Lab Sample ID: 140-5782-1
Date Collected: 09/07/16 10:00
Matrix: Air
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	40 mL	500 mL	6540	09/13/16 00:14	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: A-MID GAC
Lab Sample ID: 140-5782-2
Date Collected: 09/07/16 09:58
Matrix: Air
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6539	09/10/16 19:02	HMT	TAL KNX
	Instrument ID: ME									
Total/NA	Analysis	TO 15 LL	DL	1	40 mL	500 mL	6540	09/12/16 23:28	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: A-EFFLUENT
Lab Sample ID: 140-5782-3
Date Collected: 09/07/16 09:56
Matrix: Air
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6539	09/10/16 19:49	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-INFLUENT
Lab Sample ID: 140-5782-4
Date Collected: 09/07/16 10:24
Matrix: Air
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6539	09/10/16 20:34	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-MID GAC
Lab Sample ID: 140-5782-5
Date Collected: 09/07/16 10:22
Matrix: Air
Date Received: 09/08/16 09:25

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6539	09/10/16 21:19	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: C-EFFLUENT
Date Collected: 09/07/16 10:20
Date Received: 09/08/16 09:25

Lab Sample ID: 140-5782-6
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	100 mL	500 mL	6539	09/10/16 22:04	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 140-6539/7
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6539	09/10/16 17:31	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Method Blank
Date Collected: N/A
Date Received: N/A

Lab Sample ID: MB 140-6540/4
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6540	09/12/16 12:21	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-6539/1004
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6539	09/10/16 14:39	HMT	TAL KNX
	Instrument ID: ME									

Client Sample ID: Lab Control Sample
Date Collected: N/A
Date Received: N/A

Lab Sample ID: LCS 140-6540/1002
Matrix: Air

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	TO 15 LL		1	500 mL	500 mL	6540	09/12/16 10:43	HMT	TAL KNX
	Instrument ID: ME									

Laboratory References:
TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Method Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River, MD

TestAmerica Job ID: 140-5782-1

Method	Method Description	Protocol	Laboratory
TO 15 LL	Volatile Organic Compounds in Ambient Air, Low Concentration (GC/MS)	EPA	TAL KNX

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

TAL KNX = TestAmerica Knoxville, 5815 Middlebrook Pike, Knoxville, TN 37921, TEL (865)291-3000

Sample Summary

Client: Tetra Tech GEO
Project/Site: LMMRC SSDS - Middle River, MD

TestAmerica Job ID: 140-5782-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
140-5782-1	A-INFLUENT	Air	09/07/16 10:00	09/08/16 09:25
140-5782-2	A-MID GAC	Air	09/07/16 09:58	09/08/16 09:25
140-5782-3	A-EFFLUENT	Air	09/07/16 09:56	09/08/16 09:25
140-5782-4	C-INFLUENT	Air	09/07/16 10:24	09/08/16 09:25
140-5782-5	C-MID GAC	Air	09/07/16 10:22	09/08/16 09:25
140-5782-6	C-EFFLUENT	Air	09/07/16 10:20	09/08/16 09:25

Method TO15 Low Level

Volatile Organic Compounds - Low level (GC/MS) by Method TO 15

FORM II
AIR - GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Matrix: Air Level: Low

GC Column (1): RTX-5 ID: 0.32(mm)

Client Sample ID	Lab Sample ID	BFB #
A-INFLUENT	140-5782-1	99
A-MID GAC	140-5782-2	105
A-MID GAC DL	140-5782-2 DL	96
A-EFFLUENT	140-5782-3	101
C-INFLUENT	140-5782-4	103
C-MID GAC	140-5782-5	99
C-EFFLUENT	140-5782-6	101
	MB 140-6539/7	100
	MB 140-6540/4	97
	LCS 140-6539/1004	100
	LCS 140-6540/1002	103

	QC LIMITS
BFB = 4-Bromofluorobenzene (Surr)	60-140

Column to be used to flag recovery values

FORM II TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVI10A-LCS.d

Lab ID: LCS 140-6539/1004 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.15	108	70-130	
Carbon tetrachloride	2.00	2.07	103	70-130	
Chlorodifluoromethane	2.00	2.15	107	60-140	
Chloroform	2.00	2.12	106	70-130	
cis-1,2-Dichloroethene	2.00	2.25	112	70-130	
Dichlorodifluoromethane	2.00	2.32	116	60-140	
1,1-Dichloroethane	2.00	2.21	110	70-130	
1,2-Dichloroethane	2.00	2.07	104	70-130	
1,1-Dichloroethene	2.00	2.16	108	70-130	
Ethylbenzene	2.00	2.18	109	70-130	
Methylene Chloride	2.00	2.12	106	70-130	
Methyl tert-butyl ether	2.00	2.06	103	60-140	
Naphthalene	2.00	2.54	127	60-140	
Tetrachloroethene	2.00	2.17	109	70-130	
Toluene	2.00	2.15	107	70-130	
trans-1,2-Dichloroethene	2.00	2.24	112	70-130	
1,2,4-Trichlorobenzene	2.00	2.55	128	60-140	
1,1,1-Trichloroethane	2.00	2.08	104	70-130	
1,1,2-Trichloroethane	2.00	2.17	109	70-130	
Trichloroethene	2.00	2.15	107	70-130	
1,2,3-Trimethylbenzene	2.00	2.23	112	70-130	
1,2,4-Trimethylbenzene	2.00	2.25	112	70-130	
1,3,5-Trimethylbenzene	2.00	2.26	113	70-130	
Vinyl chloride	2.00	2.44	122	70-130	
Xylenes, Total	6.00	6.52	109	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM III
AIR - GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Matrix: Air Level: Low Lab File ID: ECCVI12-LCS.d

Lab ID: LCS 140-6540/1002 Client ID:

COMPOUND	SPIKE ADDED (ppb v/v)	LCS CONCENTRATION (ppb v/v)	LCS % REC	QC LIMITS REC	#
Benzene	2.00	2.12	106	70-130	
Carbon tetrachloride	2.00	1.96	98	70-130	
Chlorodifluoromethane	2.00	2.18	109	60-140	
Chloroform	2.00	2.09	104	70-130	
cis-1,2-Dichloroethene	2.00	2.20	110	70-130	
Dichlorodifluoromethane	2.00	2.42	121	60-140	
1,1-Dichloroethane	2.00	2.24	112	70-130	
1,2-Dichloroethane	2.00	2.00	100	70-130	
1,1-Dichloroethene	2.00	2.05	102	70-130	
Ethylbenzene	2.00	2.09	105	70-130	
Methylene Chloride	2.00	2.16	108	70-130	
Methyl tert-butyl ether	2.00	1.97	99	60-140	
Naphthalene	2.00	2.25	112	60-140	
Tetrachloroethene	2.00	2.04	102	70-130	
Toluene	2.00	2.10	105	70-130	
trans-1,2-Dichloroethene	2.00	2.23	112	70-130	
1,2,4-Trichlorobenzene	2.00	2.22	111	60-140	
1,1,1-Trichloroethane	2.00	1.99	100	70-130	
1,1,2-Trichloroethane	2.00	2.16	108	70-130	
Trichloroethene	2.00	2.01	101	70-130	
1,2,3-Trimethylbenzene	2.00	2.08	104	70-130	
1,2,4-Trimethylbenzene	2.00	2.10	105	70-130	
1,3,5-Trimethylbenzene	2.00	2.10	105	70-130	
Vinyl chloride	2.00	2.54	127	70-130	
Xylenes, Total	6.00	6.28	105	70-130	

Column to be used to flag recovery and RPD values

FORM III TO 15 LL

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab File ID: EMB500I10.D Lab Sample ID: MB 140-6539/7

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 09/10/2016 17:31

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
A-MID GAC	140-5782-2	EI10p102.D	09/10/2016 19:02
A-EFFLUENT	140-5782-3	EI10p103.D	09/10/2016 19:49
C-INFLUENT	140-5782-4	EI10p104.D	09/10/2016 20:34
C-MID GAC	140-5782-5	EI10p105.D	09/10/2016 21:19
C-EFFLUENT	140-5782-6	EI10p106.D	09/10/2016 22:04

FORM IV
AIR - GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab File ID: E500BI12.D Lab Sample ID: MB 140-6540/4

Matrix: Air Heated Purge:(Y/N) N

Instrument ID: ME Date Analyzed: 09/12/2016 12:21

GC Column: RTX-5 ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 140-6540/1002	ECCVI12-LCS.d	09/12/2016 10:43
A-MID GAC DL	140-5782-2 DL	EI12P111.D	09/12/2016 23:28
A-INFLUENT	140-5782-1	EI12P112.D	09/13/2016 00:14

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab File ID: EBFBH23A.D BFB Injection Date: 08/23/2016

Instrument ID: ME BFB Injection Time: 15:48

Analysis Batch No.: 6379

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	15.0	
75	30.0 - 60.0 % of mass 95	54.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	83.7	
175	5.0 - 9.0 % of mass 174	5.9	(7.1) 1
176	95.0 - 101.0 % of mass 174	81.7	(97.6) 1
177	5.0 - 9.0 % of mass 176	5.6	(6.9) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 140-6379/3	EH23IC01A.D	08/23/2016	17:03
	IC 140-6379/4	EH23IC02A.D	08/23/2016	17:48
	IC 140-6379/5	EH23IC03A.D	08/23/2016	18:32
	IC 140-6379/6	EH23IC04.D	08/23/2016	19:17
	IC 140-6379/7	EH23IC05.D	08/23/2016	20:01
	ICIS 140-6379/8	EH23IC06.D	08/23/2016	20:46
	IC 140-6379/9	EH23IC07.D	08/23/2016	21:31
	IC 140-6379/10	EH23IC08.D	08/23/2016	22:17
	IC 140-6379/11	EH23IC09.D	08/23/2016	23:02
	ICV 140-6379/13	EH23ICV.D	08/24/2016	00:30

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab File ID: EBFBI10A.D BFB Injection Date: 09/10/2016

Instrument ID: ME BFB Injection Time: 14:08

Analysis Batch No.: 6539

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	14.8	
75	30.0 - 60.0 % of mass 95	53.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	79.9	
175	5.0 - 9.0 % of mass 174	5.9	(7.4) 1
176	95.0 - 101.0 % of mass 174	77.5	(97.0) 1
177	5.0 - 9.0 % of mass 176	5.4	(7.0) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6539/4	ECCVI10A.D	09/10/2016	14:39
	LCS 140-6539/1004	ECCVI10A-LCS .d	09/10/2016	14:39
	MB 140-6539/7	EMB500I10.D	09/10/2016	17:31
A-MID GAC	140-5782-2	EI10p102.D	09/10/2016	19:02
A-EFFLUENT	140-5782-3	EI10p103.D	09/10/2016	19:49
C-INFLUENT	140-5782-4	EI10p104.D	09/10/2016	20:34
C-MID GAC	140-5782-5	EI10p105.D	09/10/2016	21:19
C-EFFLUENT	140-5782-6	EI10p106.D	09/10/2016	22:04

FORM V
AIR - GC/MS VOA INSTRUMENT PERFORMANCE CHECK

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab File ID: EBFBI12.D BFB Injection Date: 09/12/2016

Instrument ID: ME BFB Injection Time: 10:12

Analysis Batch No.: 6540

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	14.6	
75	30.0 - 60.0 % of mass 95	52.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.4	(0.5) 1
174	50.0 - 120.00 % of mass 95	81.7	
175	5.0 - 9.0 % of mass 174	5.9	(7.2) 1
176	95.0 - 101.0 % of mass 174	79.0	(96.7) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.8) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 140-6540/2	ECCVI12.D	09/12/2016	10:43
	LCS 140-6540/1002	ECCVI12-LCS.d	09/12/2016	10:43
	MB 140-6540/4	E500BI12.D	09/12/2016	12:21
A-MID GAC DL	140-5782-2 DL	EI12P111.D	09/12/2016	23:28
A-INFLUENT	140-5782-1	EI12P112.D	09/13/2016	00:14

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Sample No.: ICIS 140-6379/8 Date Analyzed: 08/23/2016 20:46

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): EH23IC06.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		269675	7.57	1287098	9.82	1211436	14.82
UPPER LIMIT		377545	7.90	1801937	10.15	1696010	15.15
LOWER LIMIT		161805	7.24	772259	9.49	726862	14.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 140-6379/13		255853	7.57	1211654	9.82	1126201	14.82

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Sample No.: CCVIS 140-6539/4 Date Analyzed: 09/10/2016 14:39

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVI10A.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		381284	7.57	1808529	9.81	1723895	14.81
UPPER LIMIT		533798	7.90	2531941	10.14	2413453	15.14
LOWER LIMIT		228770	7.24	1085117	9.48	1034337	14.48
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6539/1004		381284	7.57	1808529	9.81	1723895	14.81
MB 140-6539/7		379492	7.56	1719308	9.80	1621826	14.80
140-5782-2	A-MID GAC	326955	7.56	1505992	9.81	1529484	14.80
140-5782-3	A-EFFLUENT	365502	7.56	1675100	9.80	1612461	14.80
140-5782-4	C-INFLUENT	362890	7.57	1760181	9.81	1686283	14.80
140-5782-5	C-MID GAC	413550	7.56	1987999	9.80	1829818	14.80
140-5782-6	C-EFFLUENT	390166	7.57	1902675	9.81	1788947	14.80

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM VIII
AIR - GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Sample No.: CCVIS 140-6540/2 Date Analyzed: 09/12/2016 10:43

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm)

Lab File ID (Standard): ECCVI12.D Heated Purge: (Y/N) N

Calibration ID: 750

		CBM		DFBZ		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		380713	7.56	1831211	9.81	1718365	14.81
UPPER LIMIT		532998	7.89	2563695	10.14	2405711	15.14
LOWER LIMIT		228428	7.23	1098727	9.48	1031019	14.48
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 140-6540/1002		380713	7.56	1831211	9.81	1718365	14.81
MB 140-6540/4		404519	7.56	1875090	9.80	1723834	14.80
140-5782-2 DL	A-MID GAC DL	389207	7.56	1818092	9.80	1651151	14.80
140-5782-1	A-INFLUENT	382326	7.56	1816599	9.80	1693302	14.81

CBM = Chlorobromomethane (IS)
DFBZ = 1,4-Difluorobenzene
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 60%-140% of internal standard area
RT Limit = ± 0.33 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII TO 15 LL

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-INFLUENT | Lab Sample ID: 140-5782-1

Matrix: Air | Lab File ID: EI12P112.D

Analysis Method: TO 15 LL | Date Collected: 09/07/2016 10:00

Sample wt/vol: 40(mL) | Date Analyzed: 09/13/2016 00:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6540 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	12		1.0	0.29
56-23-5	Carbon tetrachloride	153.81	ND		1.0	0.19
75-45-6	Chlorodifluoromethane	86.47	0.43	J	1.0	0.19
67-66-3	Chloroform	119.38	0.24	J	1.0	0.19
156-59-2	cis-1,2-Dichloroethene	96.94	22		1.0	0.30
75-71-8	Dichlorodifluoromethane	120.91	0.47	J	1.0	0.34
75-34-3	1,1-Dichloroethane	98.96	3.5		1.0	0.13
107-06-2	1,2-Dichloroethane	98.96	ND		1.0	0.24
75-35-4	1,1-Dichloroethene	96.94	17		1.0	0.18
100-41-4	Ethylbenzene	106.17	ND		1.0	0.34
75-09-2	Methylene Chloride	84.93	4.3		2.5	1.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		5.0	0.85
91-20-3	Naphthalene	128.17	ND		0.50	0.50
127-18-4	Tetrachloroethene	165.83	ND		1.0	0.20
108-88-3	Toluene	92.14	ND		1.5	1.5
156-60-5	trans-1,2-Dichloroethene	96.94	0.46	J	1.0	0.25
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		1.0	0.49
71-55-6	1,1,1-Trichloroethane	133.41	74		1.0	0.15
79-00-5	1,1,2-Trichloroethane	133.41	ND		1.0	0.26
79-01-6	Trichloroethene	131.39	140		0.50	0.18
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		1.0	0.43
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		1.0	0.31
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		1.0	0.33
75-01-4	Vinyl chloride	62.50	ND		0.50	0.36
1330-20-7	Xylenes, Total	106.17	ND		2.0	0.30

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-INFLUENT Lab Sample ID: 140-5782-1

Matrix: Air Lab File ID: EI12P112.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 10:00

Sample wt/vol: 40(mL) Date Analyzed: 09/13/2016 00:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6540 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	38		3.2	0.92
56-23-5	Carbon tetrachloride	153.81	ND		6.3	1.2
75-45-6	Chlorodifluoromethane	86.47	1.5	J	3.5	0.66
67-66-3	Chloroform	119.38	1.2	J	4.9	0.92
156-59-2	cis-1,2-Dichloroethene	96.94	88		4.0	1.2
75-71-8	Dichlorodifluoromethane	120.91	2.3	J	4.9	1.7
75-34-3	1,1-Dichloroethane	98.96	14		4.0	0.51
107-06-2	1,2-Dichloroethane	98.96	ND		4.0	0.96
75-35-4	1,1-Dichloroethene	96.94	66		4.0	0.69
100-41-4	Ethylbenzene	106.17	ND		4.3	1.5
75-09-2	Methylene Chloride	84.93	15		8.7	5.6
1634-04-4	Methyl tert-butyl ether	88.15	ND		18	3.1
91-20-3	Naphthalene	128.17	ND		2.6	2.6
127-18-4	Tetrachloroethene	165.83	ND		6.8	1.4
108-88-3	Toluene	92.14	ND		5.7	5.7
156-60-5	trans-1,2-Dichloroethene	96.94	1.8	J	4.0	0.99
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		7.4	3.6
71-55-6	1,1,1-Trichloroethane	133.41	400		5.5	0.82
79-00-5	1,1,2-Trichloroethane	133.41	ND		5.5	1.4
79-01-6	Trichloroethene	131.39	760		2.7	0.94
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		4.9	2.1
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		4.9	1.5
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		4.9	1.6
75-01-4	Vinyl chloride	62.50	ND		1.3	0.93
1330-20-7	Xylenes, Total	106.17	ND		8.7	1.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Lims ID:	140-5782-A-1				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	13-Sep-2016 00:14:30	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-019				
Misc. Info.:	140-5782-a-1				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:42:35	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				
First Level Reviewer: tajh		Date:	13-Sep-2016 11:34:27		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.557	7.562	-0.005	72	382326	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.805	-0.005	94	1816599	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.805	14.810	-0.006	87	1693302	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.482	16.481	0.001	92	1373329	3.96	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	94	1544	0.0340	
8 Dichlorodifluoromethane	85	2.952	2.946	0.006	99	15139	0.0377	
27 1,1-Dichloroethene	96	4.775	4.780	-0.005	98	154823	1.33	
31 Methylene Chloride	84	5.098	5.103	-0.005	79	41211	0.3436	
34 trans-1,2-Dichloroethene	96	5.859	5.869	-0.010	93	4639	0.0366	
37 1,1-Dichloroethane	63	6.268	6.273	-0.005	100	60139	0.2829	
42 cis-1,2-Dichloroethene	96	7.234	7.239	-0.005	90	227502	1.78	
44 Chloroform	83	7.568	7.578	-0.010	29	6168	0.0194	
47 1,1,1-Trichloroethane	97	8.587	8.592	-0.005	94	2120380	5.94	
51 Benzene	78	9.196	9.196	0.000	93	349790	0.9395	
59 Trichloroethene	130	10.577	10.576	0.001	96	1852786	11.4	
68 Toluene	91	12.772	12.771	0.001	94	20835	0.0513	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

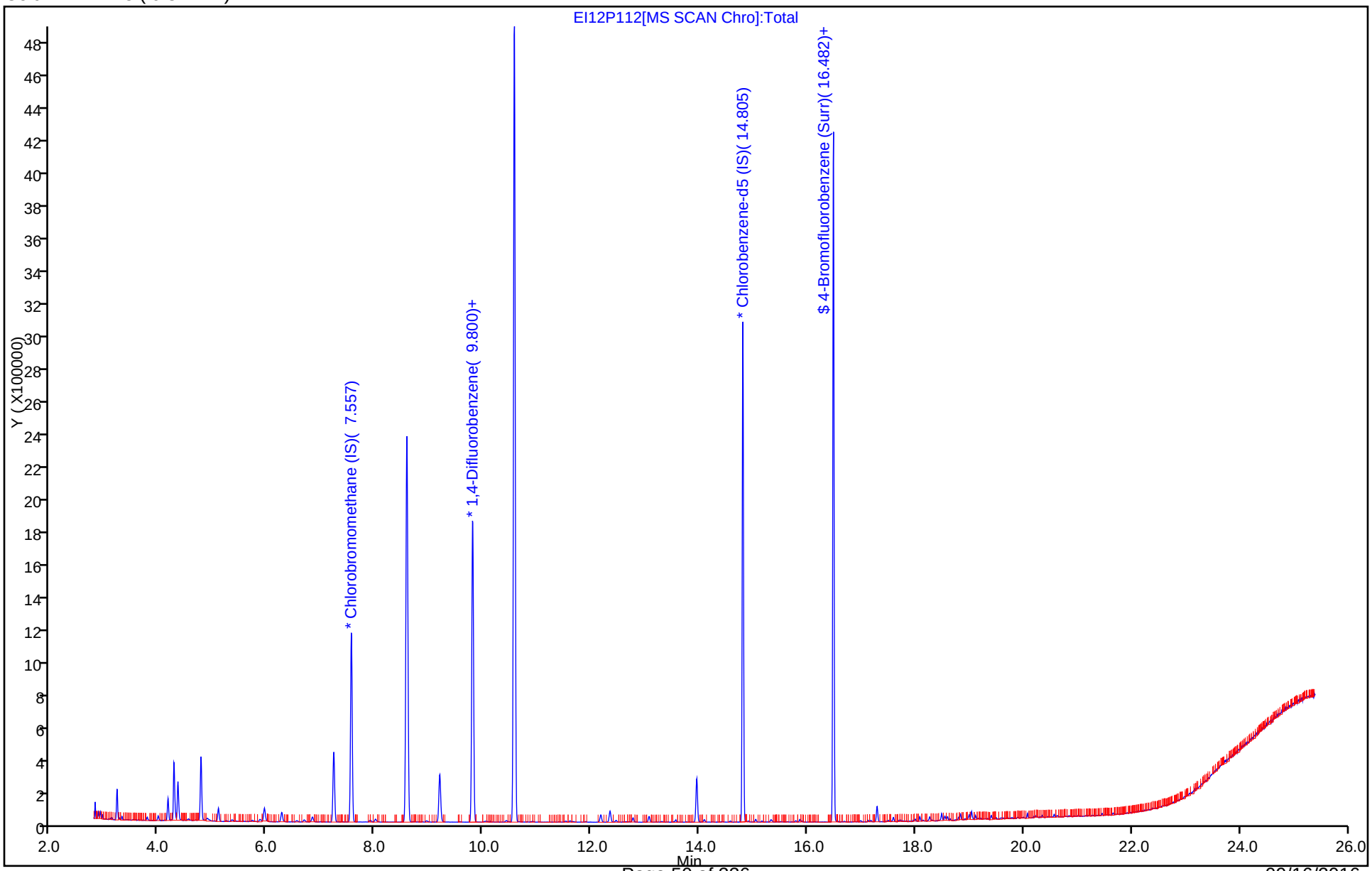
Report Date: 13-Sep-2016 11:46:55 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D

Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1	Worklist Smp#:	19
Client ID:	A-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Lims ID:	140-5782-A-1				
Client ID:	A-INFLUENT				
Sample Type:	Client				
Inject. Date:	13-Sep-2016 00:14:30	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-019				
Misc. Info.:	140-5782-a-1				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:42:35	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				

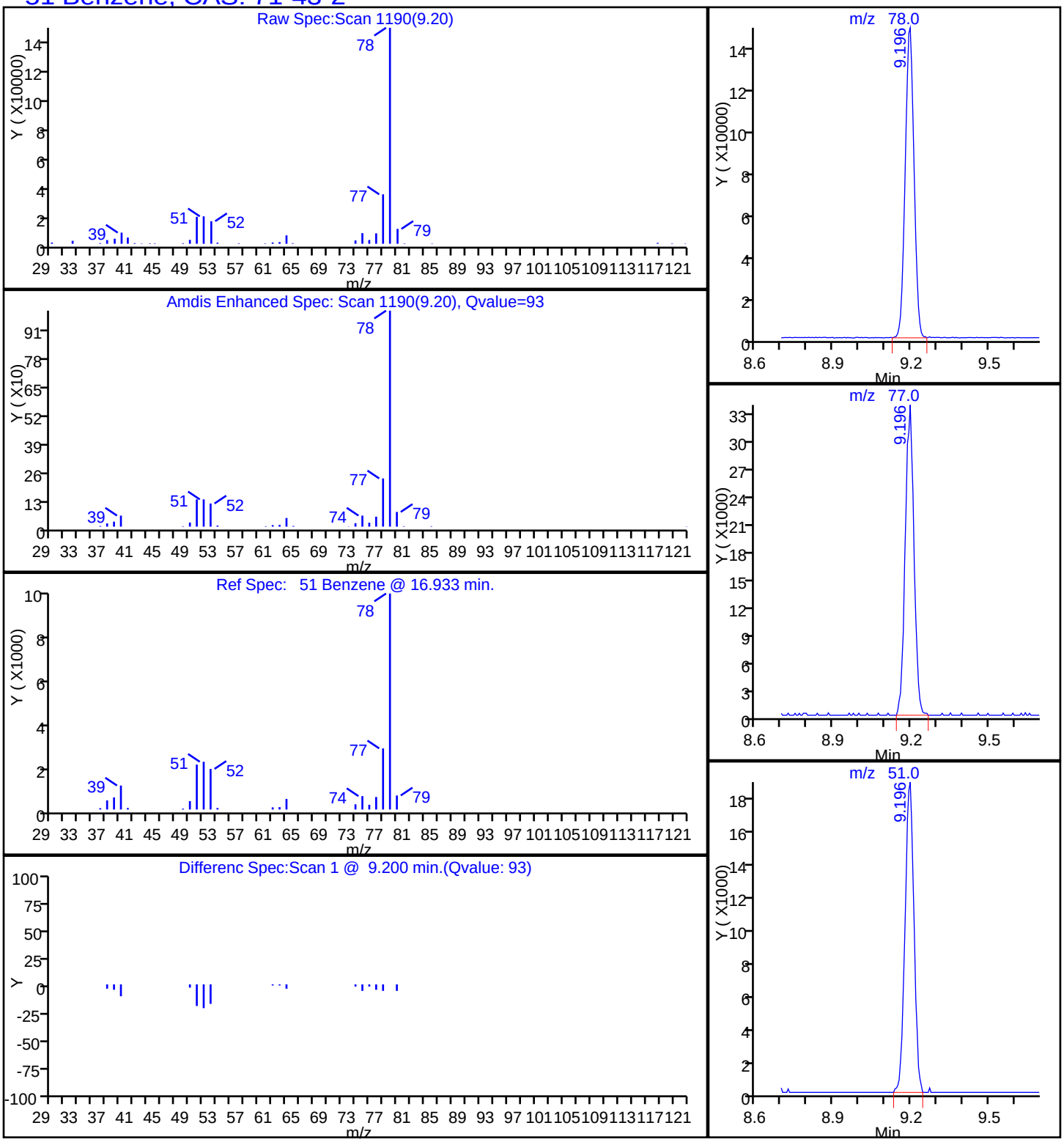
First Level Reviewer: tajh Date: 13-Sep-2016 11:34:27

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.96	99.09

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

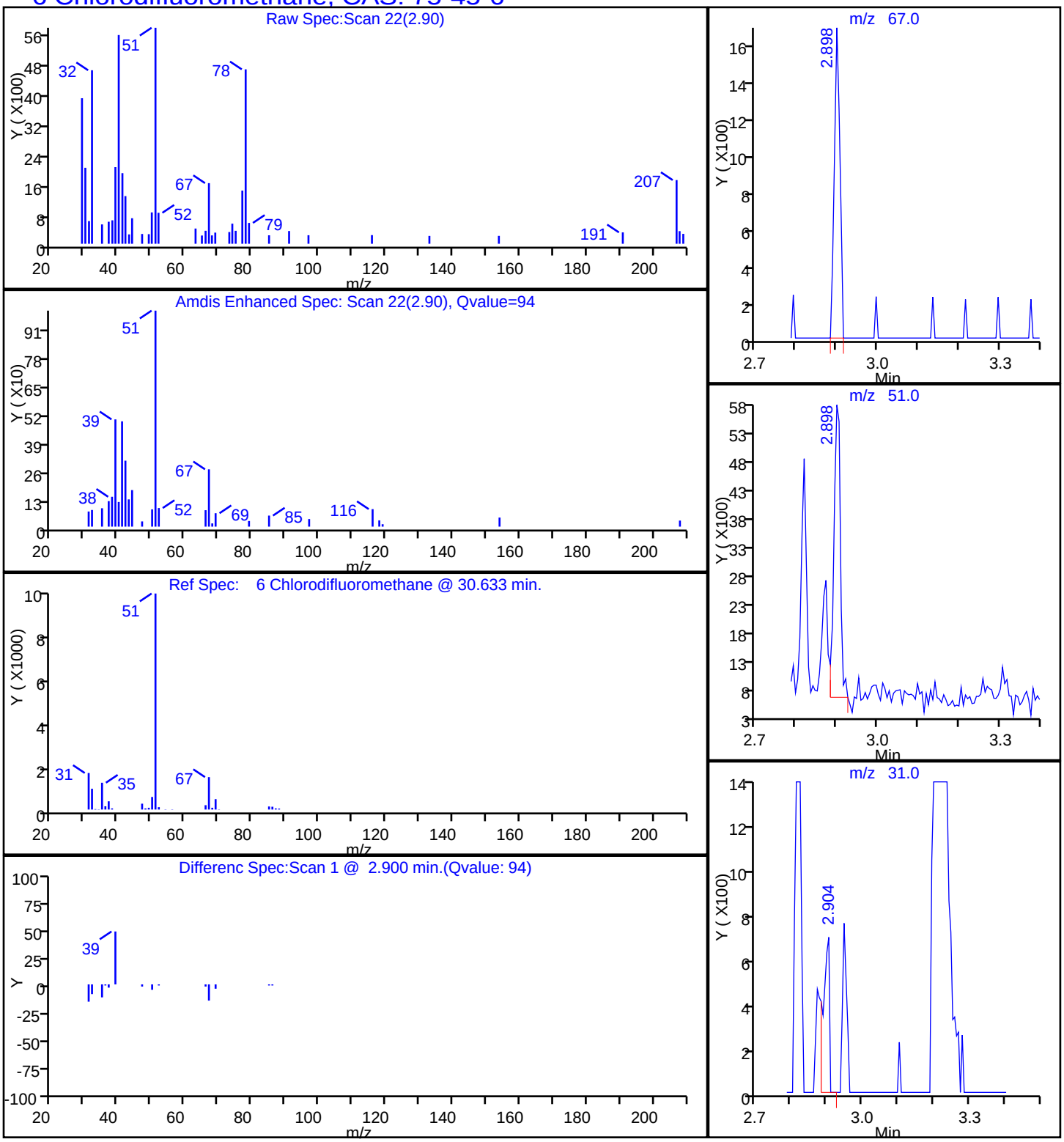
51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

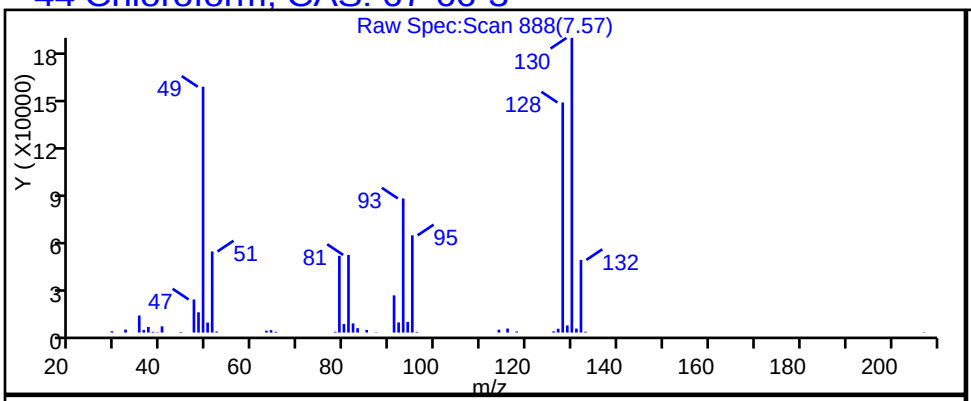
6 Chlorodifluoromethane, CAS: 75-45-6

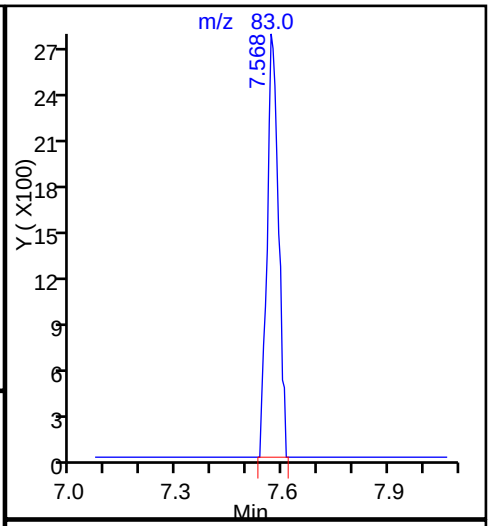


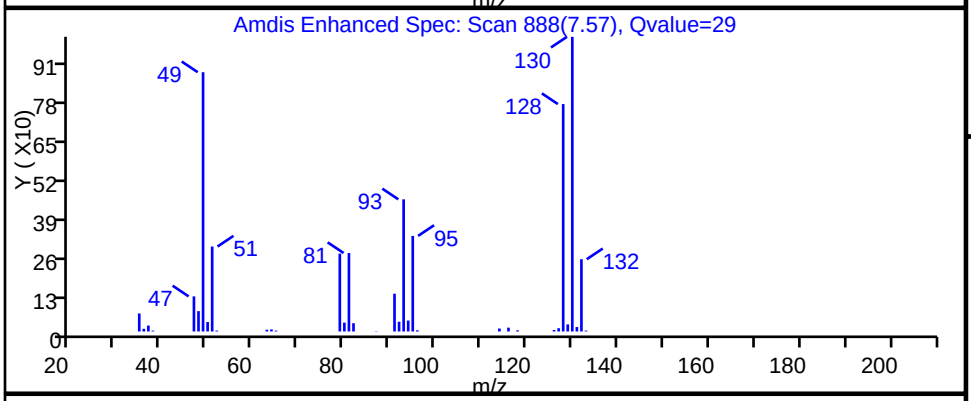
TestAmerica Knoxville

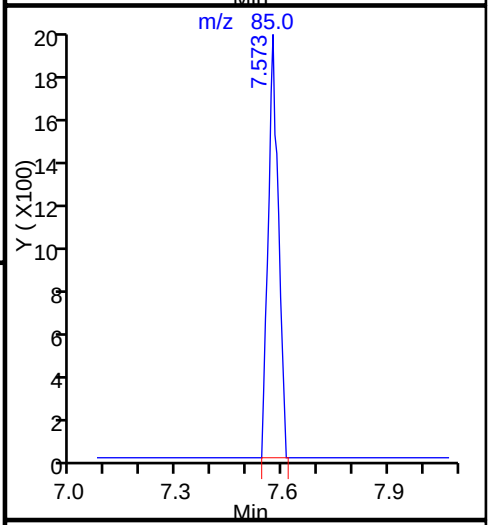
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

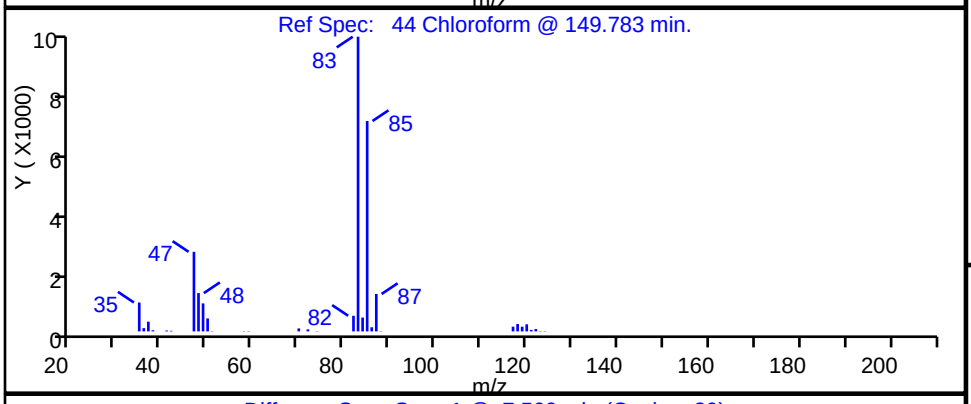
44 Chloroform, CAS: 67-66-3

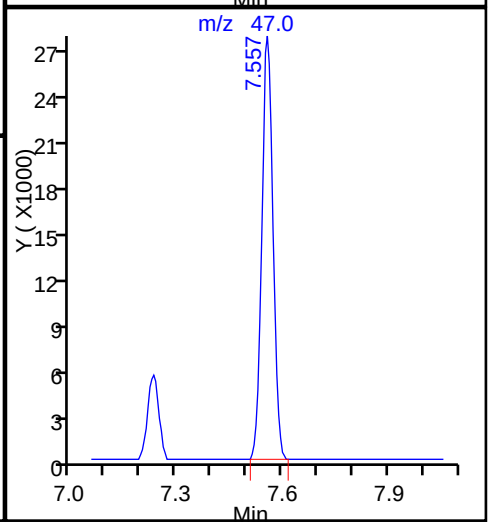


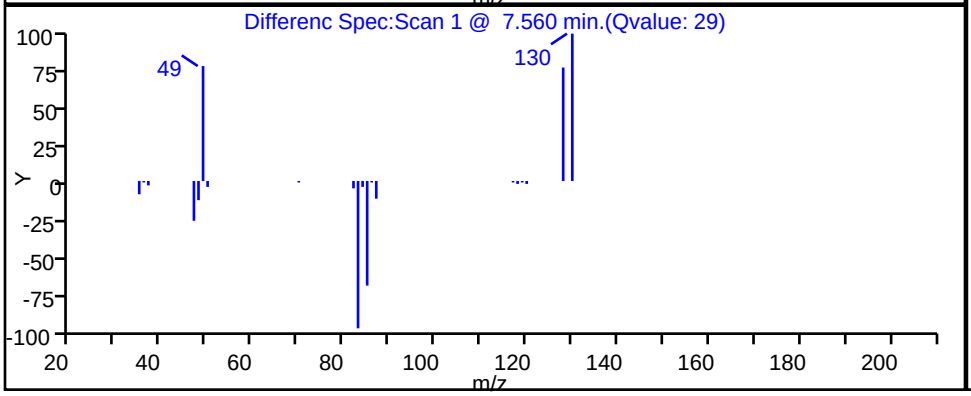








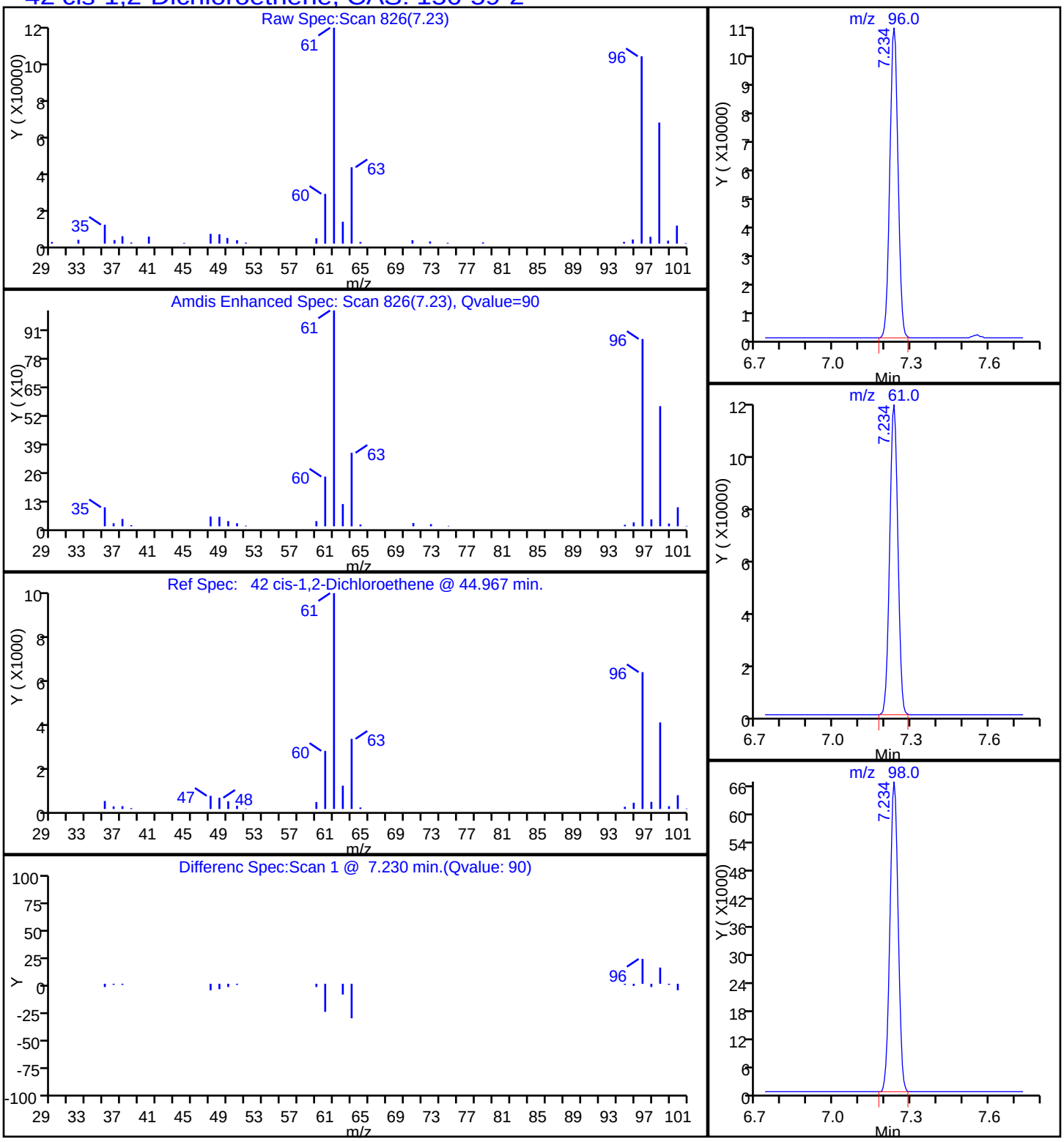




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

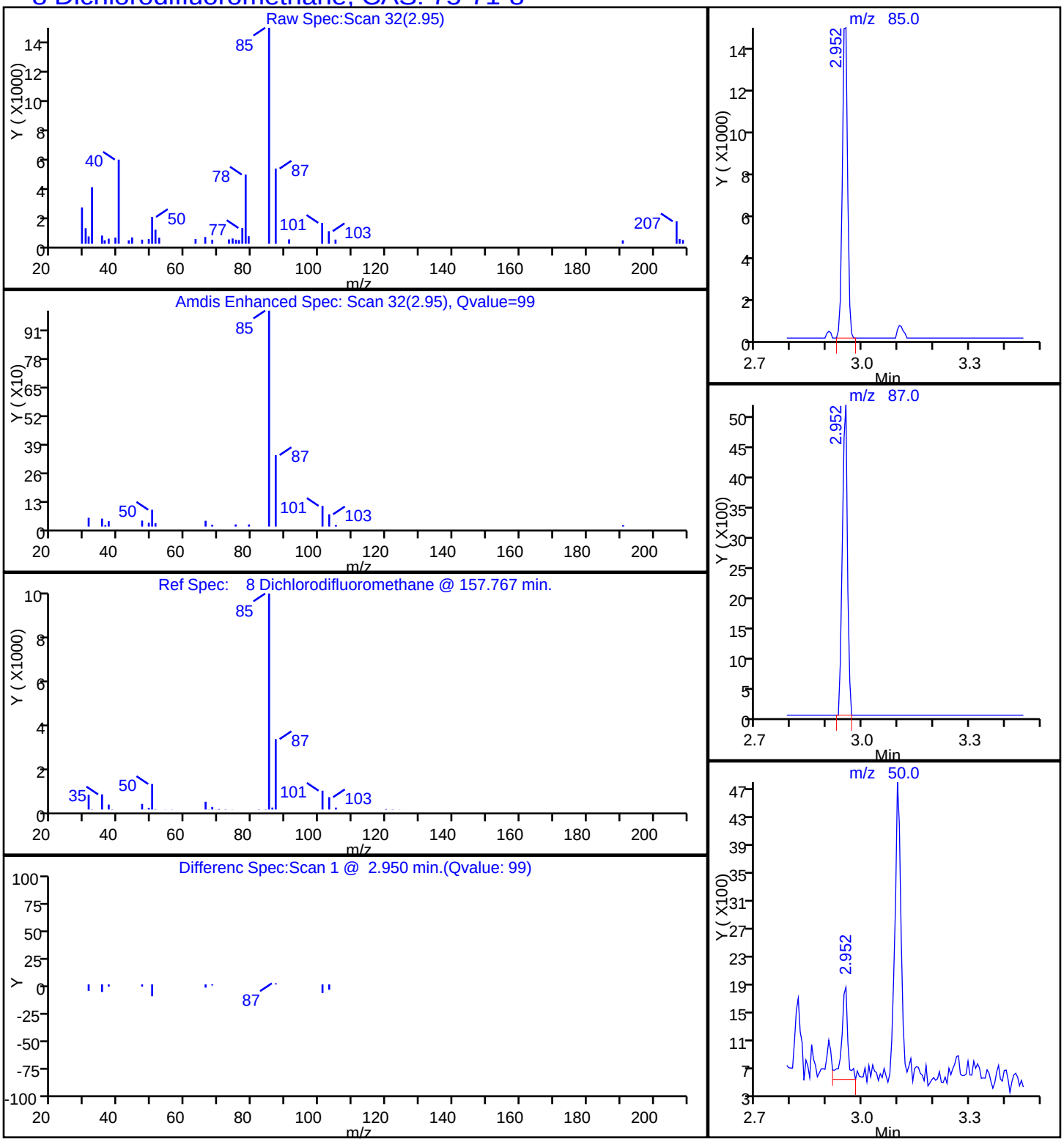
42 cis-1,2-Dichloroethene, CAS: 156-59-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

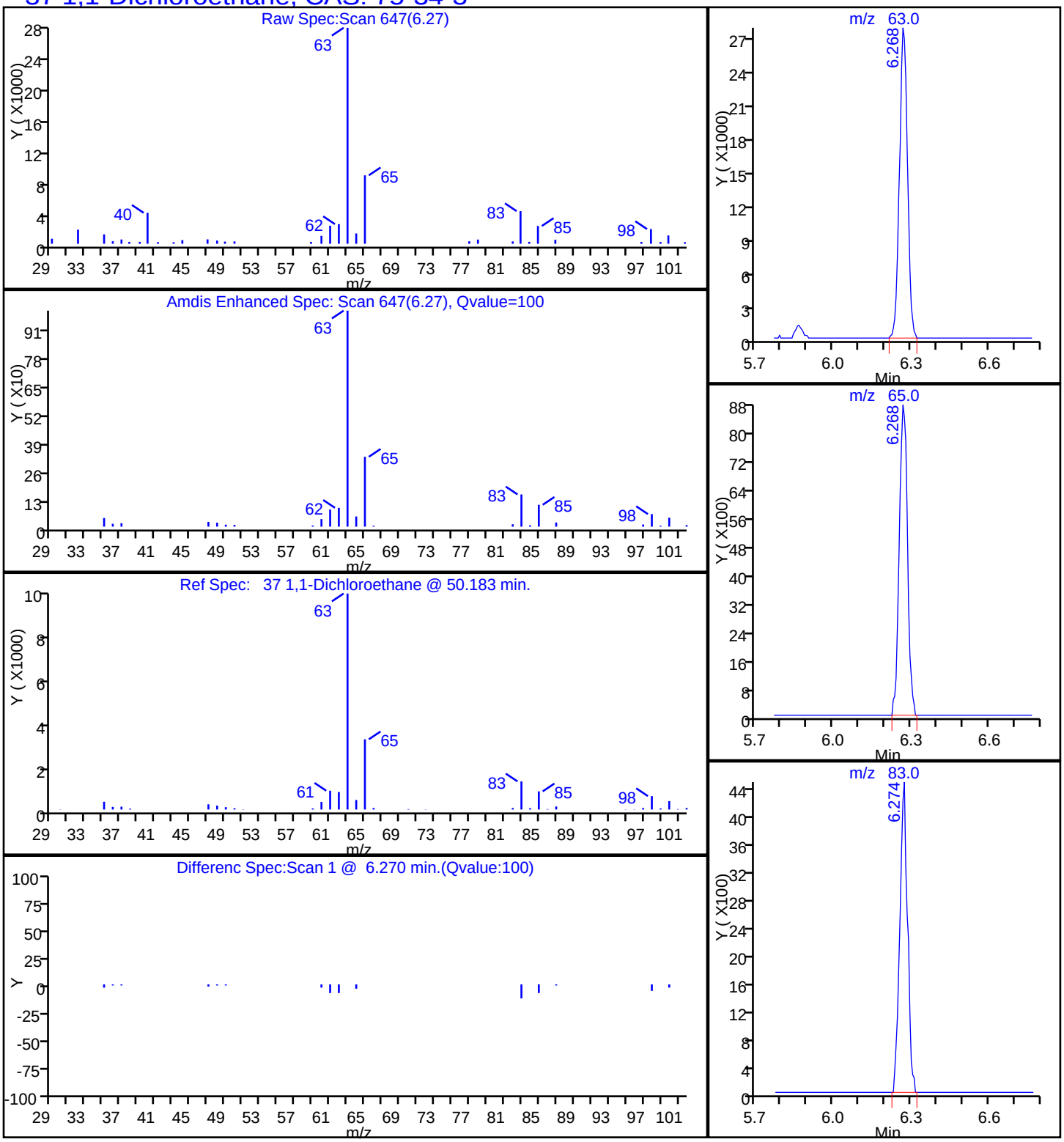
8 Dichlorodifluoromethane, CAS: 75-71-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

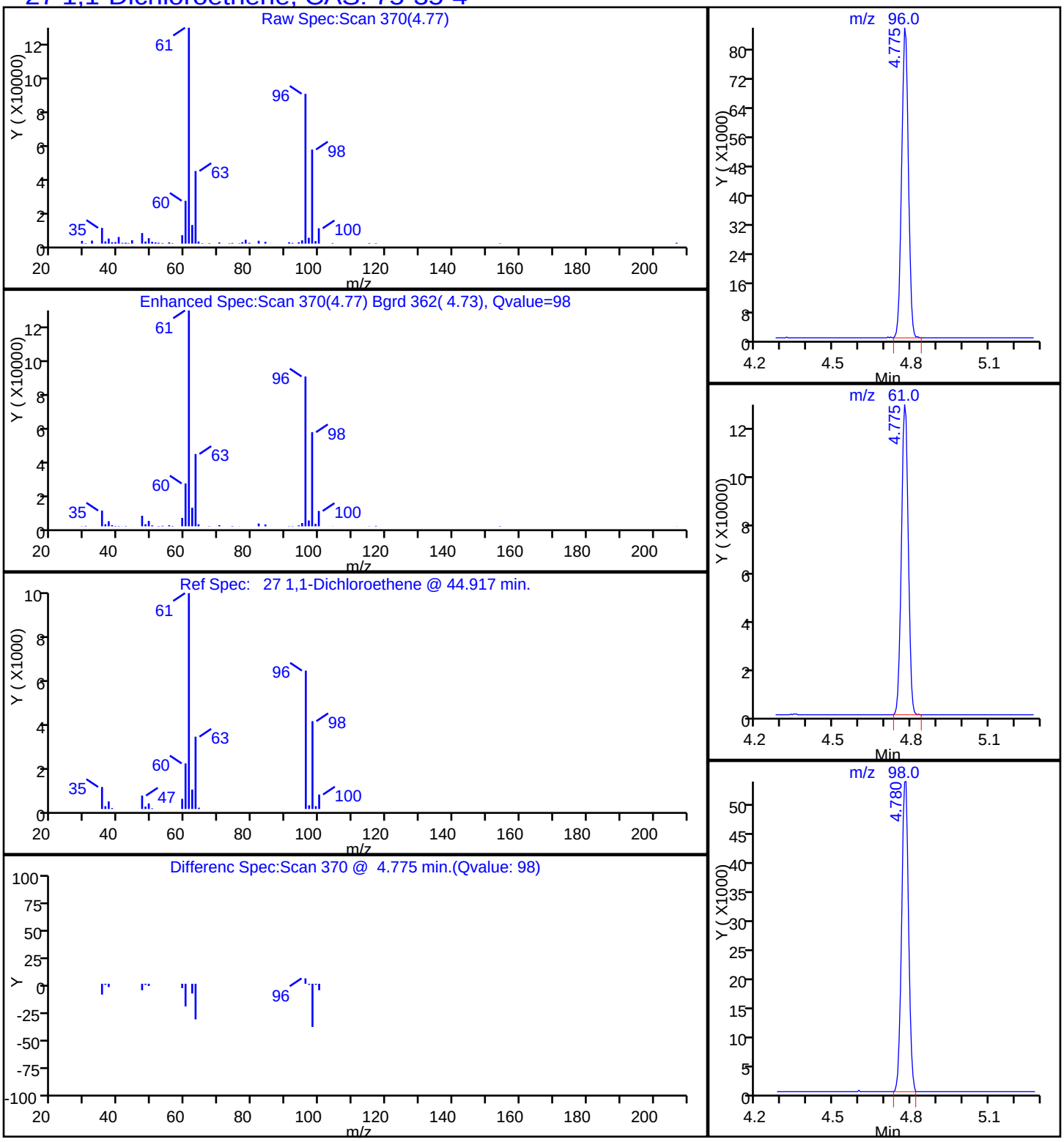
37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

27 1,1-Dichloroethene, CAS: 75-35-4



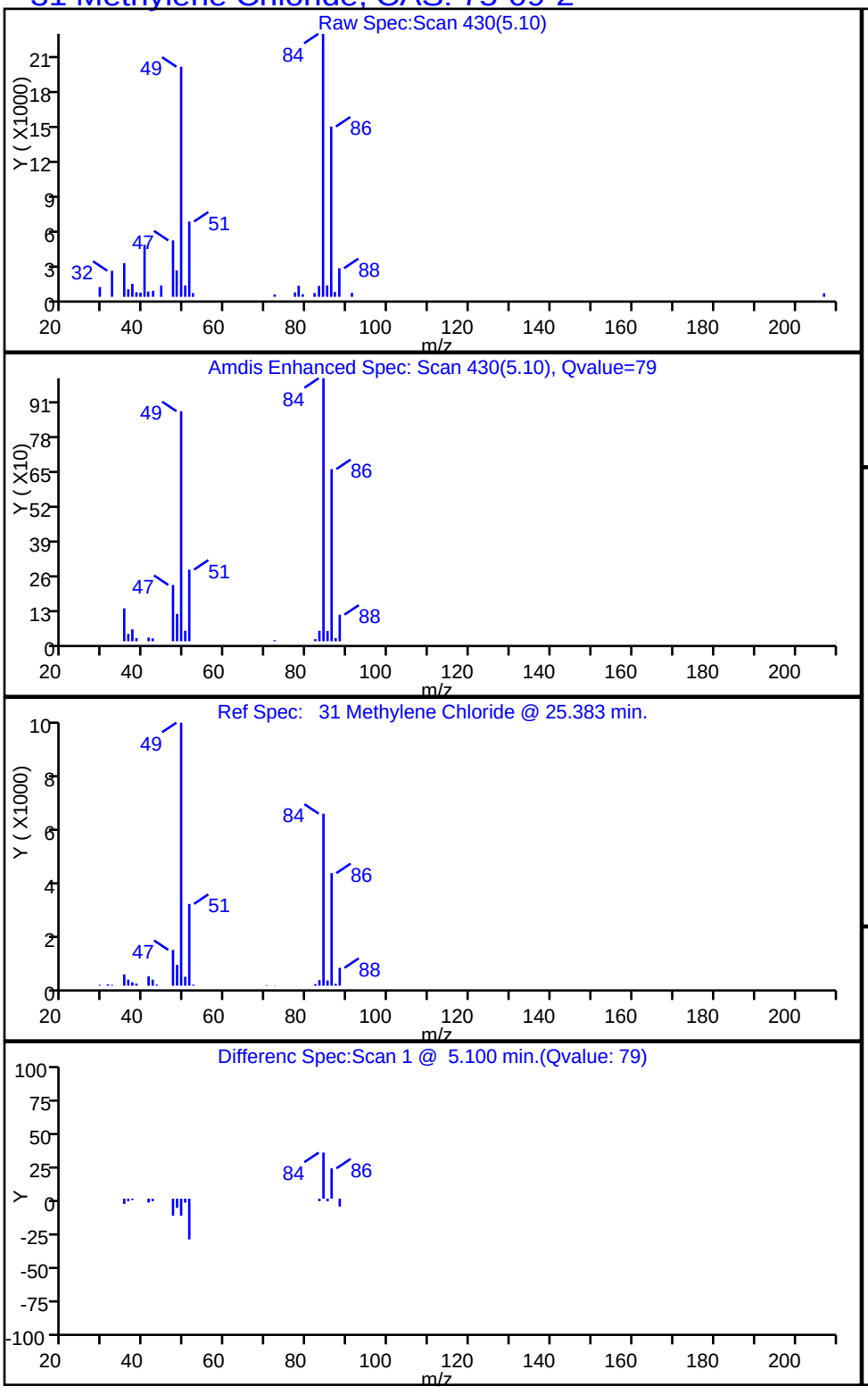
Report Date: 13-Sep-2016 11:46:56 Chrom Revision: 2.2 02-Sep-2016 12:39:46

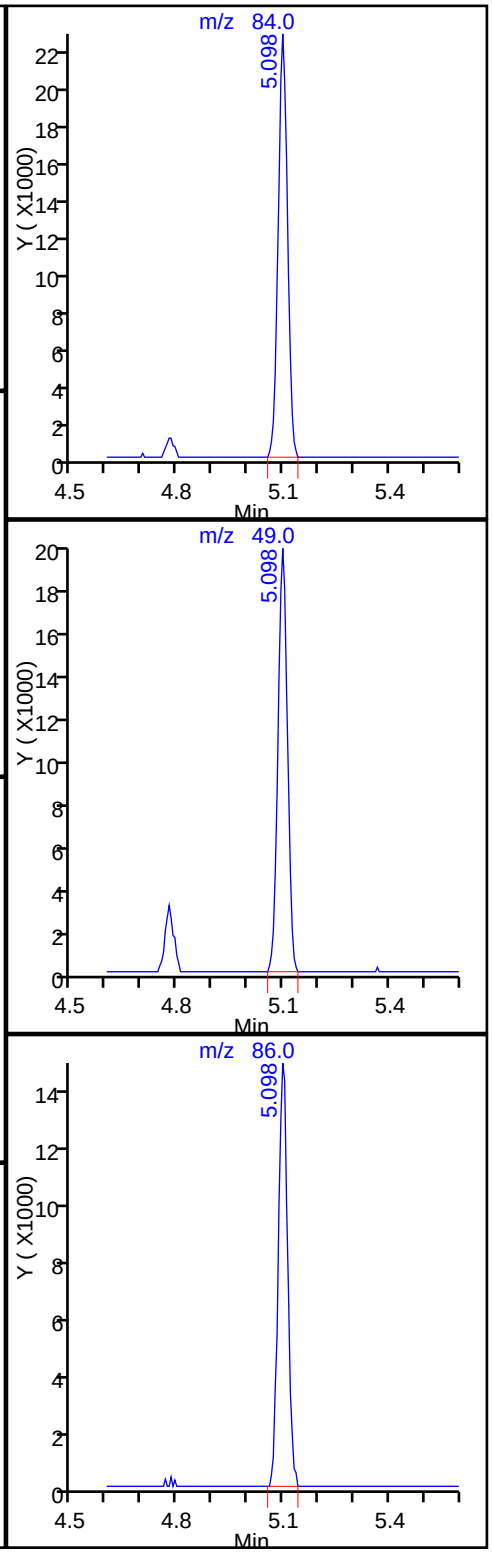
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D

Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

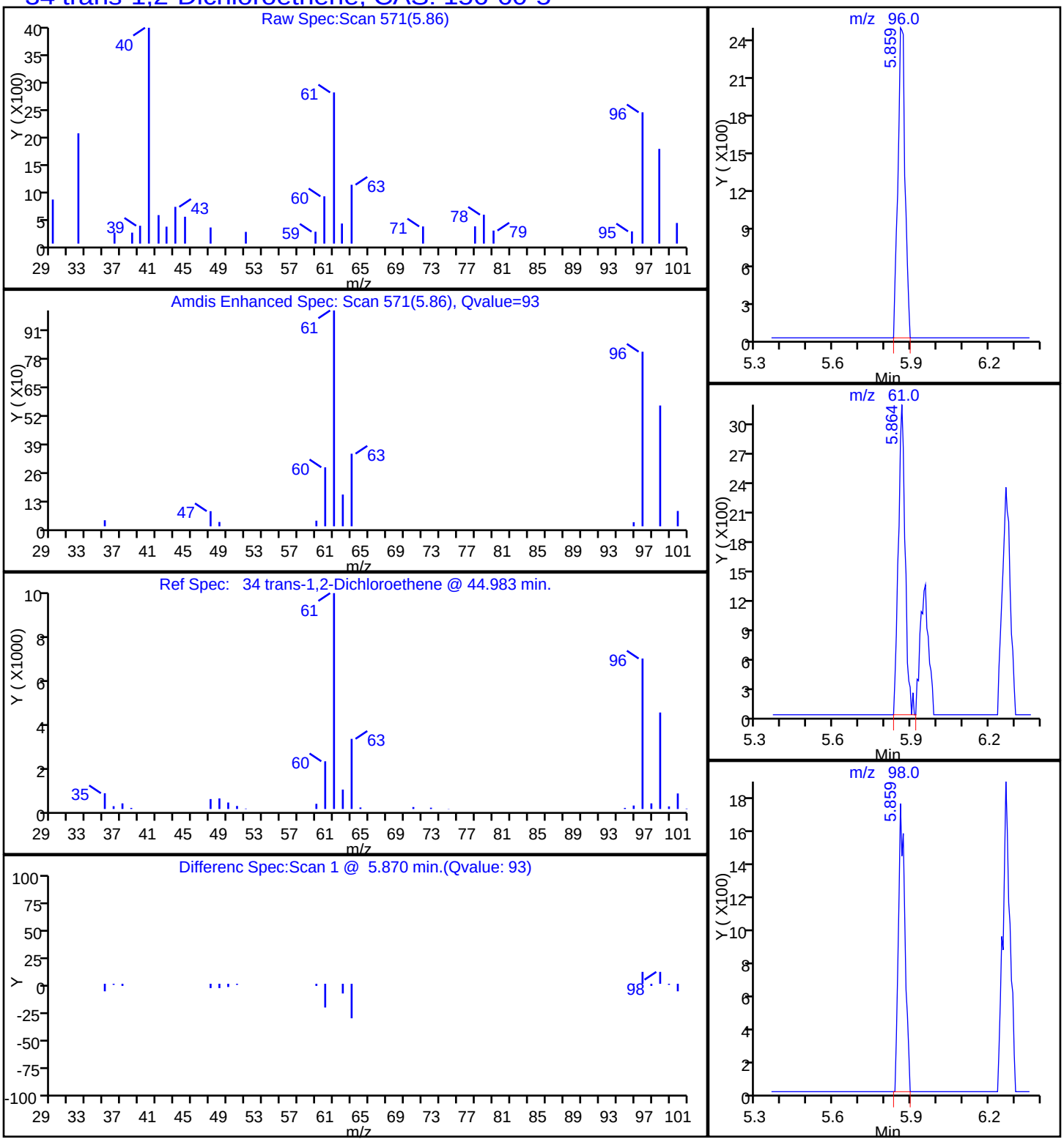
31 Methylene Chloride, CAS: 75-09-2





Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D
Injection Date: 13-Sep-2016 00:14:30 Instrument ID: ME
Lims ID: 140-5782-A-1 Lab Sample ID: 140-5782-1
Client ID: A-INFLUENT
Operator ID: 007126 ALS Bottle#: 12 Worklist Smp#: 19
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

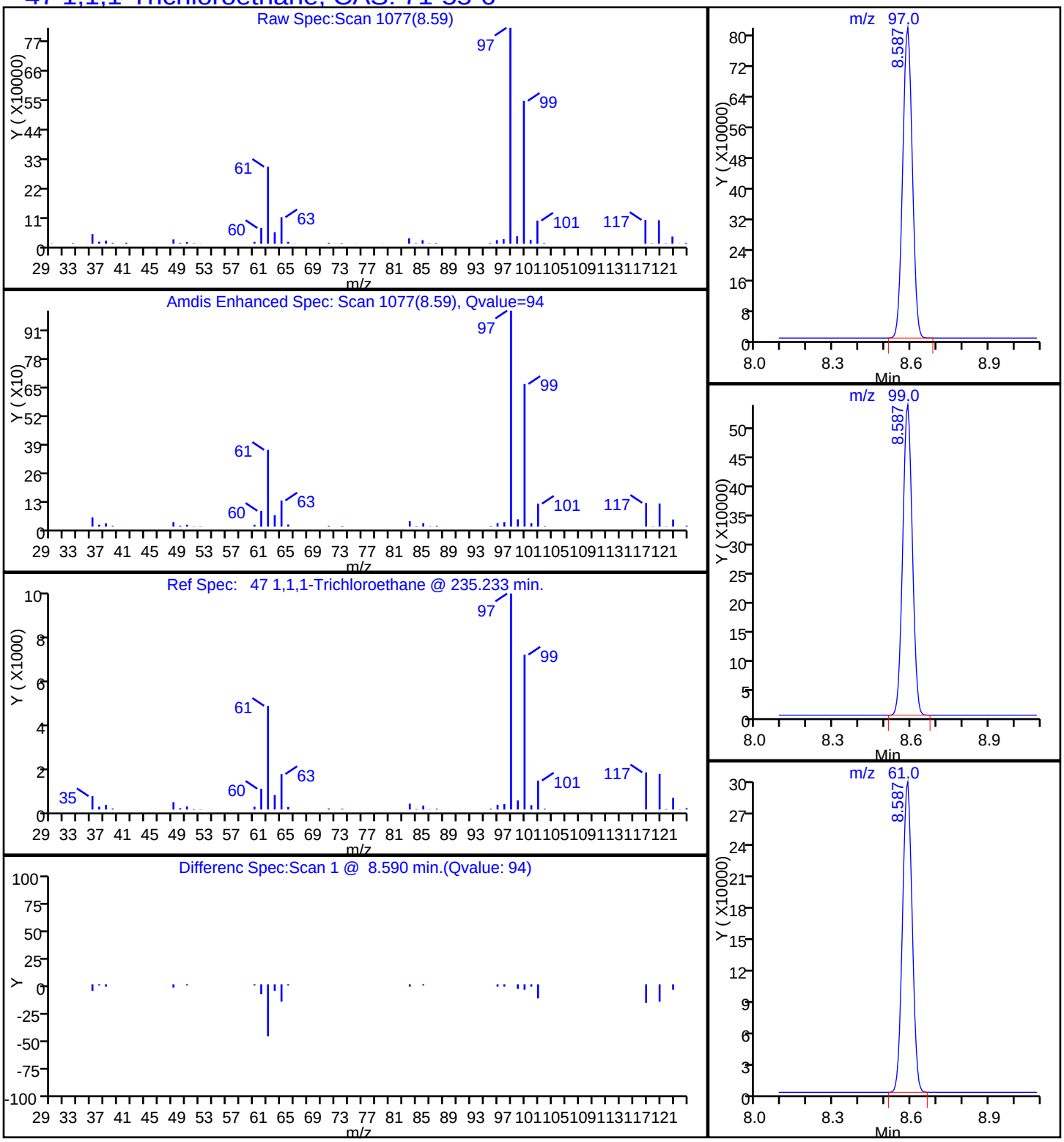
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

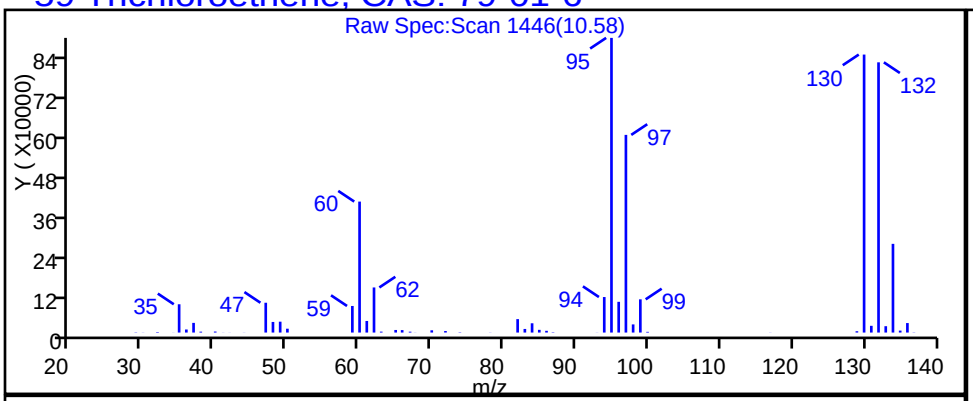
47 1,1,1-Trichloroethane, CAS: 71-55-6

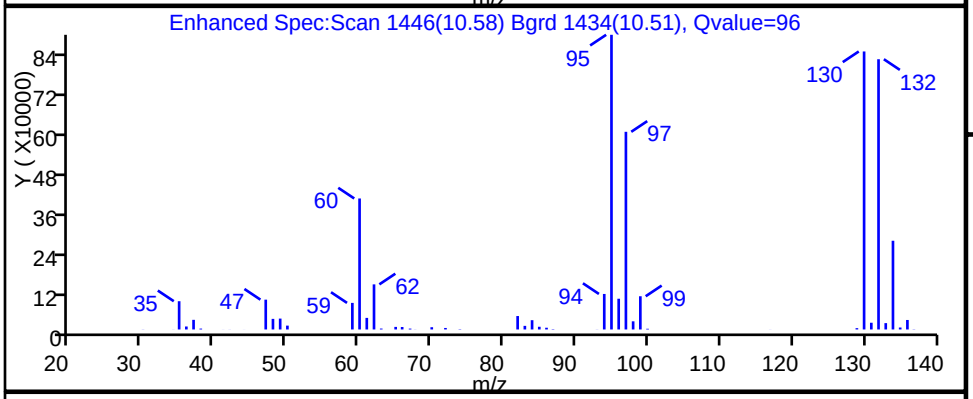


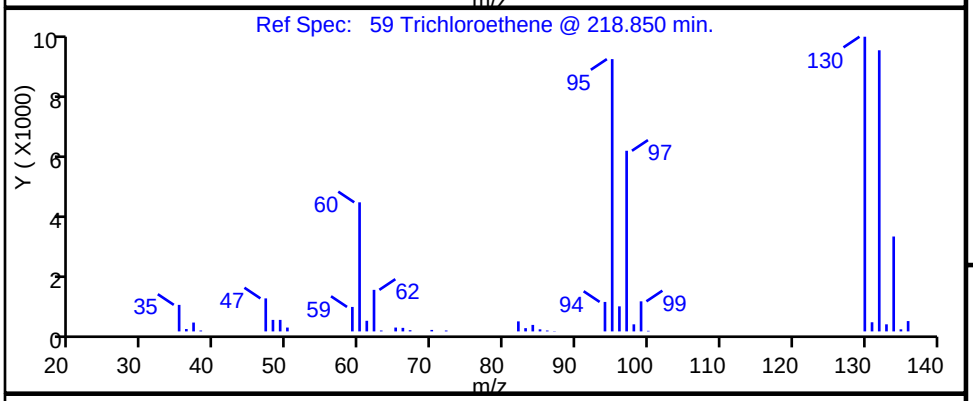
TestAmerica Knoxville

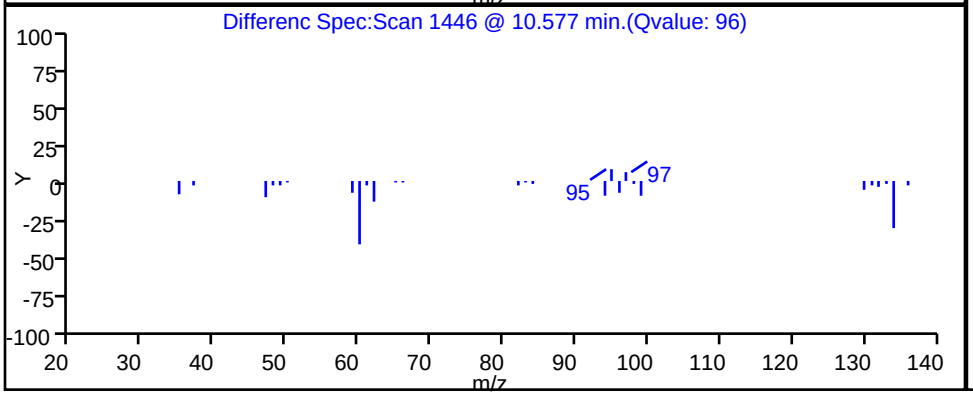
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P112.D				
Injection Date:	13-Sep-2016 00:14:30	Instrument ID:	ME		
Lims ID:	140-5782-A-1	Lab Sample ID:	140-5782-1		
Client ID:	A-INFLUENT				
Operator ID:	007126	ALS Bottle#:	12	Worklist Smp#:	19
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

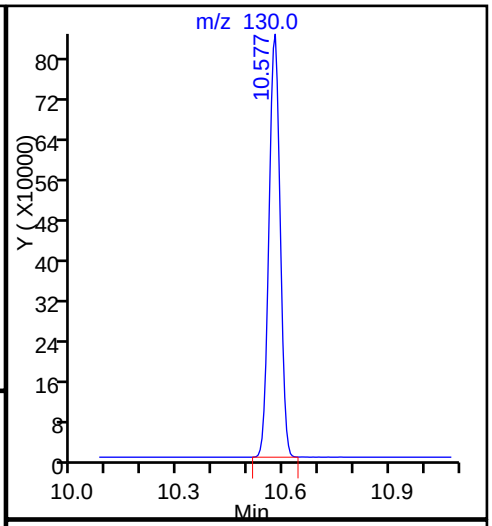
59 Trichloroethene, CAS: 79-01-6

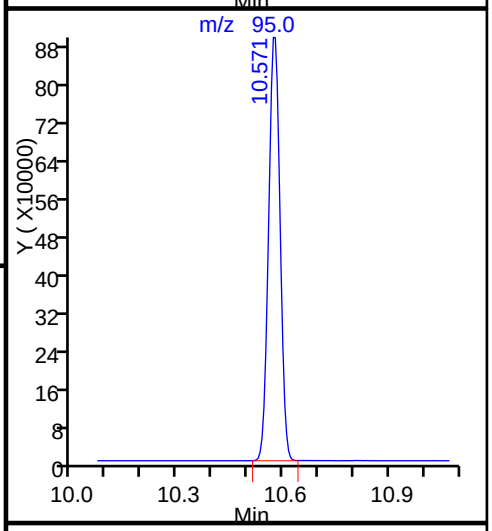


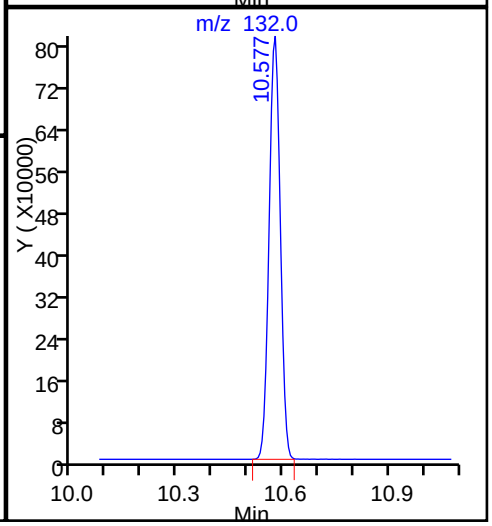












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-MID GAC | Lab Sample ID: 140-5782-2

Matrix: Air | Lab File ID: EI10p102.D

Analysis Method: TO 15 LL | Date Collected: 09/07/2016 09:58

Sample wt/vol: 100(mL) | Date Analyzed: 09/10/2016 19:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6539 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	1.8		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.092	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.45		0.40	0.075
67-66-3	Chloroform	119.38	0.58		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	41		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.57		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	5.4		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	0.27	J	0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	19		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.0		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.25	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.73		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*110*	*E*	*0.40*	*0.060*
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.20		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.24	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	0.16	J	0.20	0.15
1330-20-7	Xylenes, Total	106.17	0.41	J	0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-MID GAC | Lab Sample ID: 140-5782-2

Matrix: Air | Lab File ID: EI10p102.D

Analysis Method: TO 15 LL | Date Collected: 09/07/2016 09:58

Sample wt/vol: 100(mL) | Date Analyzed: 09/10/2016 19:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6539 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	5.8		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.58	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	2.8		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	160		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.8		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	22		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	1.1	J	1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	77		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	3.6		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.7	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	2.9		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	*1,1,1-Trichloroethane*	*133.41*	*610*	*E*	*2.2*	*0.33*
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	1.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.2	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	0.40	J	0.51	0.37
1330-20-7	Xylenes, Total	106.17	1.8	J	3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	105		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D
Lims ID: 140-5782-A-2
Client ID: A-MID GAC
Sample Type: Client
Inject. Date: 10-Sep-2016 19:02:30 ALS Bottle#: 2 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003405-009
Misc. Info.: 140-5782-a-2
Operator ID: 403648 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Sep-2016 11:33:09 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: barlozhetskayaa Date: 12-Sep-2016 10:07:43

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.562	7.568	-0.006	75	326955	4.00	
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	94	1505992	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	89	1529484	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	88	1319613	4.22	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	95	3482	0.0898	
8 Dichlorodifluoromethane	85	2.946	2.952	-0.006	99	39432	0.1147	
12 Vinyl chloride	62	3.238	3.243	-0.005	31	2747	0.0312	
27 1,1-Dichloroethene	96	4.774	4.780	-0.006	99	387934	3.89	
31 Methylene Chloride	84	5.098	5.103	-0.005	80	21148	0.2062	
34 trans-1,2-Dichloroethene	96	5.864	5.869	-0.005	97	15749	0.1453	
37 1,1-Dichloroethane	63	6.273	6.279	-0.006	100	196661	1.08	
42 cis-1,2-Dichloroethene	96	7.233	7.239	-0.006	91	886786	8.10	
44 Chloroform	83	7.573	7.584	-0.011	28	31574	0.1158	
47 1,1,1-Trichloroethane	97	8.587	8.592	-0.005	95	6800299	22.3	E
48 1,2-Dichloroethane	62	8.711	8.711	0.000	73	9209	0.0539	
51 Benzene	78	9.196	9.196	0.000	94	112866	0.3657	
52 Carbon tetrachloride	117	9.212	9.223	-0.011	48	5494	0.0184	
59 Trichloroethene	130	10.577	10.582	-0.005	90	5423	0.0402	
68 Toluene	91	12.771	12.777	-0.006	95	30530	0.0832	
76 Tetrachloroethene	129	13.952	13.958	-0.006	30	7072	0.0496	
81 m-Xylene & p-Xylene	91	15.322	15.327	-0.005	99	20569	0.0536	
85 o-Xylene	91	15.856	15.856	0.000	70	10896	0.0270	
96 1,2,4-Trimethylbenzene	105	17.721	17.727	-0.006	96	20324	0.0470	
S 126 Xylenes, Total	100				0		0.0806	

QC Flag Legend

Processing Flags

E - Exceeded Maximum Amount

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

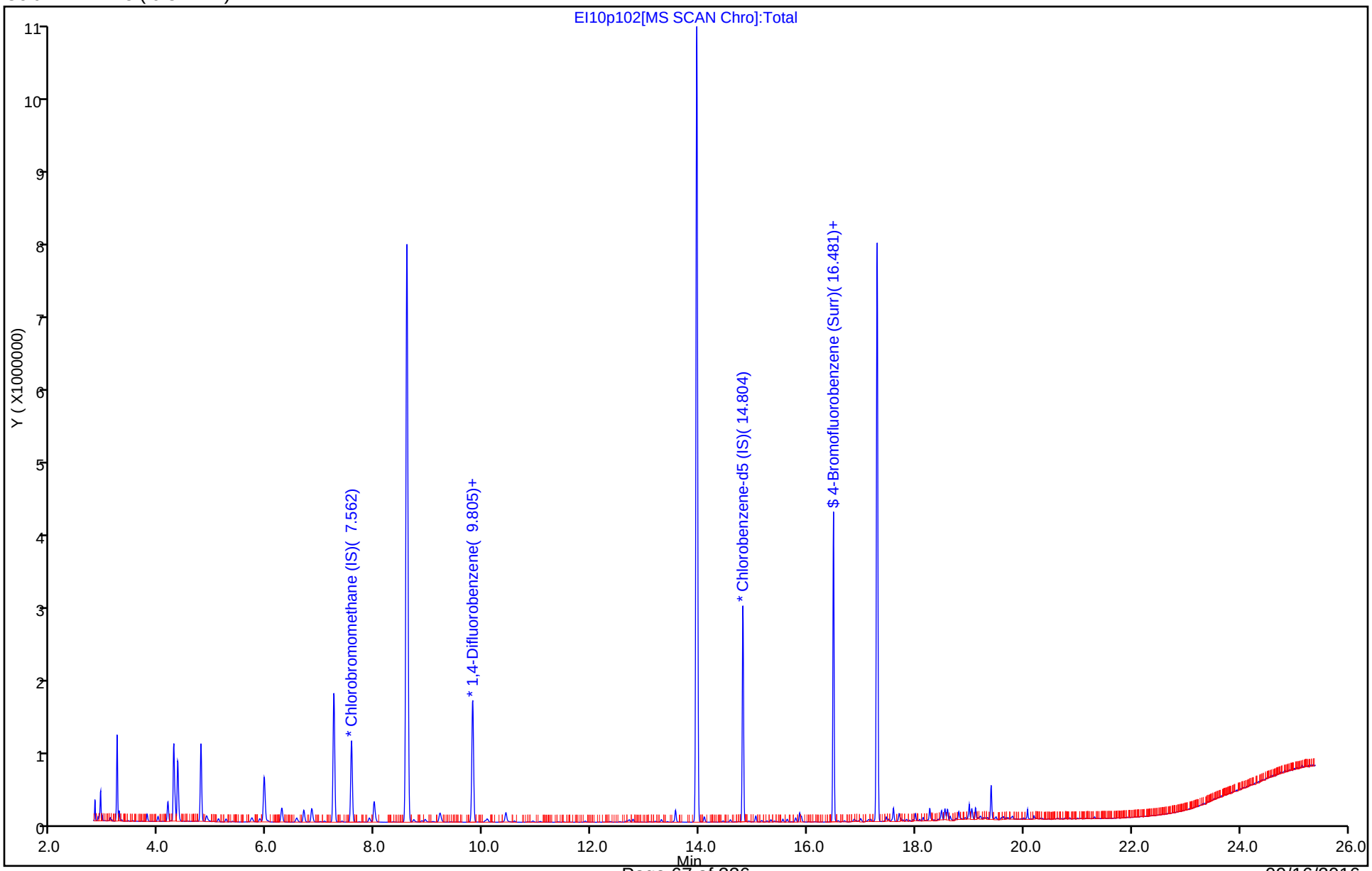
Report Date: 12-Sep-2016 11:33:41 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D

Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2	Worklist Smp#:	9
Client ID:	A-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Lims ID:	140-5782-A-2				
Client ID:	A-MID GAC				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 19:02:30	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-009				
Misc. Info.:	140-5782-a-2				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

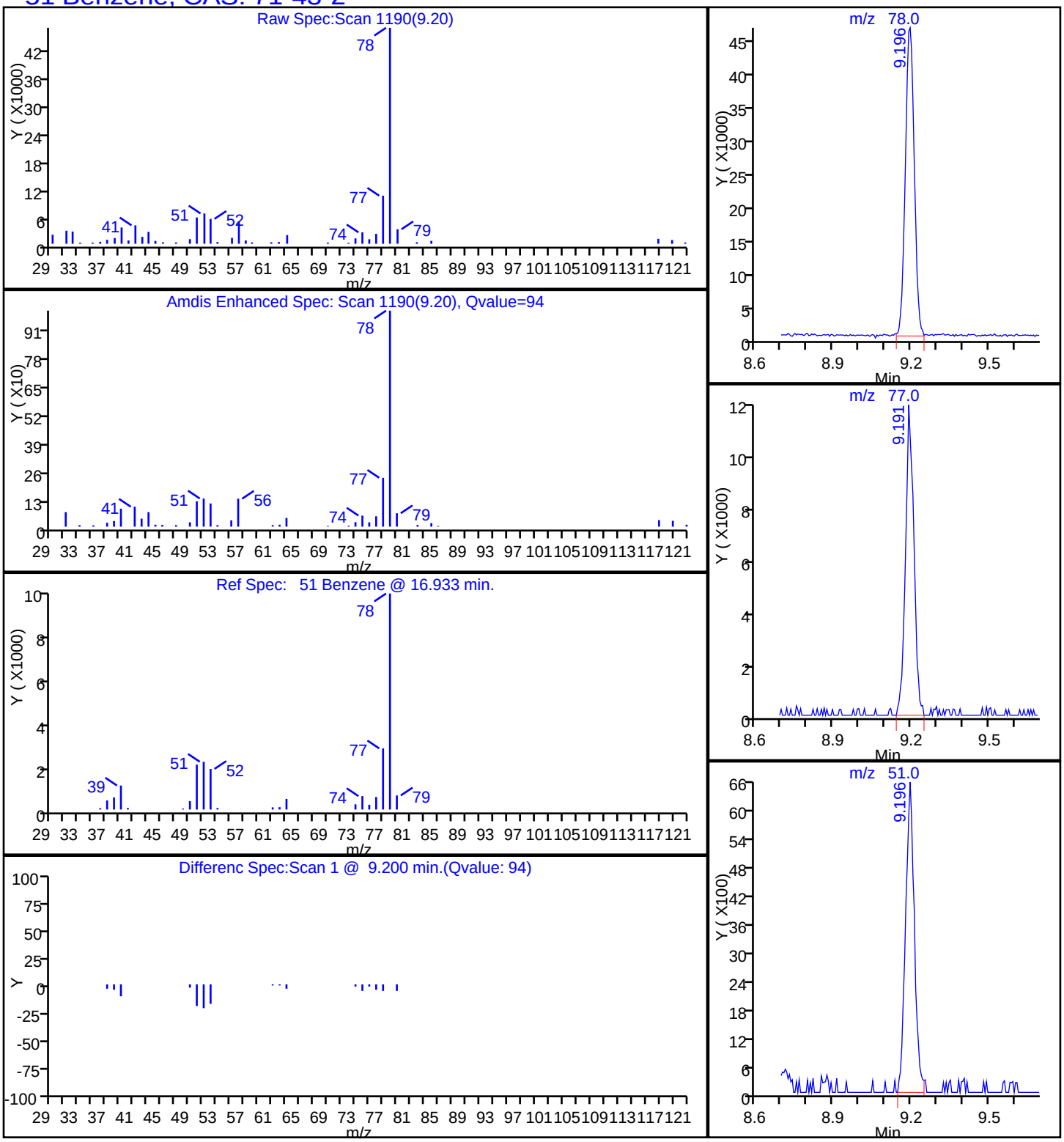
First Level Reviewer: barlozhetskayaa Date: 12-Sep-2016 10:07:43

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.22	105.41

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D		
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

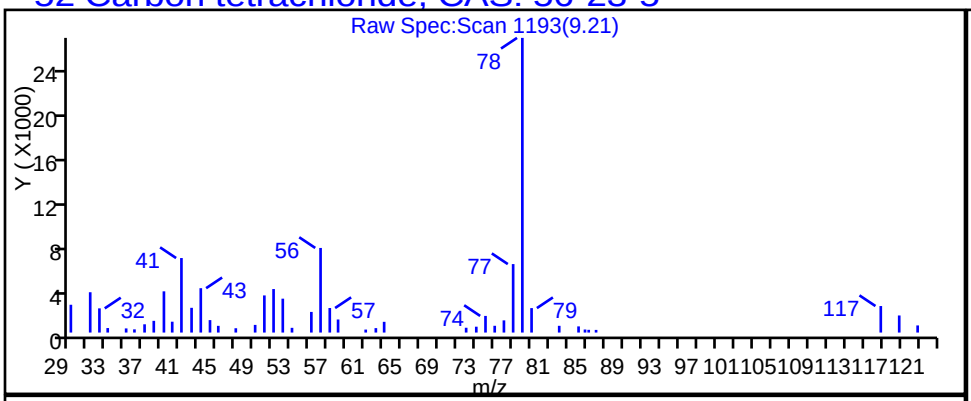
51 Benzene, CAS: 71-43-2

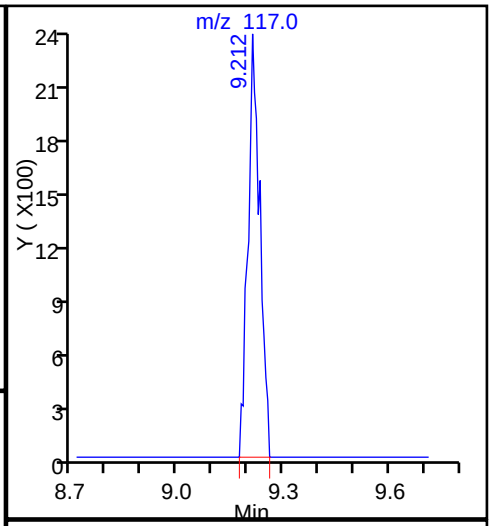


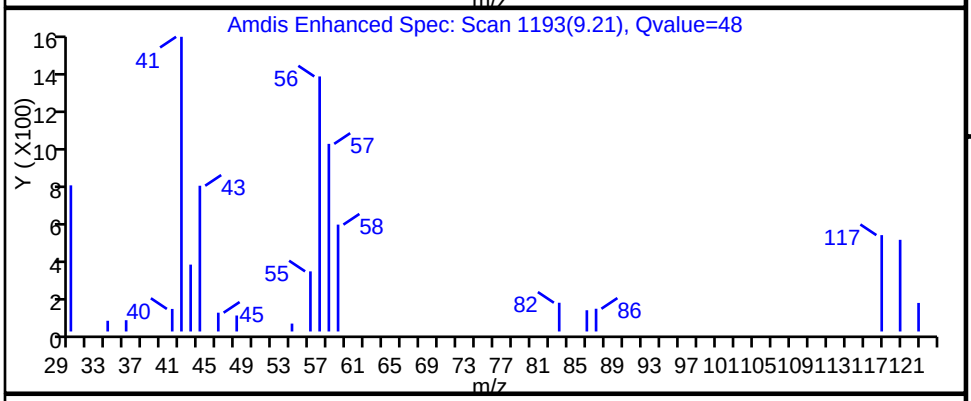
TestAmerica Knoxville

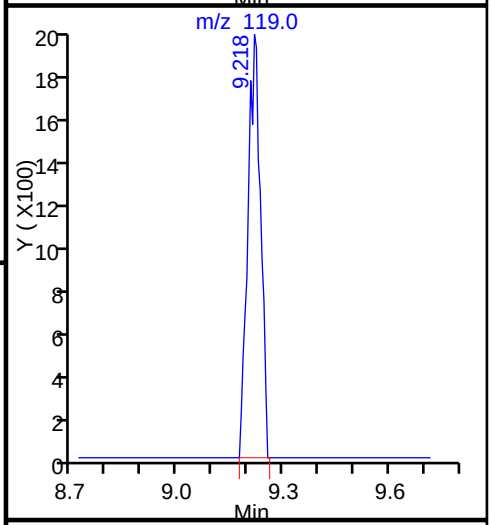
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D		
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

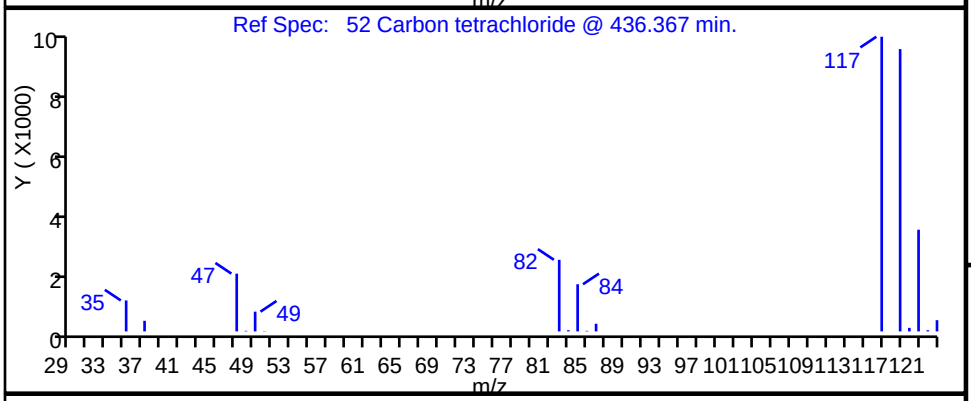
52 Carbon tetrachloride, CAS: 56-23-5

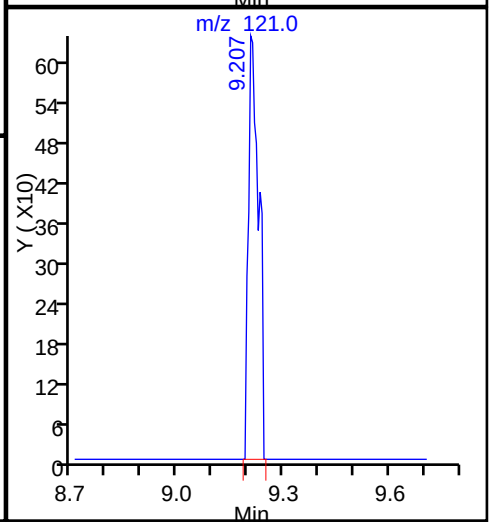


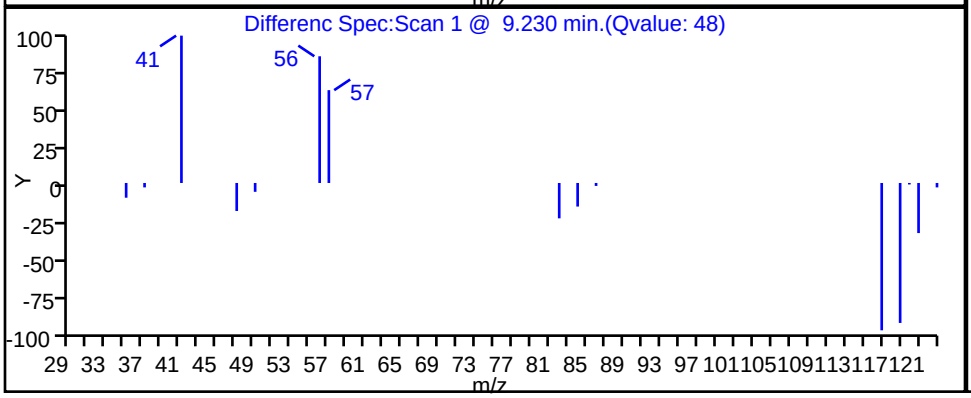








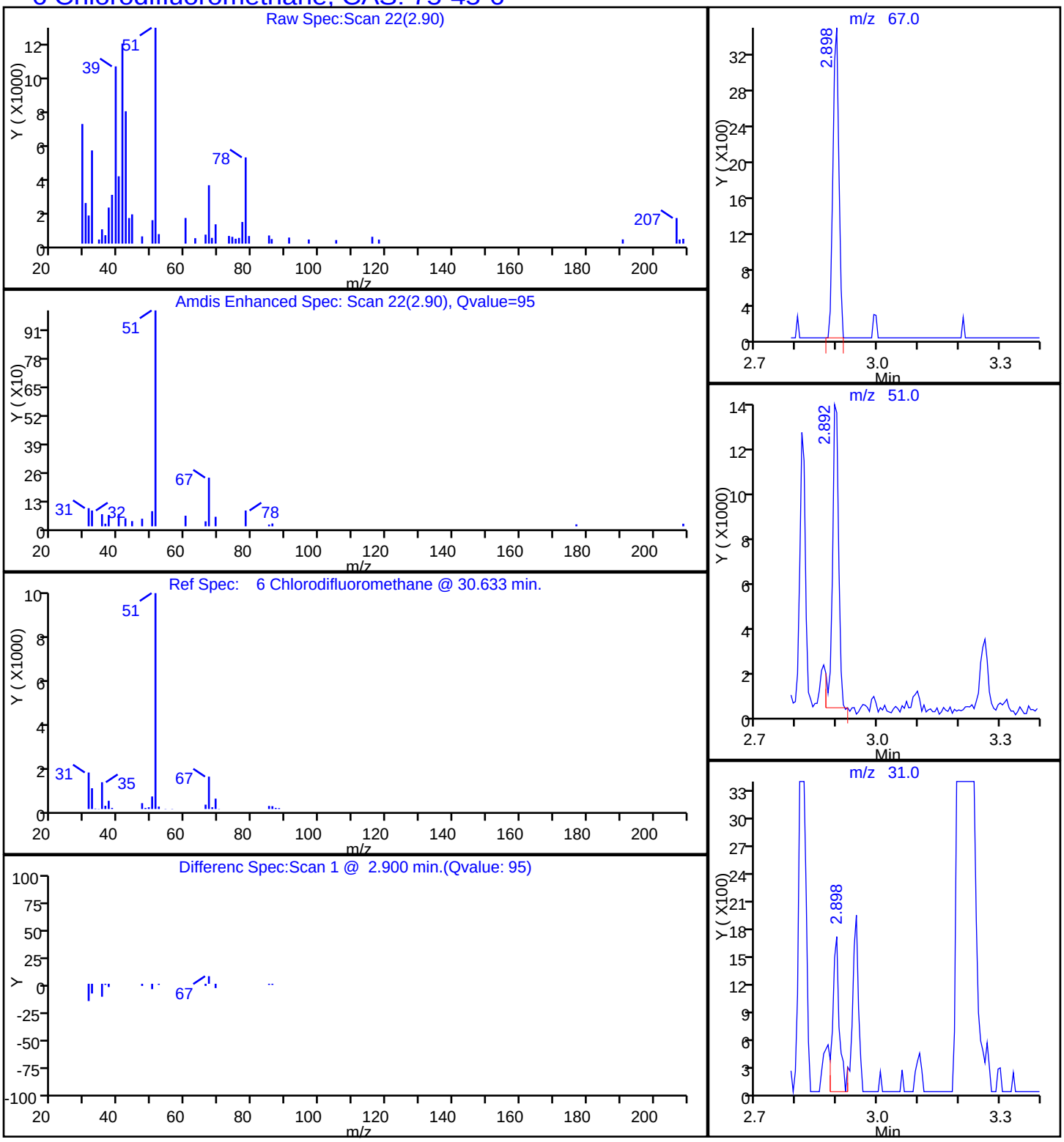




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



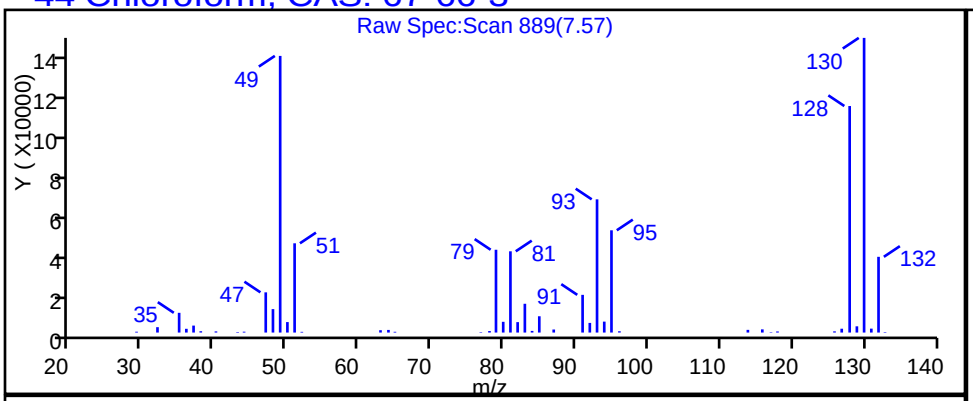
Report Date: 12-Sep-2016 11:33:42 Chrom Revision: 2.2 02-Sep-2016 12:39:46

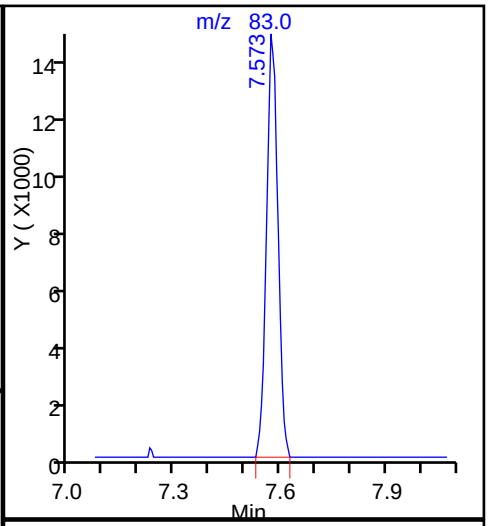
TestAmerica Knoxville

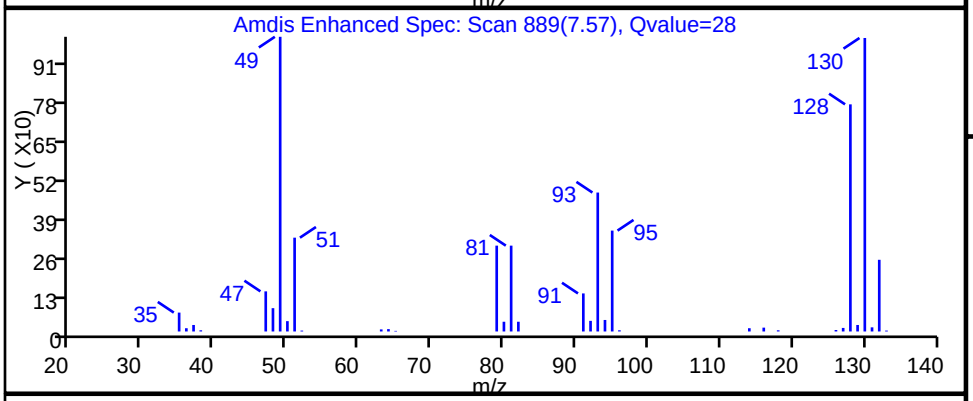
Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D

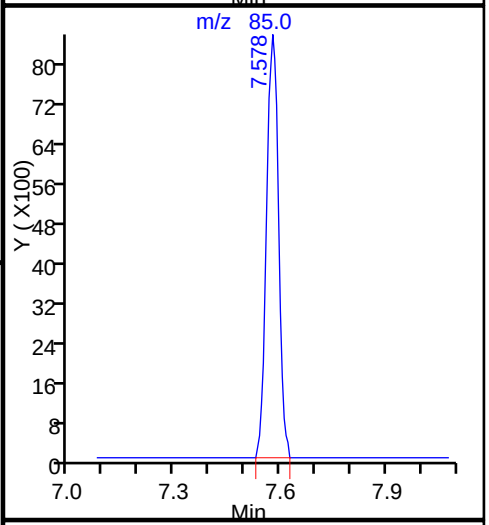
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

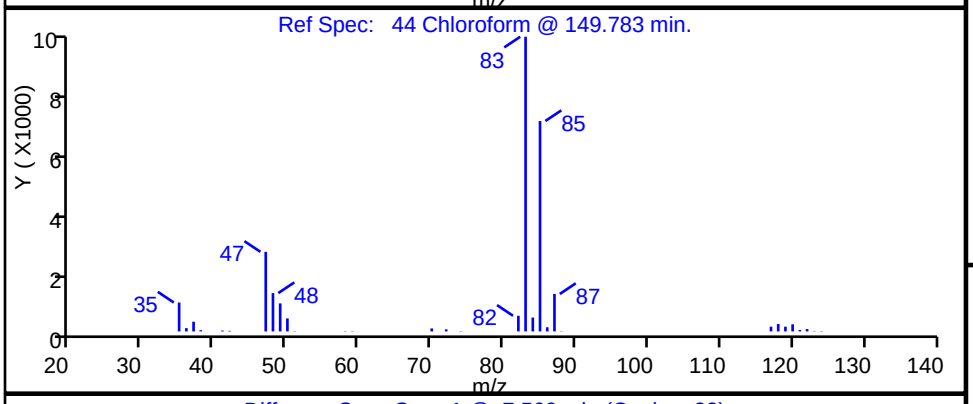
44 Chloroform, CAS: 67-66-3

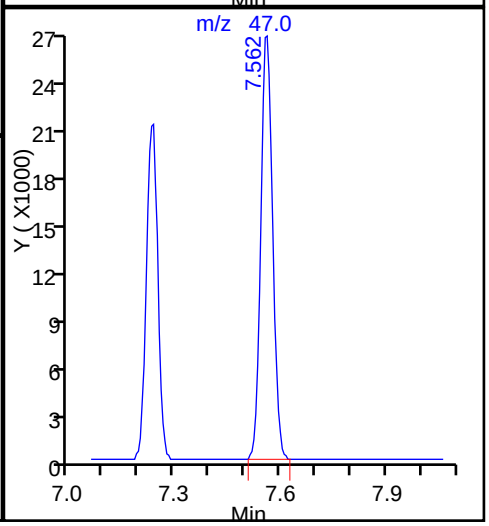


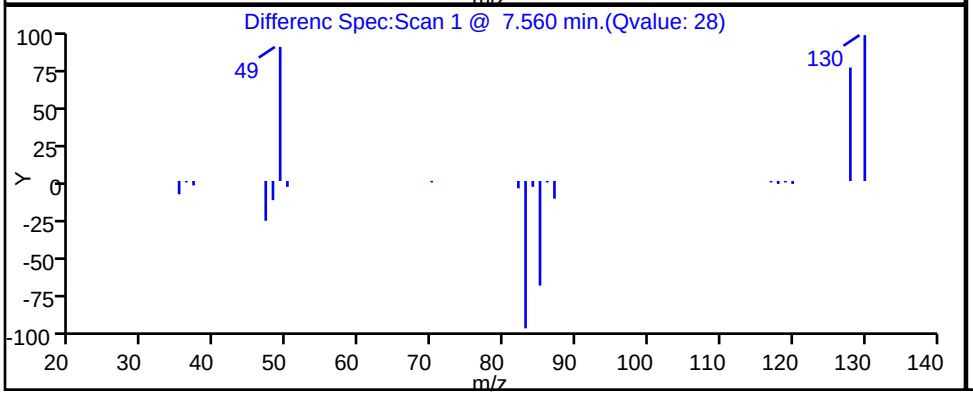








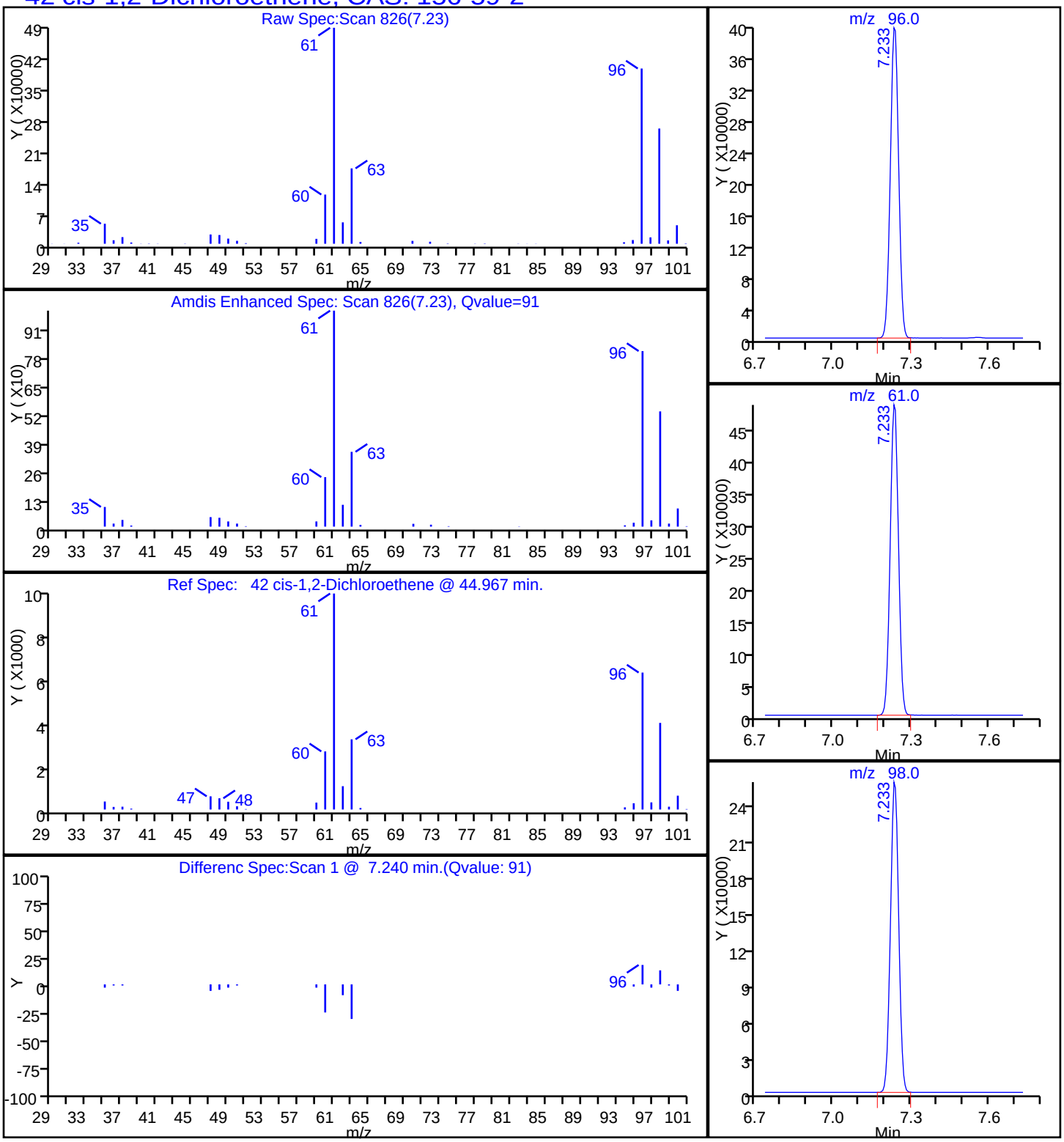




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

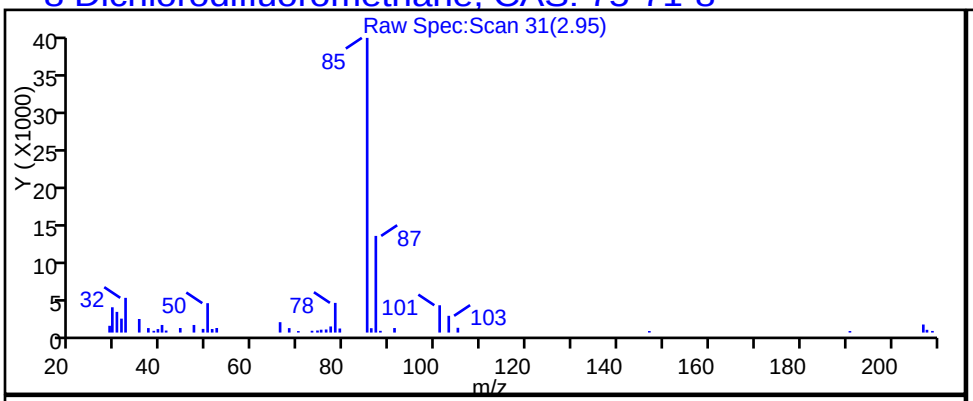
42 cis-1,2-Dichloroethene, CAS: 156-59-2

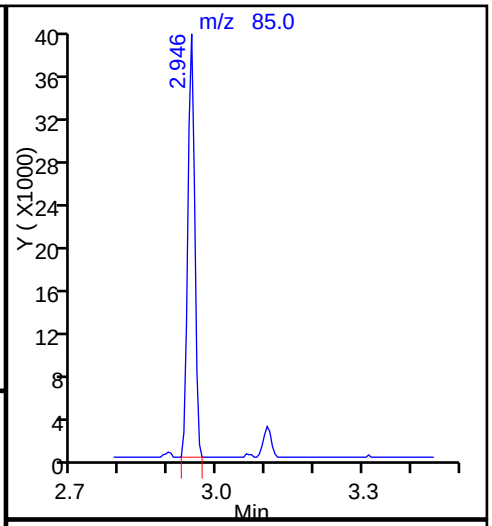


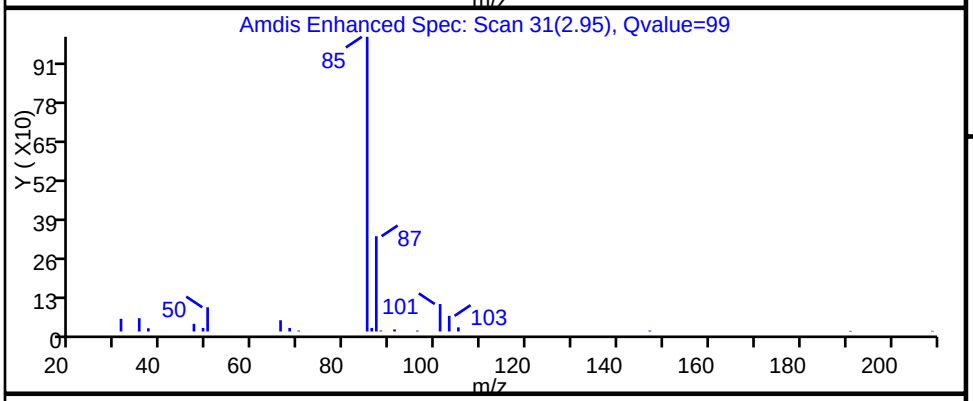
TestAmerica Knoxville

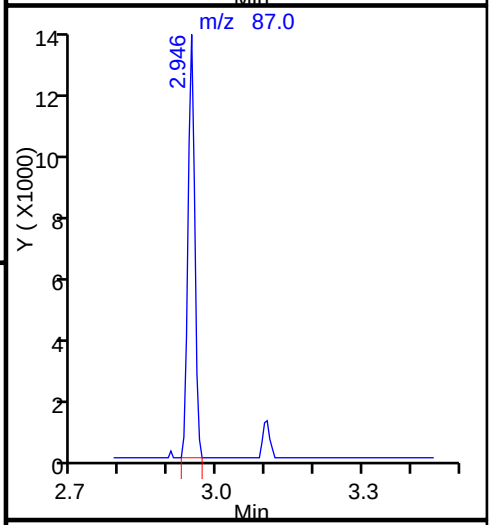
Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D
Injection Date: 10-Sep-2016 19:02:30 Instrument ID: ME
Lims ID: 140-5782-A-2 Lab Sample ID: 140-5782-2
Client ID: A-MID GAC
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

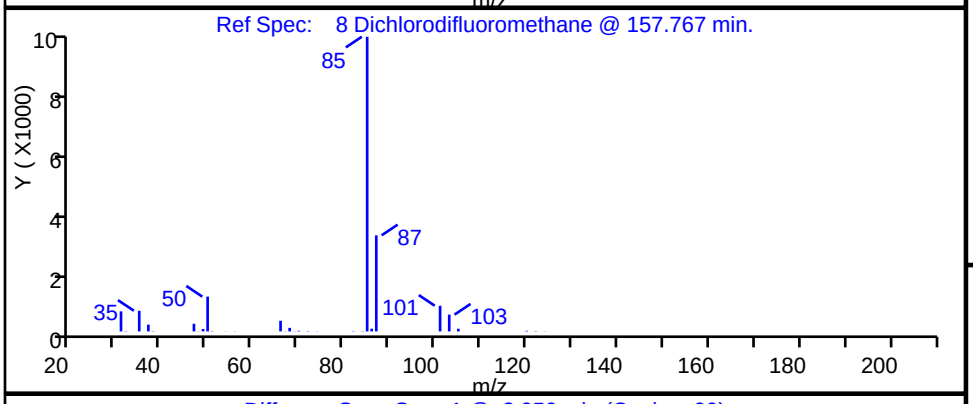
8 Dichlorodifluoromethane, CAS: 75-71-8

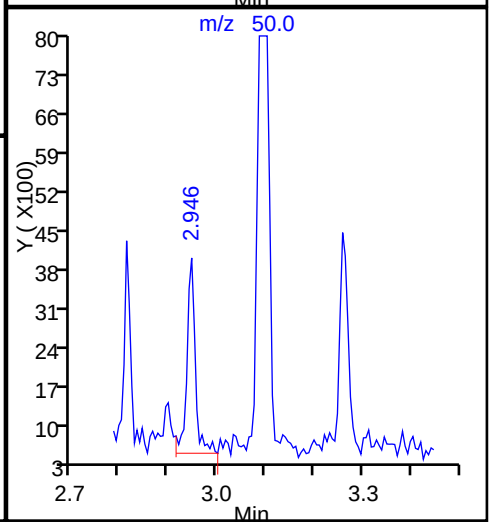


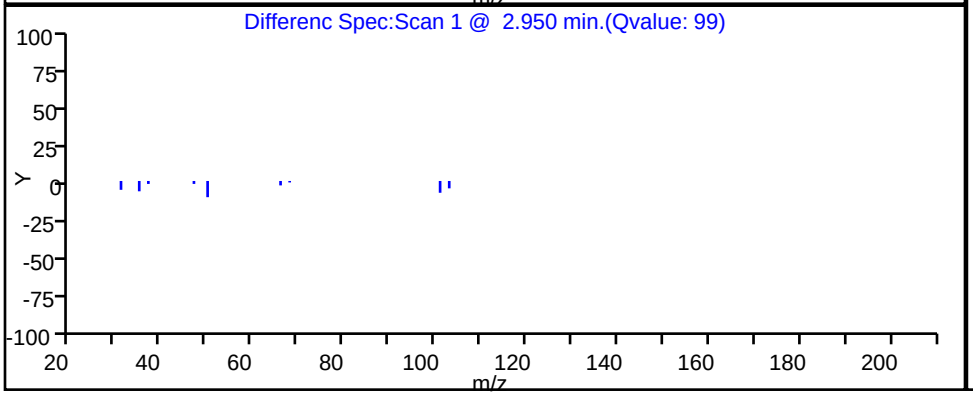








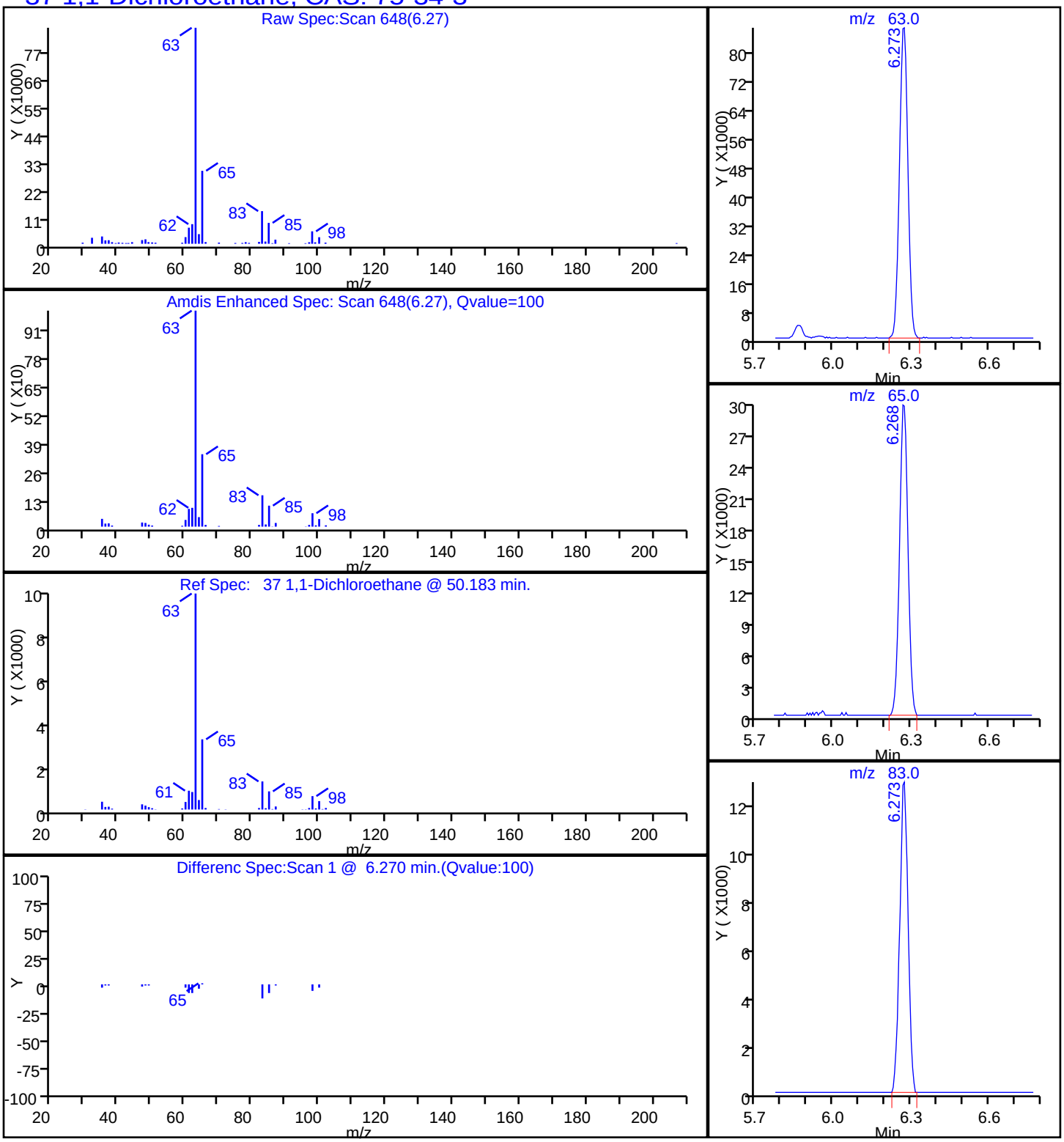




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D		
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

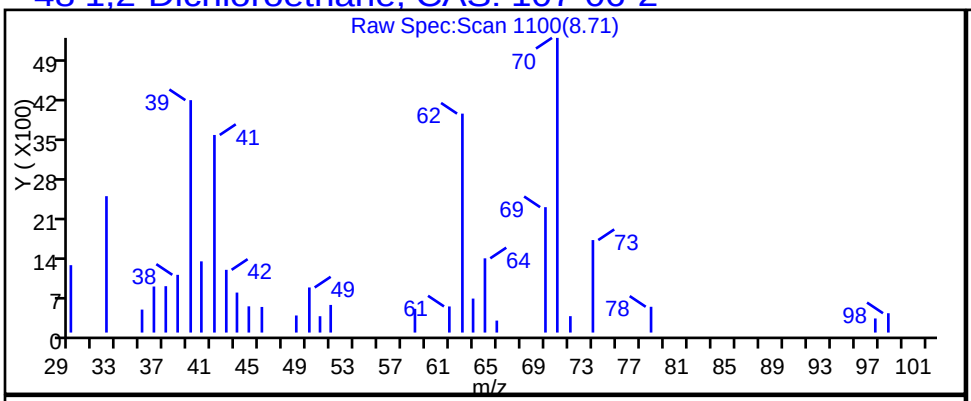
37 1,1-Dichloroethane, CAS: 75-34-3

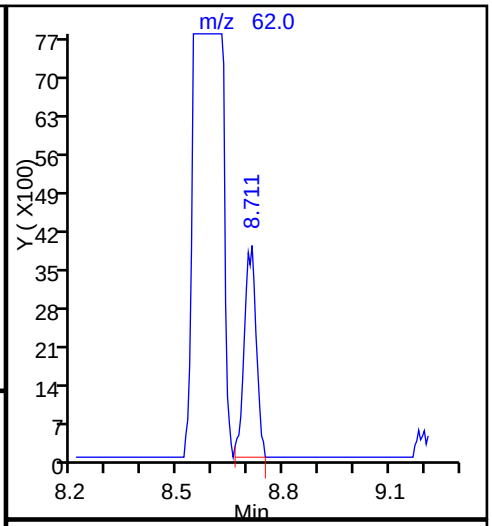


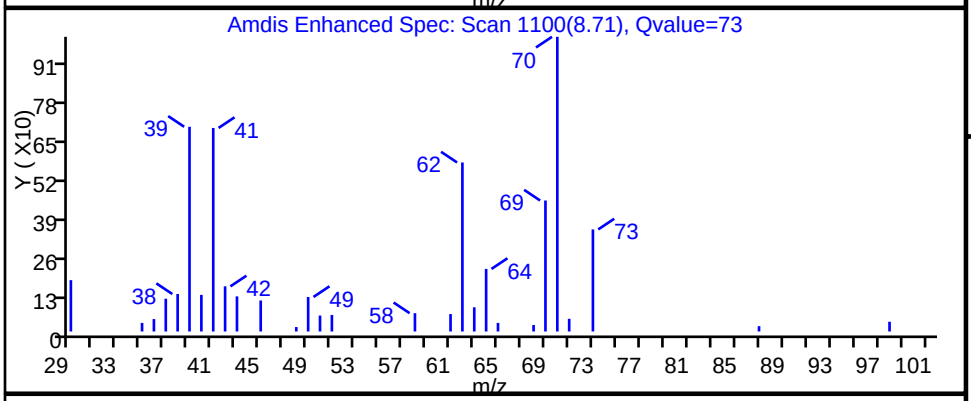
TestAmerica Knoxville

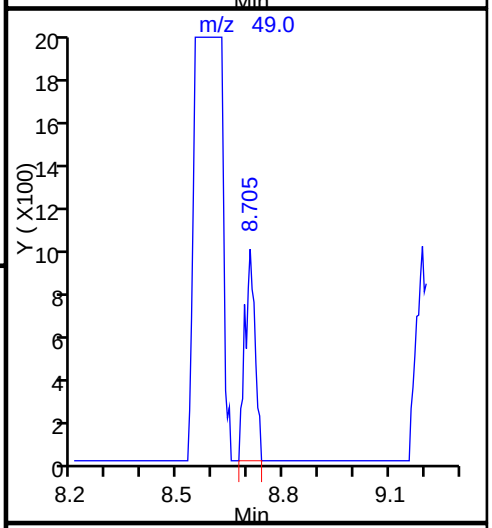
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

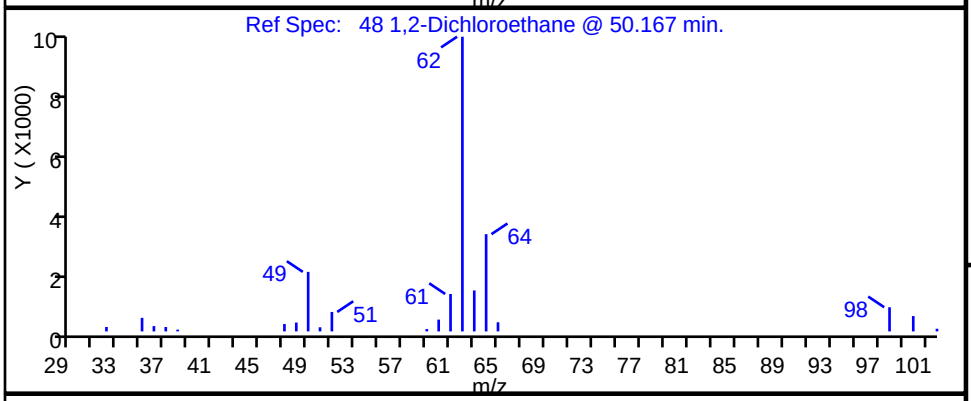
48 1,2-Dichloroethane, CAS: 107-06-2

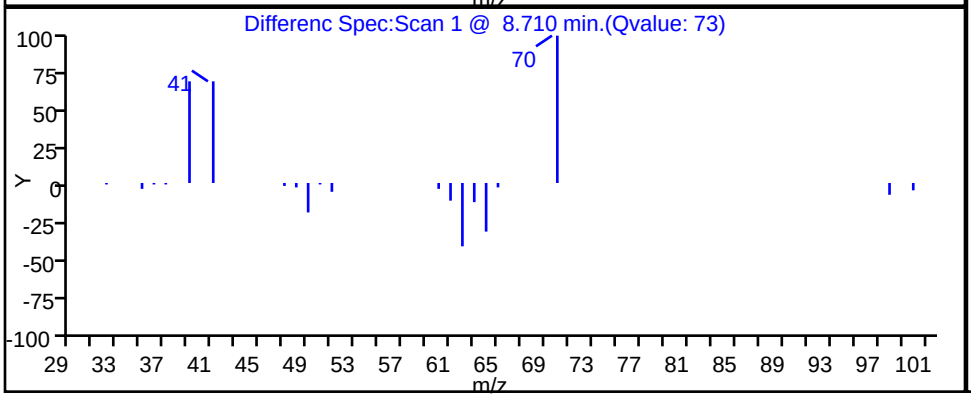


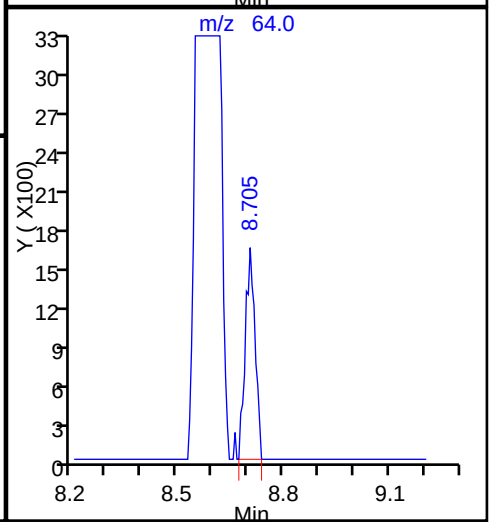








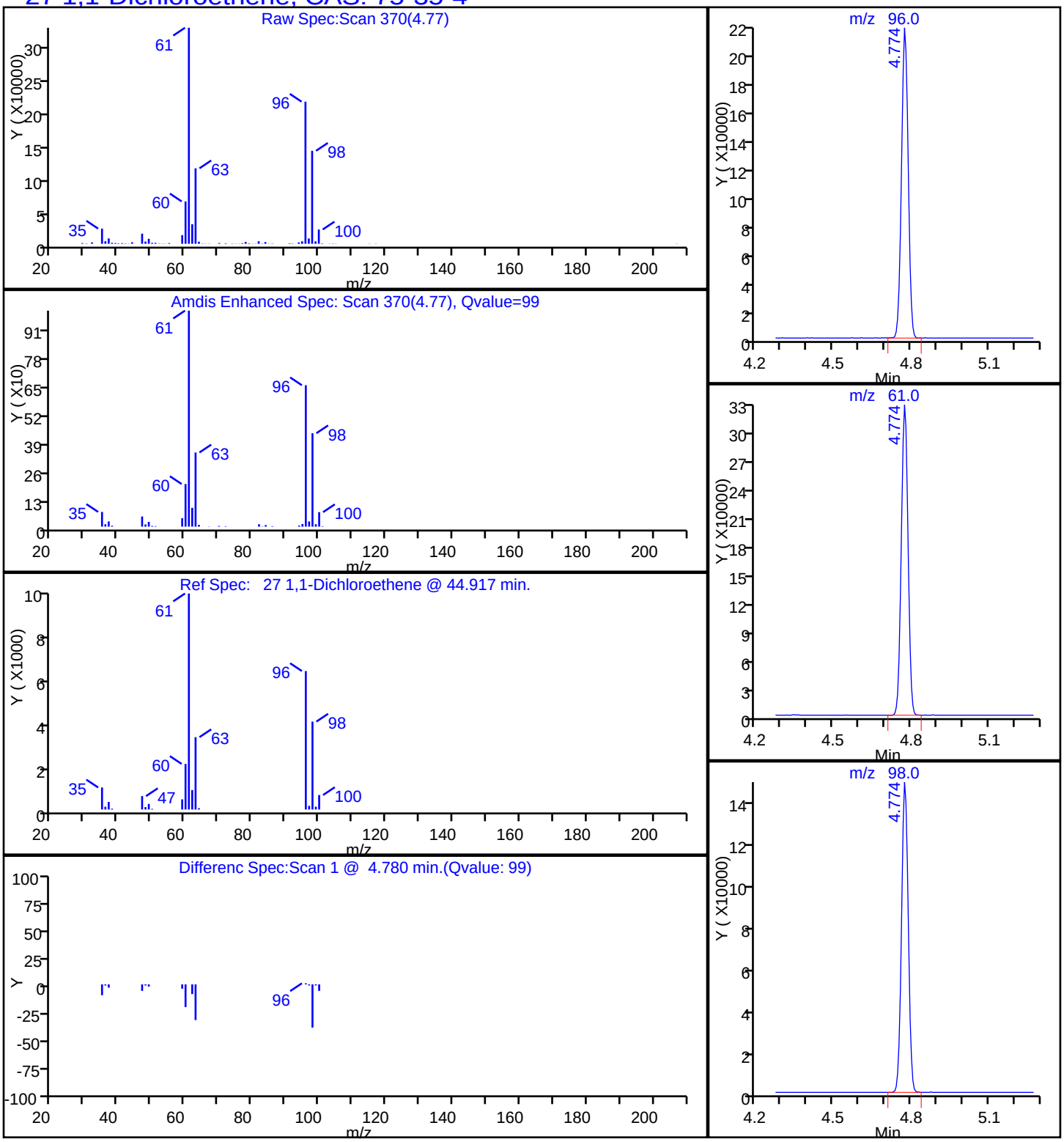




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

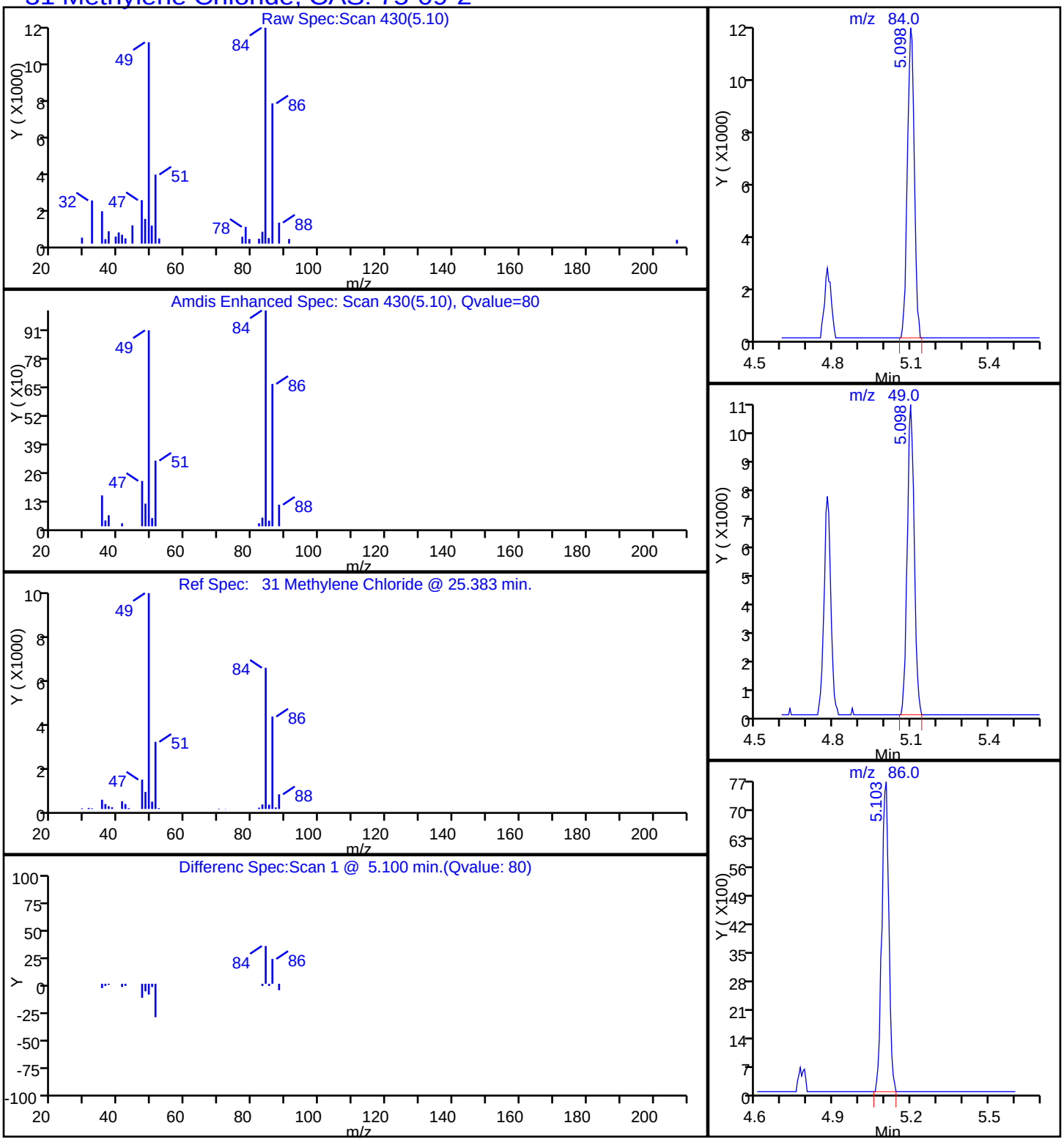
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D		
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

31 Methylene Chloride, CAS: 75-09-2



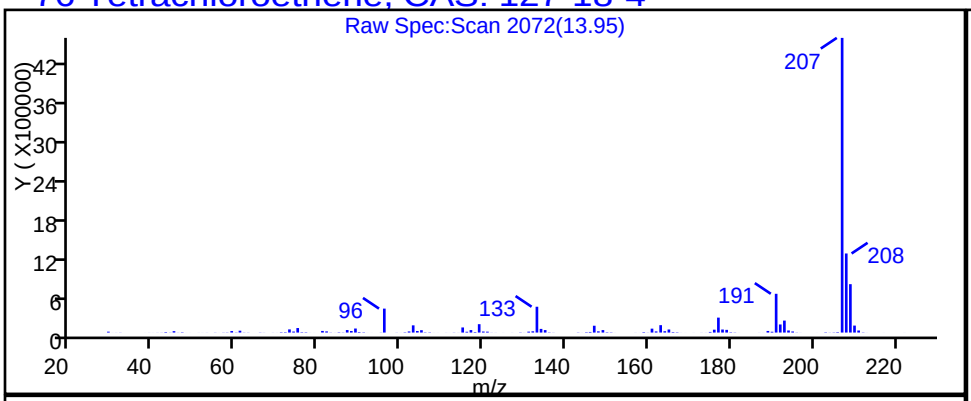
Report Date: 12-Sep-2016 11:33:43 Chrom Revision: 2.2 02-Sep-2016 12:39:46

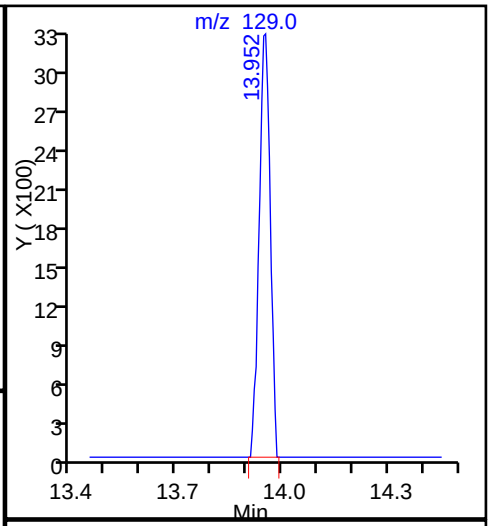
TestAmerica Knoxville

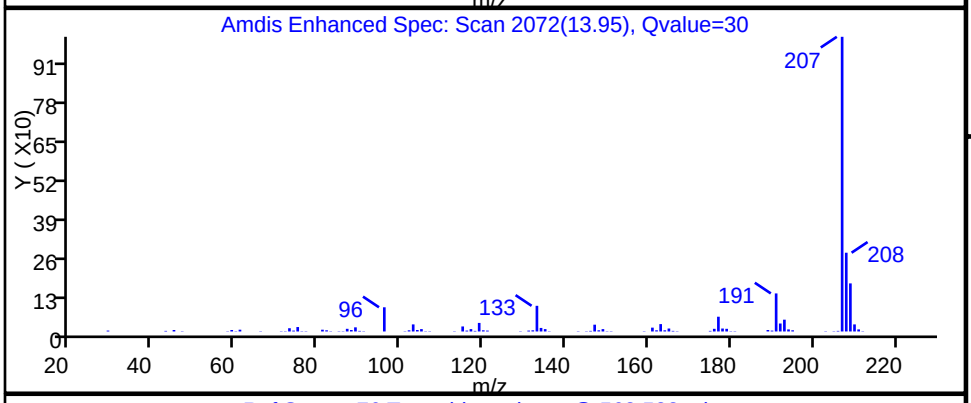
Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D

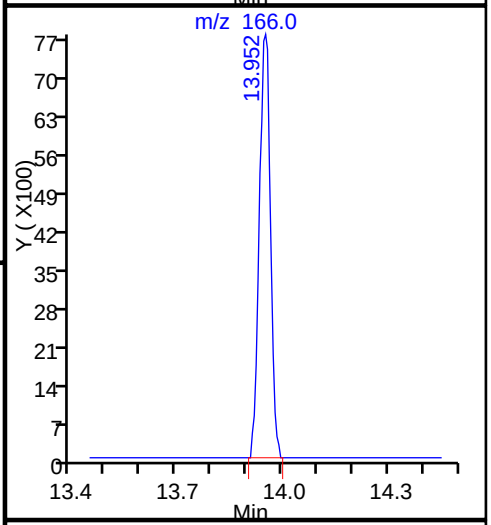
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

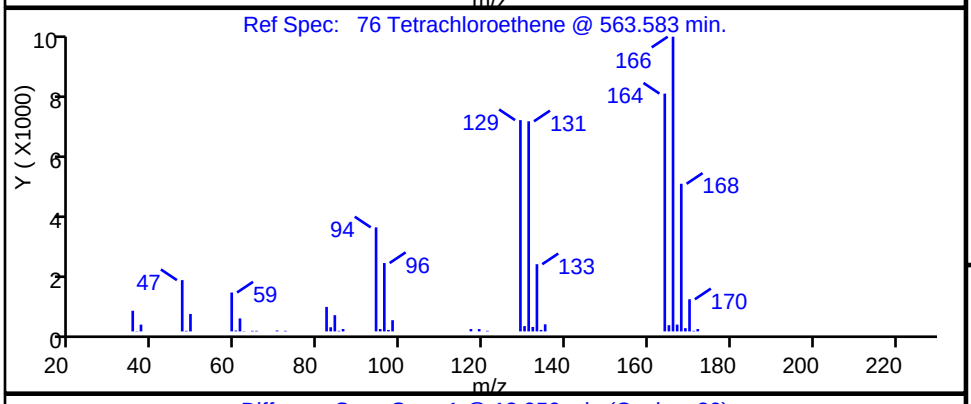
76 Tetrachloroethene, CAS: 127-18-4

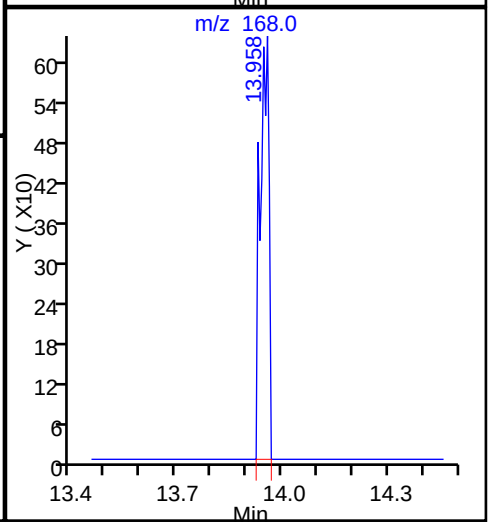


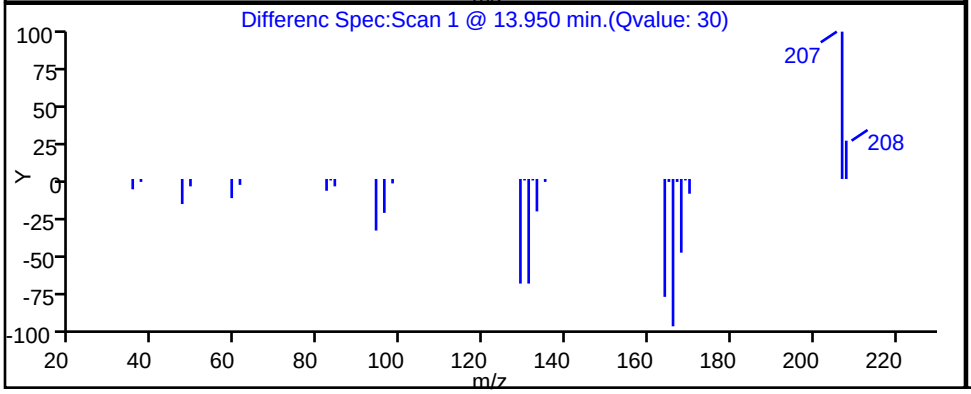








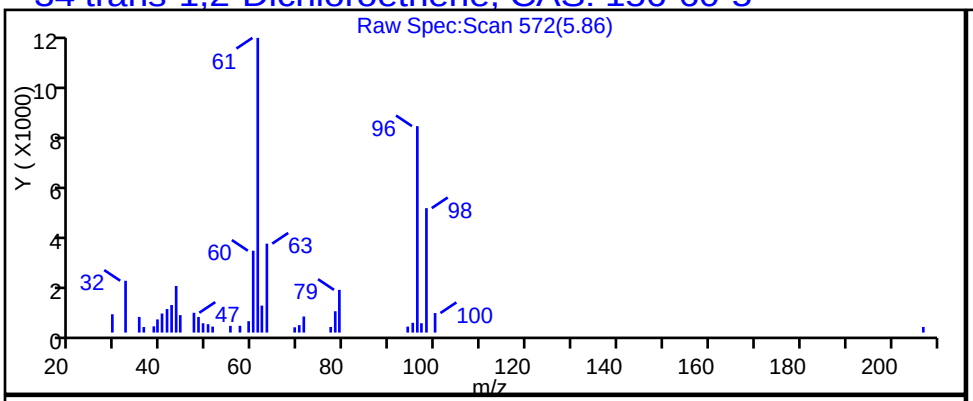


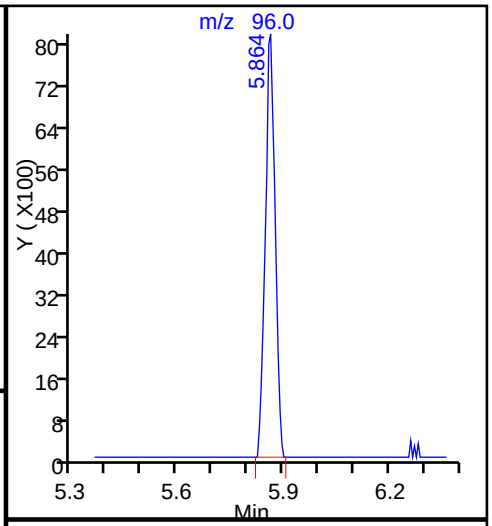


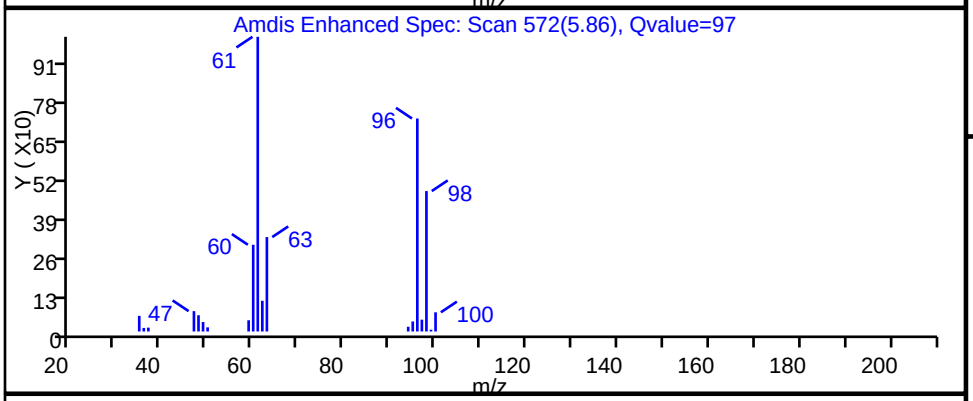
TestAmerica Knoxville

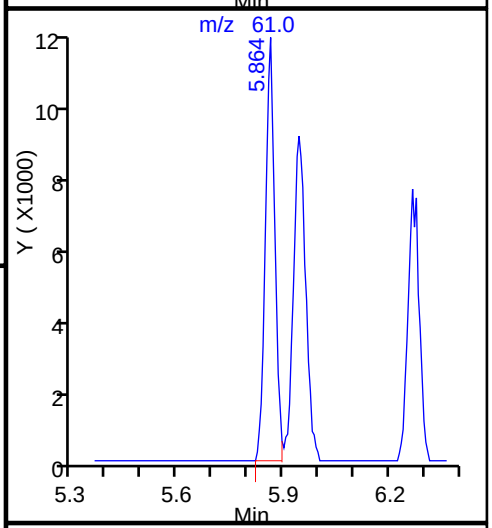
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

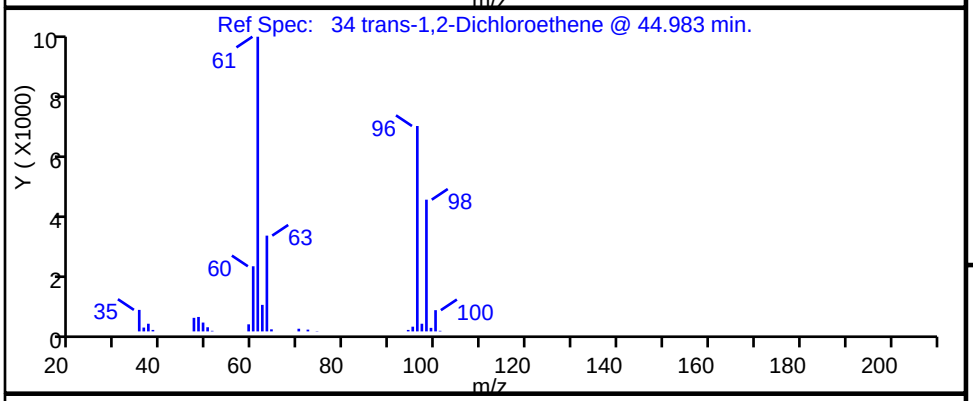
34 trans-1,2-Dichloroethene, CAS: 156-60-5

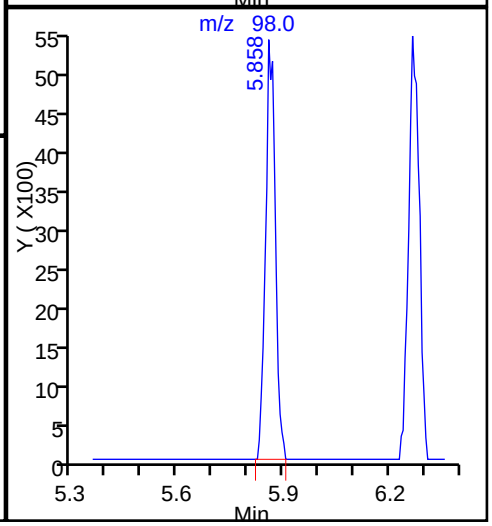


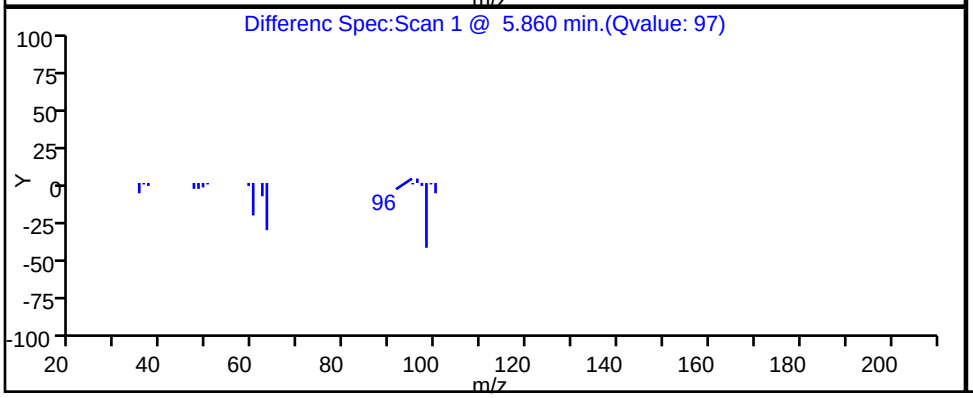






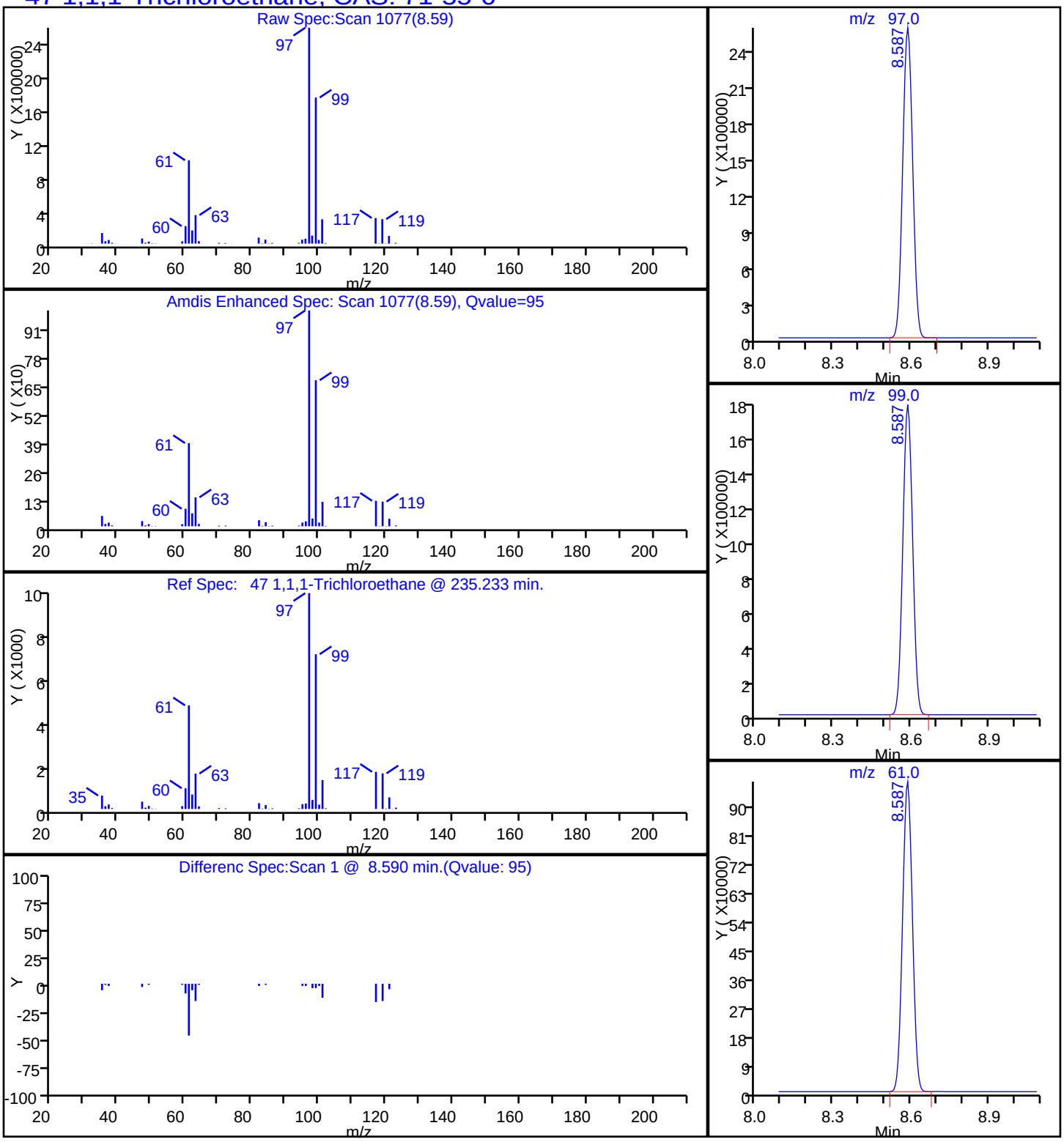






Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



Report Date: 12-Sep-2016 11:33:43 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D

Injection Date: 10-Sep-2016 19:02:30 Instrument ID: ME

Lims ID: 140-5782-A-2 Lab Sample ID: 140-5782-2

Client ID: A-MID GAC

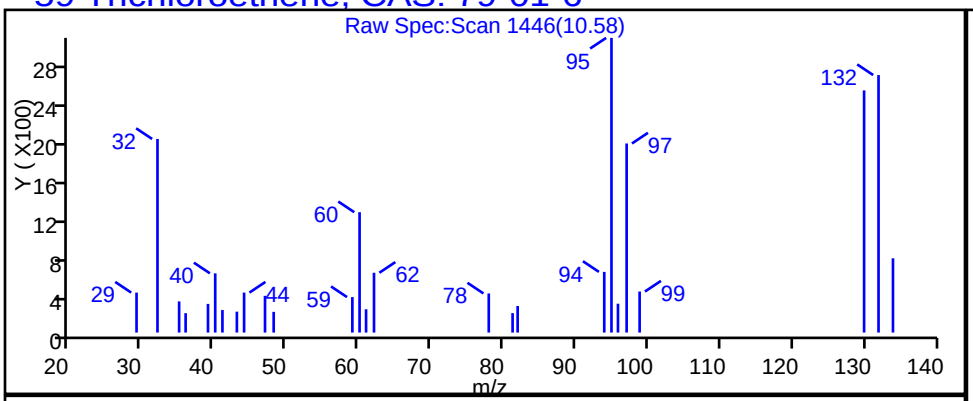
Operator ID: 403648 ALS Bottle#: 2 Worklist Smp#: 9

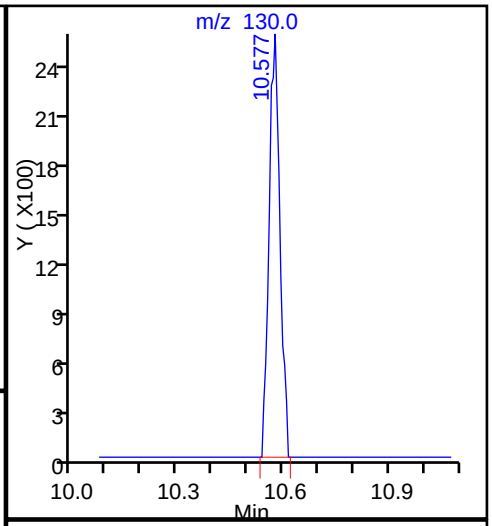
Purge Vol: 500.000 mL Dil. Factor: 1.0000

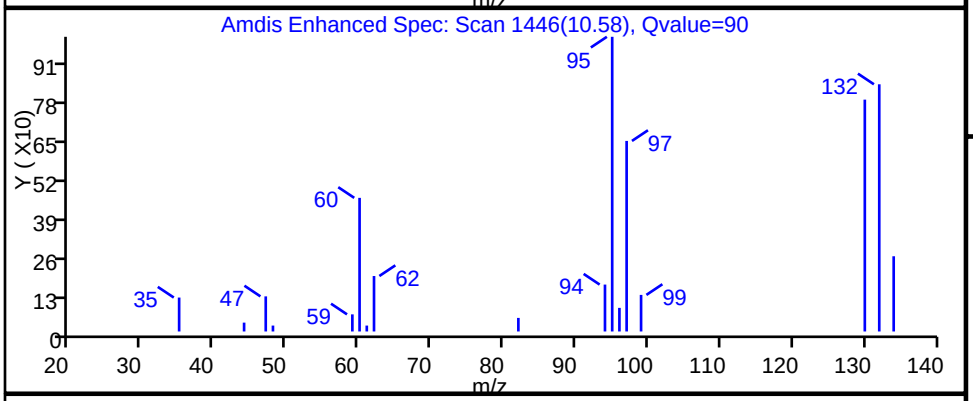
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL

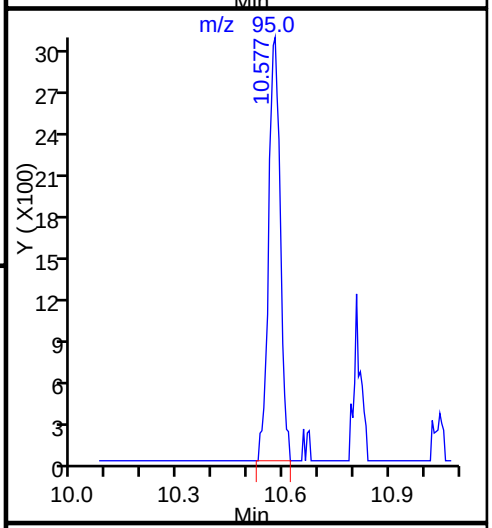
Column: RTX-5 (0.32 mm) Detector MS SCAN

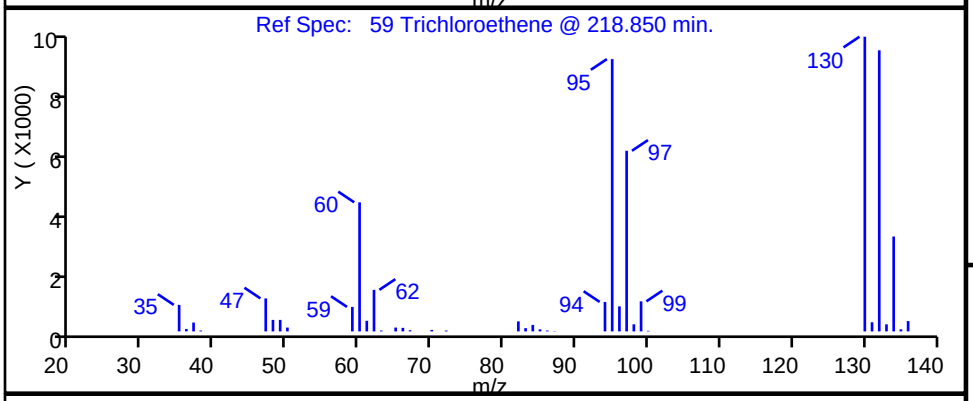
59 Trichloroethene, CAS: 79-01-6

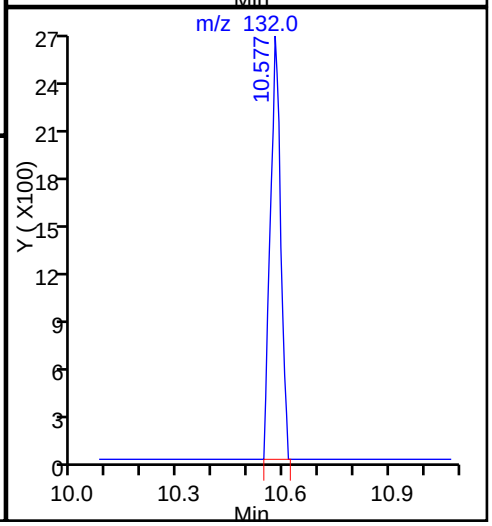


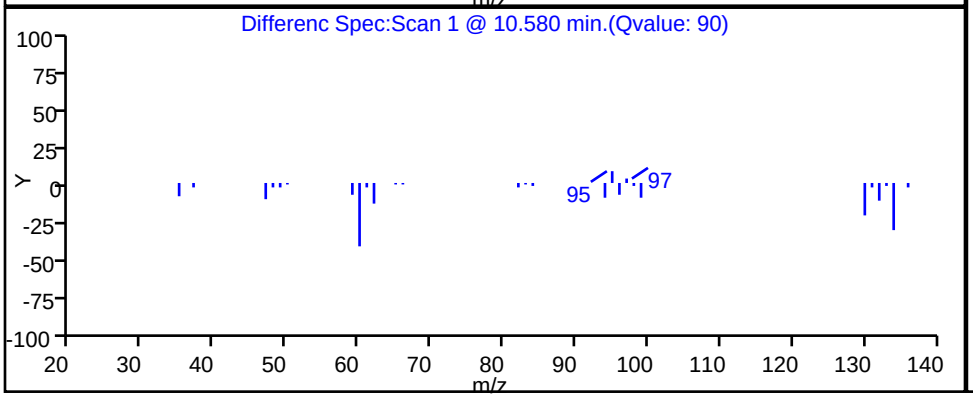








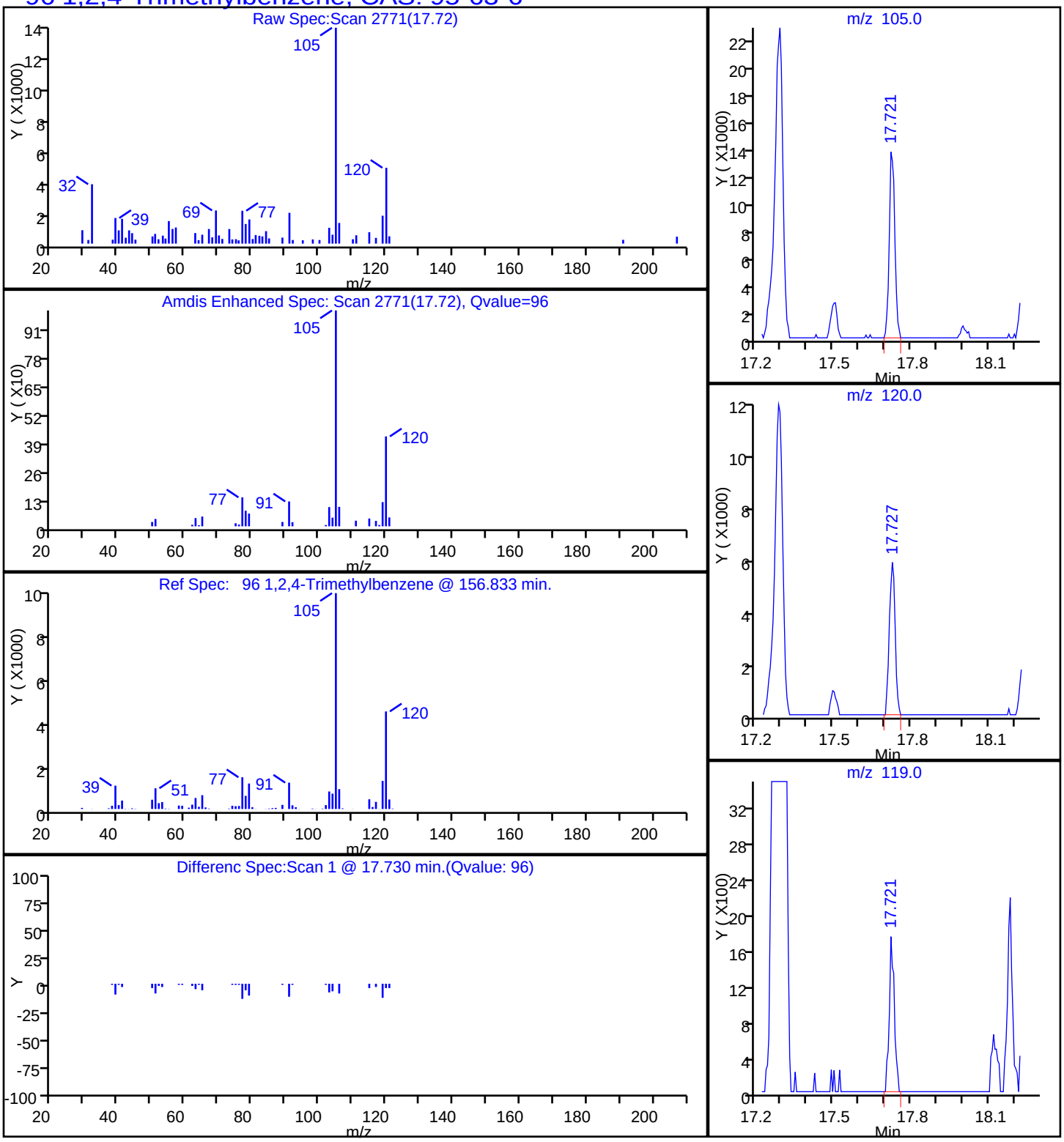




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D				
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

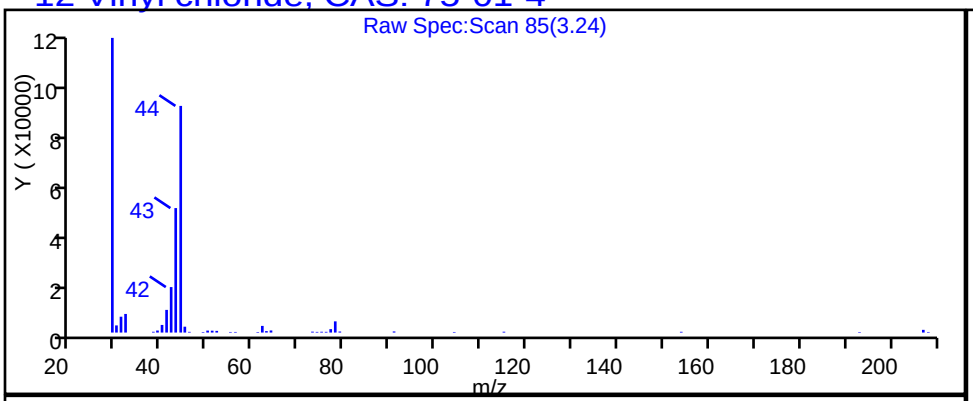
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

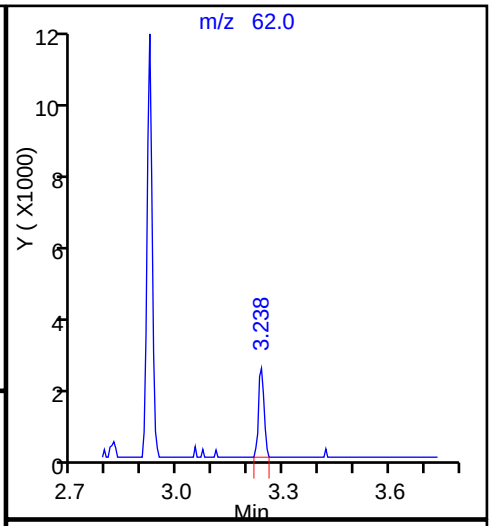


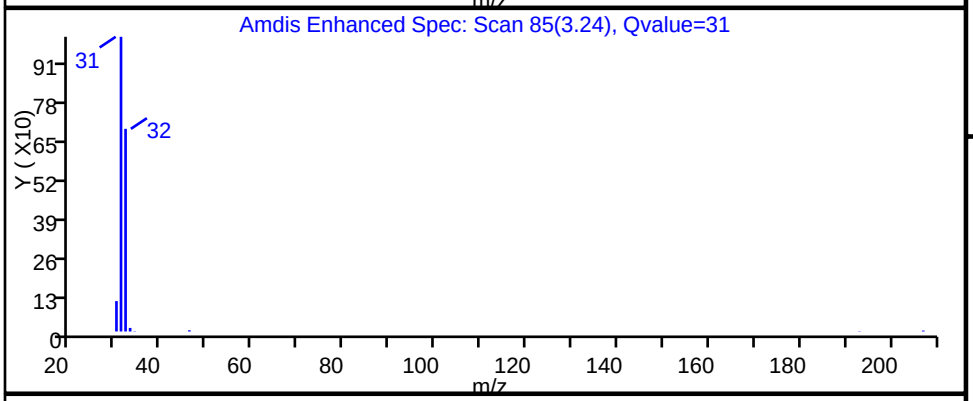
TestAmerica Knoxville

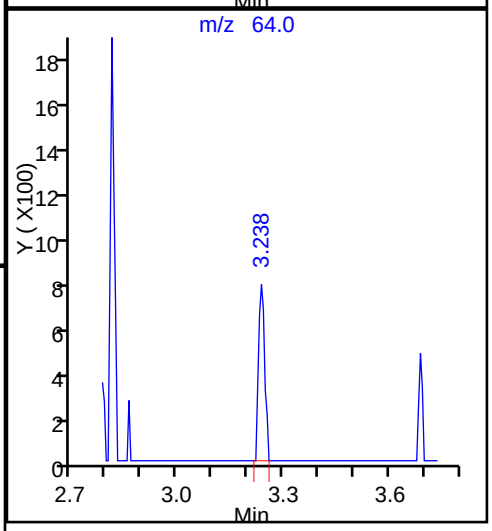
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D		
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

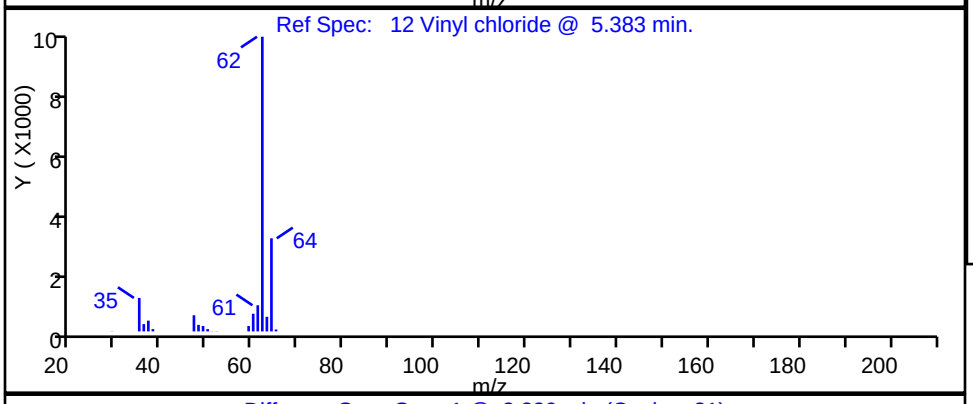
12 Vinyl chloride, CAS: 75-01-4

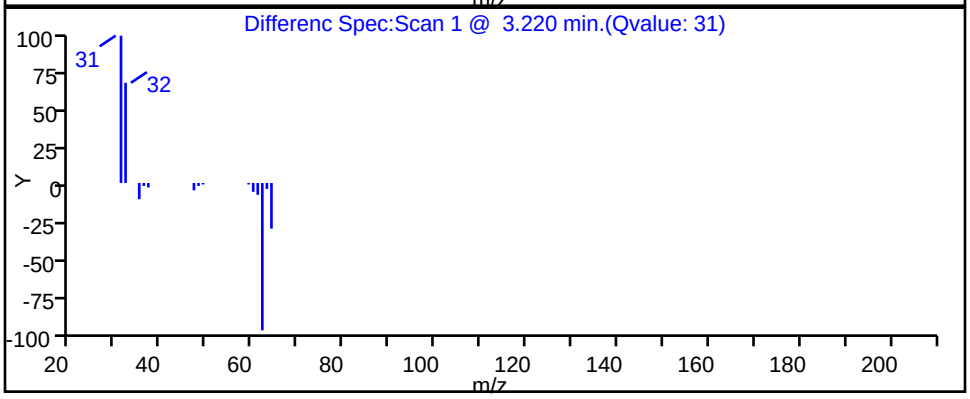












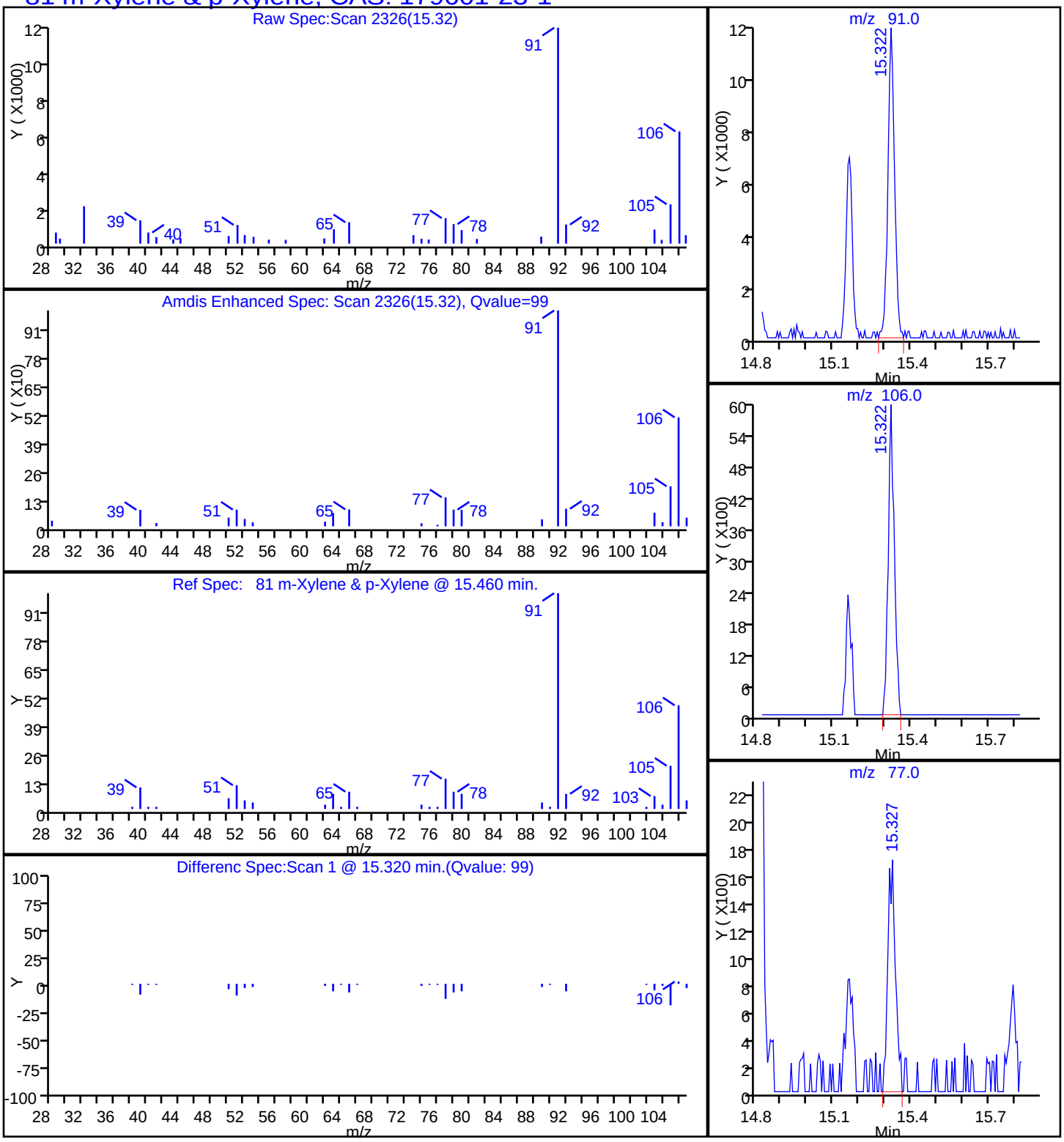
Report Date: 12-Sep-2016 11:33:43 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D

Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	403648	ALS Bottle#:	2	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

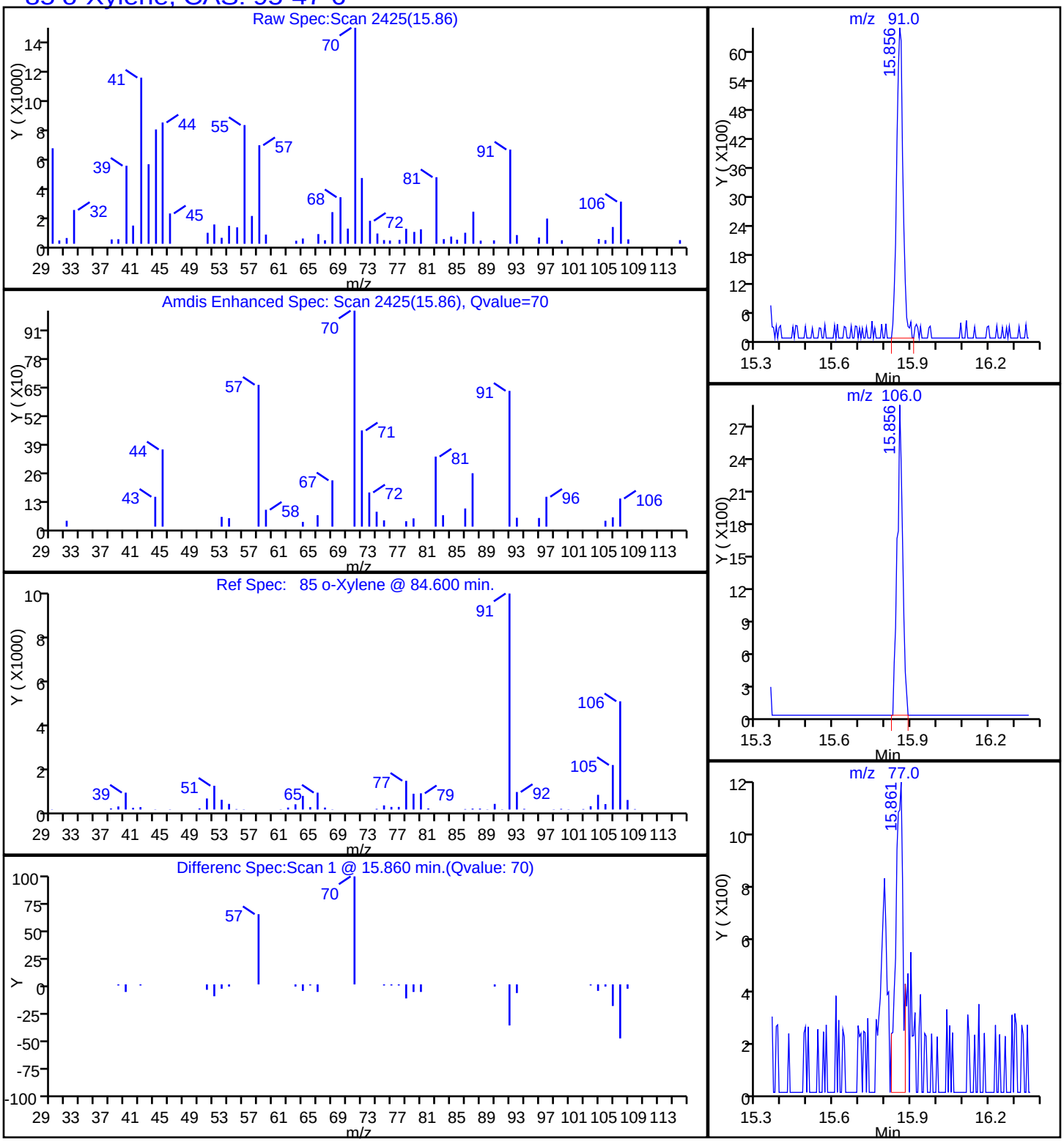
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p102.D		
Injection Date:	10-Sep-2016 19:02:30	Instrument ID:	ME
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2
Client ID:	A-MID GAC		
Operator ID:	403648	ALS Bottle#:	2 Worklist Smp#: 9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-MID GAC DL Lab Sample ID: 140-5782-2 DL

Matrix: Air Lab File ID: EI12P111.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 09:58

Sample wt/vol: 40(mL) Date Analyzed: 09/12/2016 23:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6540 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	88		1.0	0.15

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-MID GAC DL Lab Sample ID: 140-5782-2 DL

Matrix: Air Lab File ID: EI12P111.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 09:58

Sample wt/vol: 40(mL) Date Analyzed: 09/12/2016 23:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6540 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-55-6	1,1,1-Trichloroethane	133.41	480		5.5	0.82

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	96		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P111.D				
Lims ID:	140-5782-A-2				
Client ID:	A-MID GAC				
Sample Type:	Client				
Inject. Date:	12-Sep-2016 23:28:30	ALS Bottle#:	11	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-018				
Misc. Info.:	140-5782-a-2				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:42:35	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				
First Level Reviewer: tajh		Date:	13-Sep-2016 11:45:33		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.562	7.562	0.000	71	389207	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.805	-0.005	94	1818092	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	86	1651151	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	93	1293704	3.83	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	95	1745	0.0378	
8 Dichlorodifluoromethane	85	2.952	2.946	0.006	98	16303	0.0398	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	97	151428	1.28	
31 Methylene Chloride	84	5.098	5.103	-0.005	79	93442	0.7654	
34 trans-1,2-Dichloroethene	96	5.864	5.869	-0.005	93	6395	0.0496	
37 1,1-Dichloroethane	63	6.268	6.273	-0.005	99	63221	0.2921	
42 cis-1,2-Dichloroethene	96	7.233	7.239	-0.006	88	332651	2.55	
44 Chloroform	83	7.578	7.578	0.000	88	11096	0.0342	
47 1,1,1-Trichloroethane	97	8.587	8.592	-0.005	94	2573956	7.08	
48 1,2-Dichloroethane	62	8.581	8.705	-0.124	41	136222	0.6600	
51 Benzene	78	9.196	9.196	0.000	94	35363	0.0949	
59 Trichloroethene	130	10.571	10.576	-0.005	93	4392	0.0270	
116 Naphthalene	128	20.353	20.347	0.006	98	14156	0.0414	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

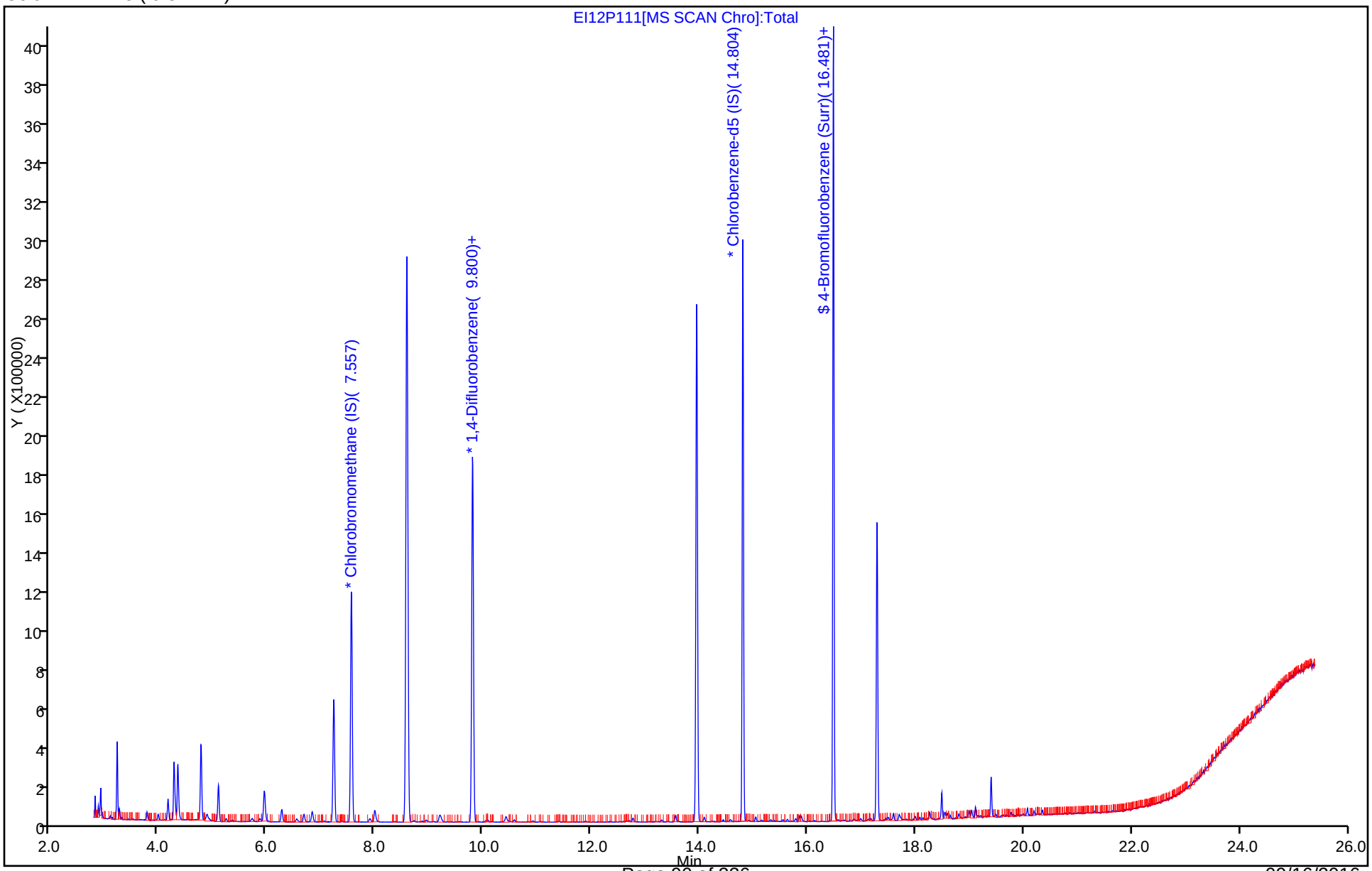
Report Date: 13-Sep-2016 11:46:48 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P111.D

Injection Date:	12-Sep-2016 23:28:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2	Worklist Smp#:	18
Client ID:	A-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P111.D				
Lims ID:	140-5782-A-2				
Client ID:	A-MID GAC				
Sample Type:	Client				
Inject. Date:	12-Sep-2016 23:28:30	ALS Bottle#:	11	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-018				
Misc. Info.:	140-5782-a-2				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:42:35	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				

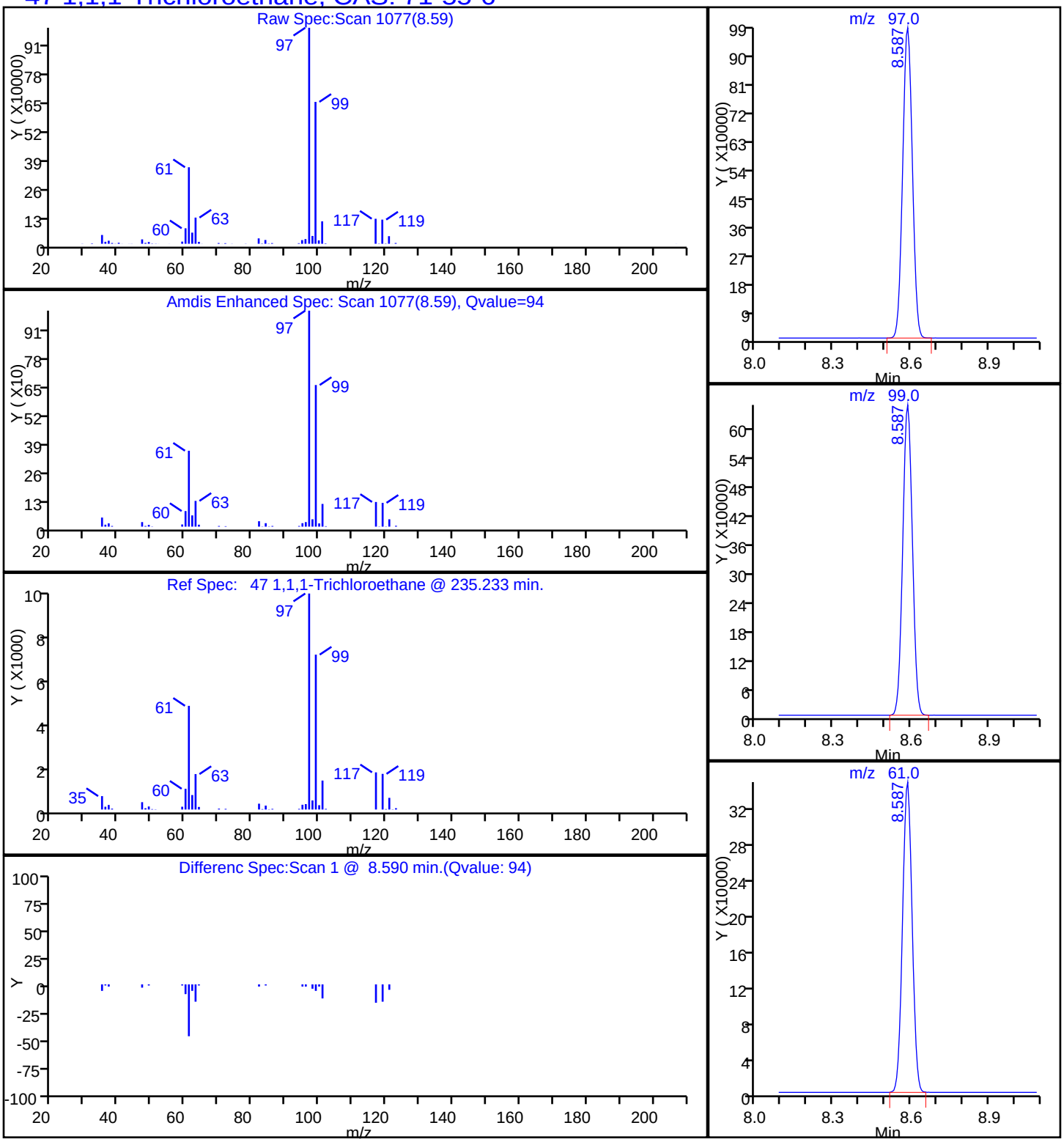
First Level Reviewer: tajh Date: 13-Sep-2016 11:45:33

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.83	95.72

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EI12P111.D				
Injection Date:	12-Sep-2016 23:28:30	Instrument ID:	ME		
Lims ID:	140-5782-A-2	Lab Sample ID:	140-5782-2		
Client ID:	A-MID GAC				
Operator ID:	007126	ALS Bottle#:	11	Worklist Smp#:	18
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

47 1,1,1-Trichloroethane, CAS: 71-55-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-5782-3

Matrix: Air Lab File ID: EI10p103.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 09:56

Sample wt/vol: 100(mL) Date Analyzed: 09/10/2016 19:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.21	J	0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.46		0.40	0.075
67-66-3	Chloroform	119.38	0.71		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	52		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.52		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	8.6		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	28		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	0.88		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	18		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.7		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.21	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: A-EFFLUENT Lab Sample ID: 140-5782-3

Matrix: Air Lab File ID: EI10p103.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 09:56

Sample wt/vol: 100(mL) Date Analyzed: 09/10/2016 19:49

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	0.68	J	1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	1.6		1.4	0.27
67-66-3	Chloroform	119.38	3.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	200		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.6		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	35		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	110		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.8		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	3.5		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	100		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	9.1		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D				
Lims ID:	140-5782-A-3				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 19:49:30	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-010				
Misc. Info.:	140-5782-a-3				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	12-Sep-2016 11:16:53		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.562	7.568	-0.006	74	365502	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.805	-0.005	94	1675100	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	88	1612461	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	88	1334151	4.04	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	96	3972	0.0916	
8 Dichlorodifluoromethane	85	2.946	2.952	-0.006	99	39718	0.1033	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	99	624978	5.61	
31 Methylene Chloride	84	5.098	5.103	-0.005	81	31805	0.2774	
34 trans-1,2-Dichloroethene	96	5.863	5.869	-0.006	98	21289	0.1757	
37 1,1-Dichloroethane	63	6.268	6.279	-0.011	100	348828	1.72	
42 cis-1,2-Dichloroethene	96	7.233	7.239	-0.006	91	1264537	10.3	
44 Chloroform	83	7.573	7.584	-0.011	93	43199	0.1418	
47 1,1,1-Trichloroethane	97	8.587	8.592	-0.005	94	1253823	3.67	
51 Benzene	78	9.196	9.196	0.000	92	14594	0.0425	
59 Trichloroethene	130	10.576	10.582	-0.006	92	50600	0.3372	
68 Toluene	91	12.771	12.777	-0.006	93	29548	0.0764	
81 m-Xylene & p-Xylene	91	15.322	15.327	-0.005	99	19993	0.0494	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	98	19569	0.0429	
S 126 Xylenes, Total	100				0		0.0494	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

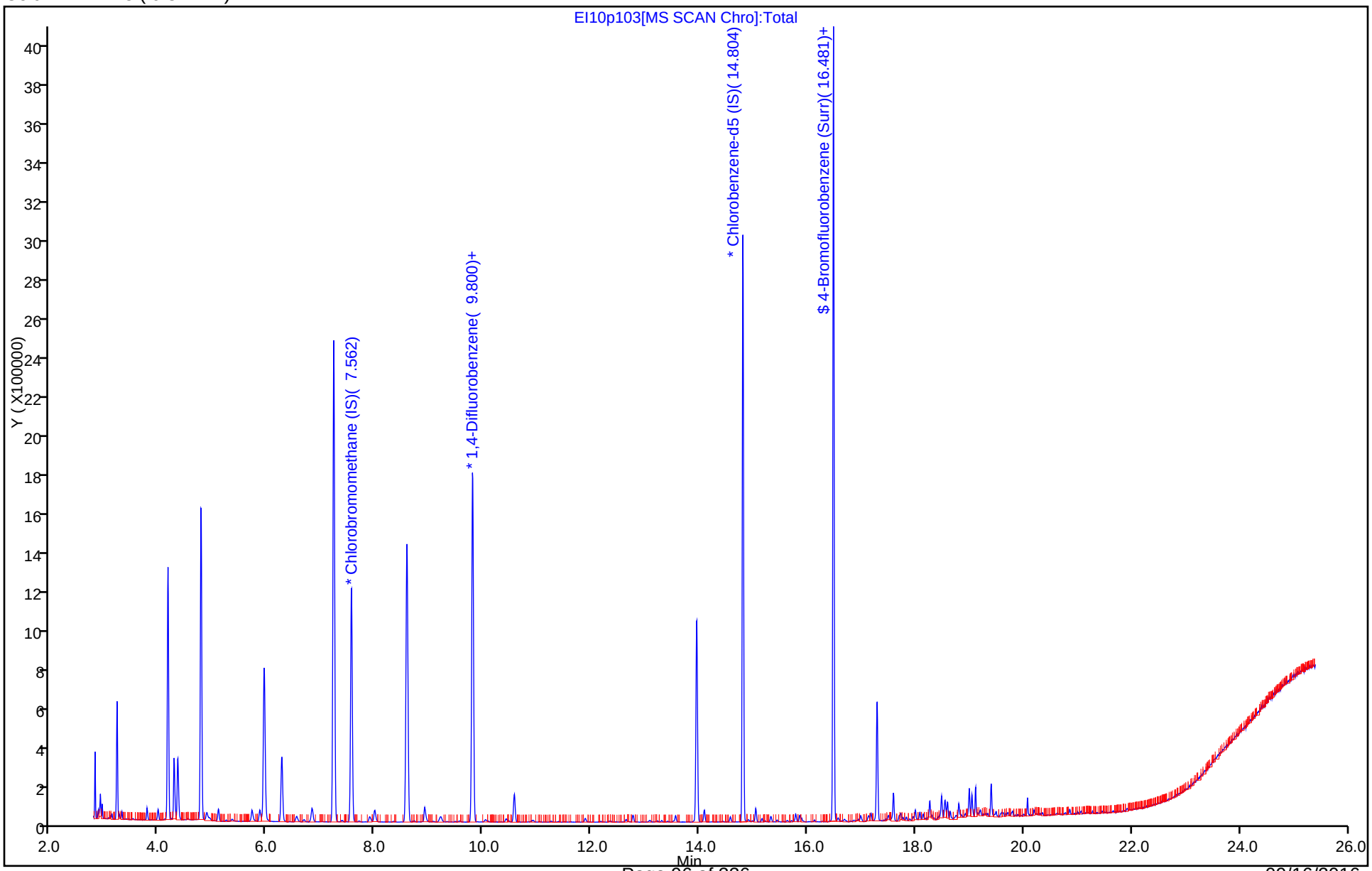
Report Date: 12-Sep-2016 11:33:49 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D

Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3	Worklist Smp#:	10
Client ID:	A-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D				
Lims ID:	140-5782-A-3				
Client ID:	A-EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 19:49:30	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-010				
Misc. Info.:	140-5782-a-3				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

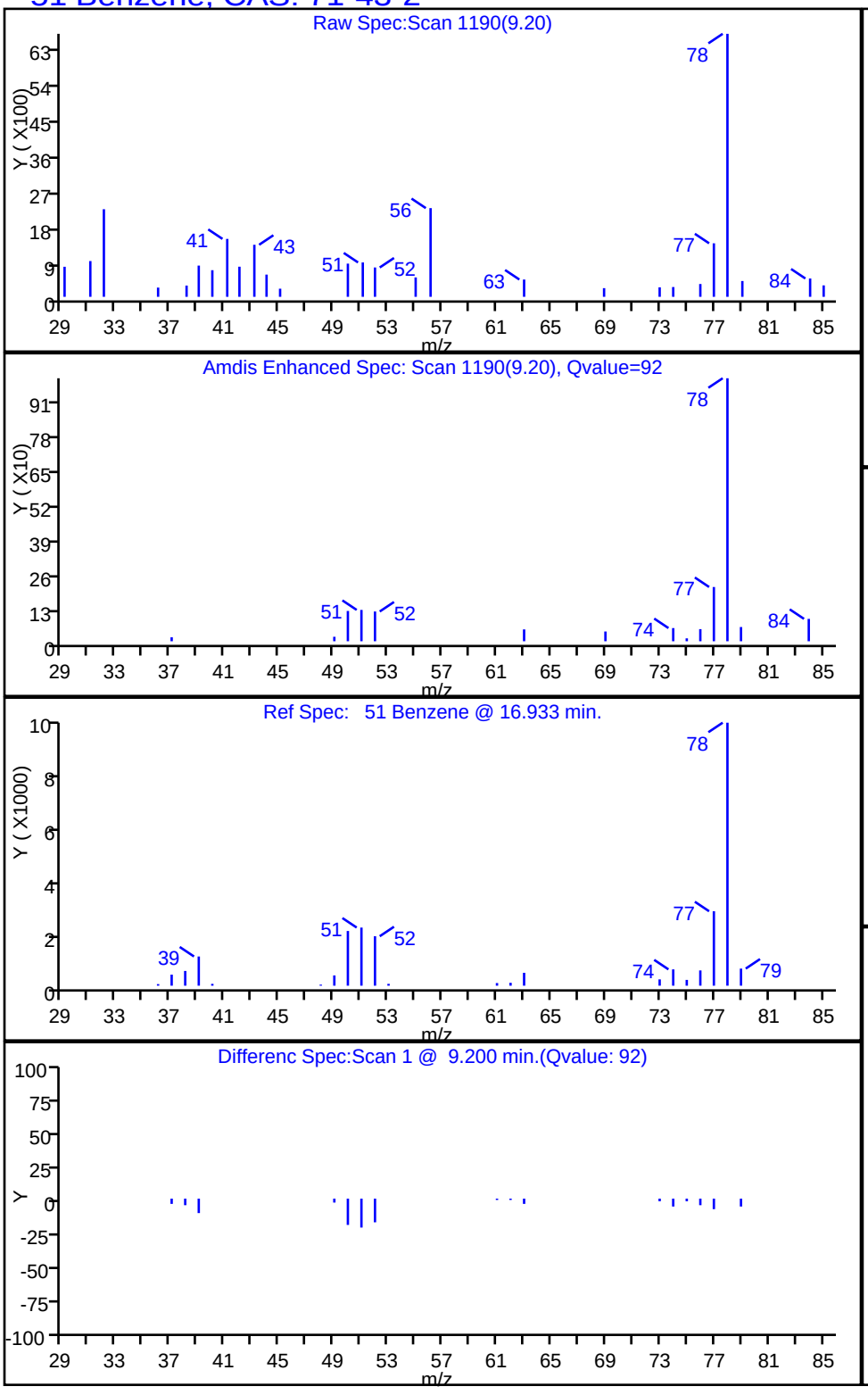
First Level Reviewer: tajh Date: 12-Sep-2016 11:16:53

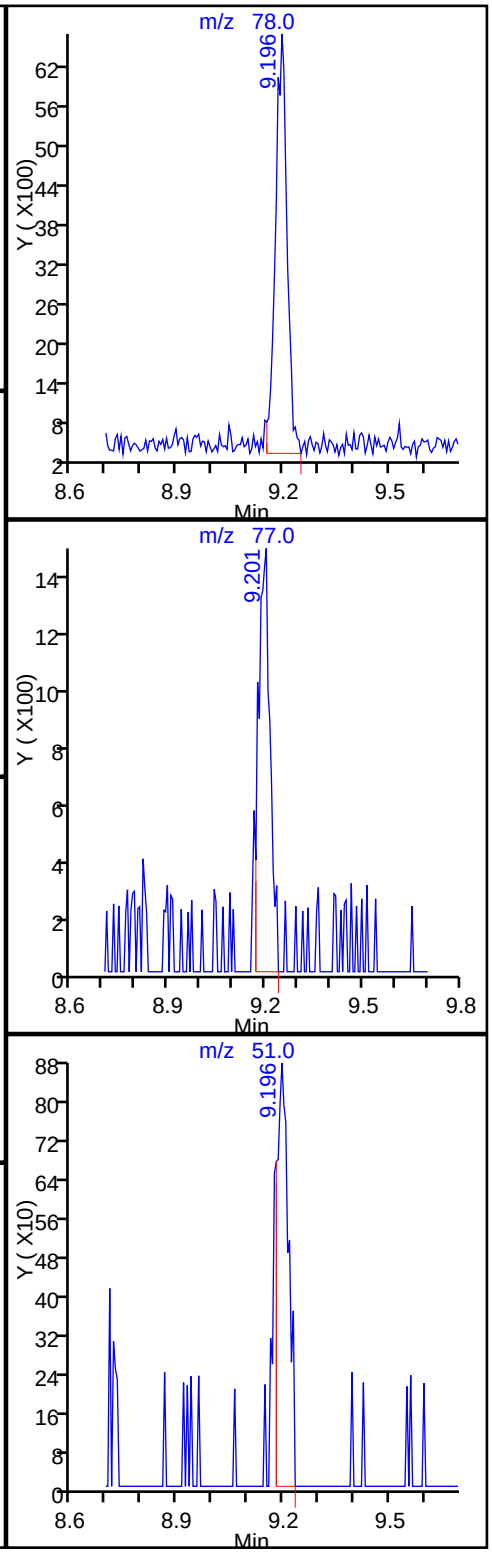
Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.04	101.09

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

51 Benzene, CAS: 71-43-2





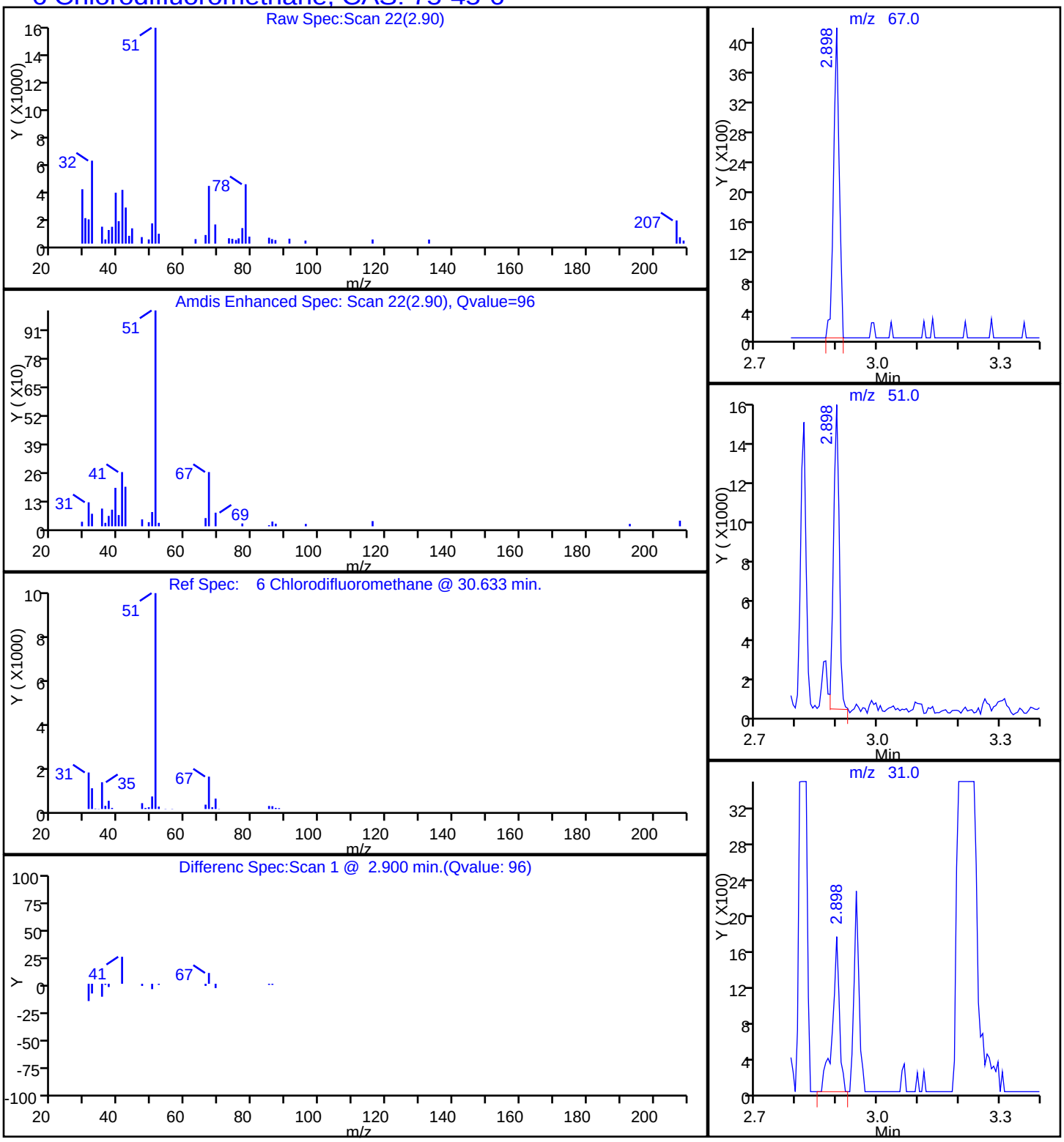
Report Date: 12-Sep-2016 11:33:49 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D

Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME		
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3		
Client ID:	A-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

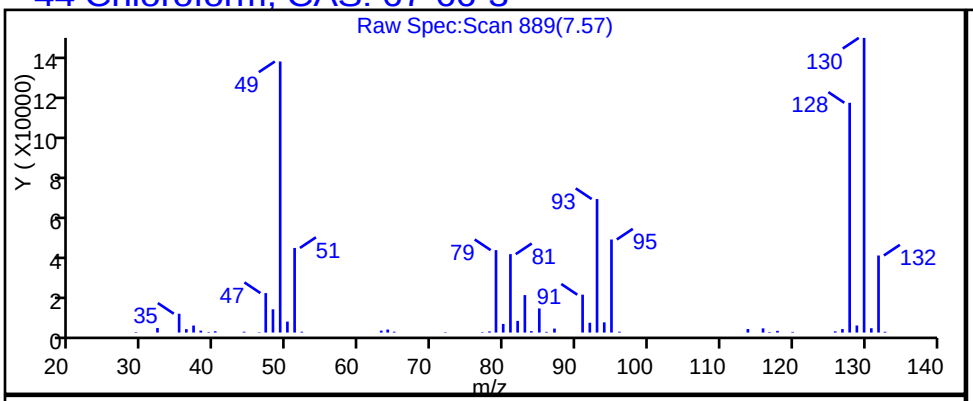
6 Chlorodifluoromethane, CAS: 75-45-6

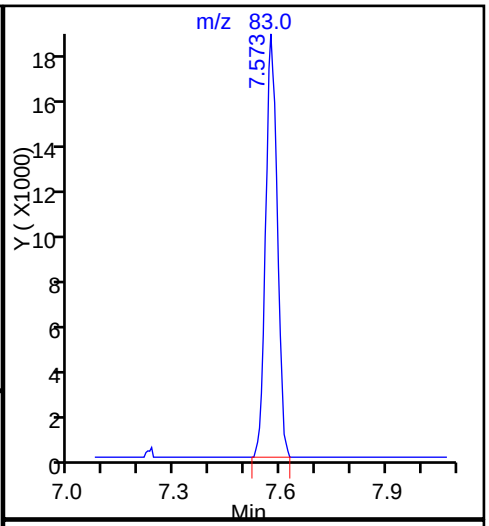


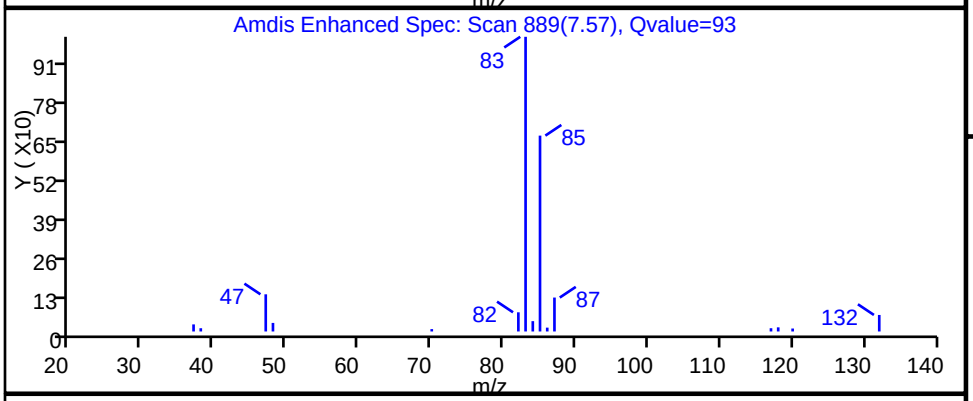
TestAmerica Knoxville

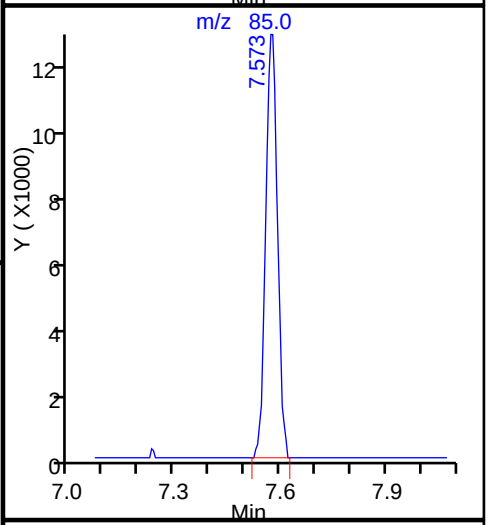
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

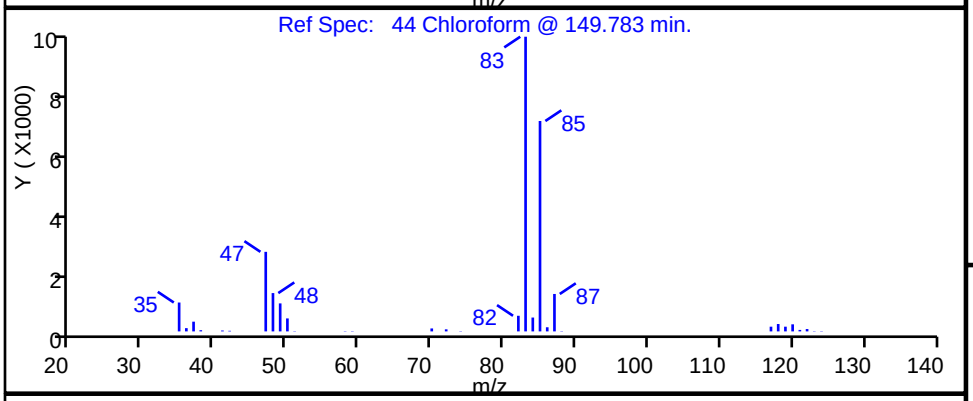
44 Chloroform, CAS: 67-66-3

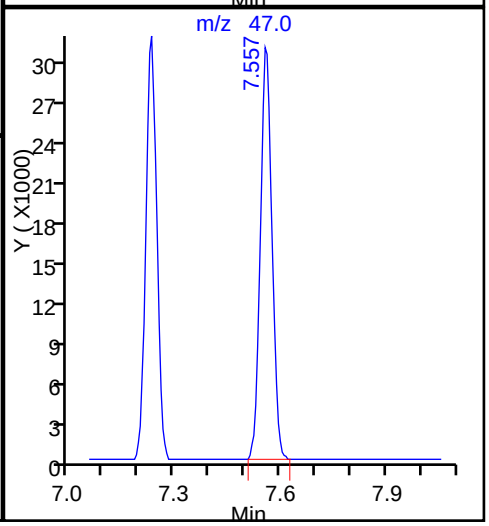


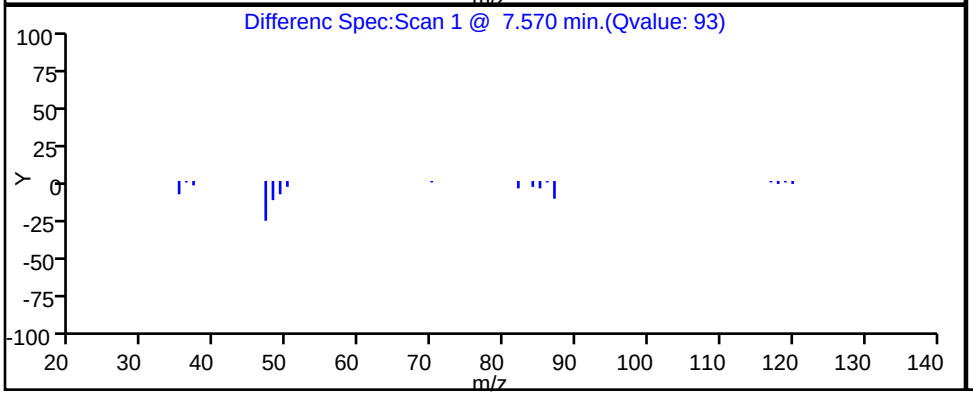








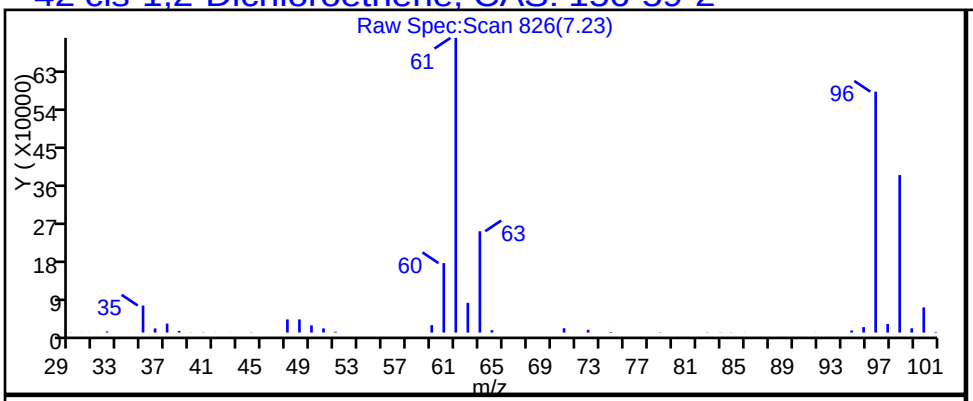


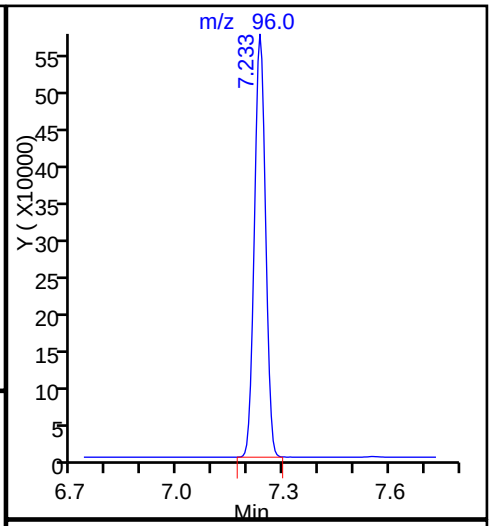


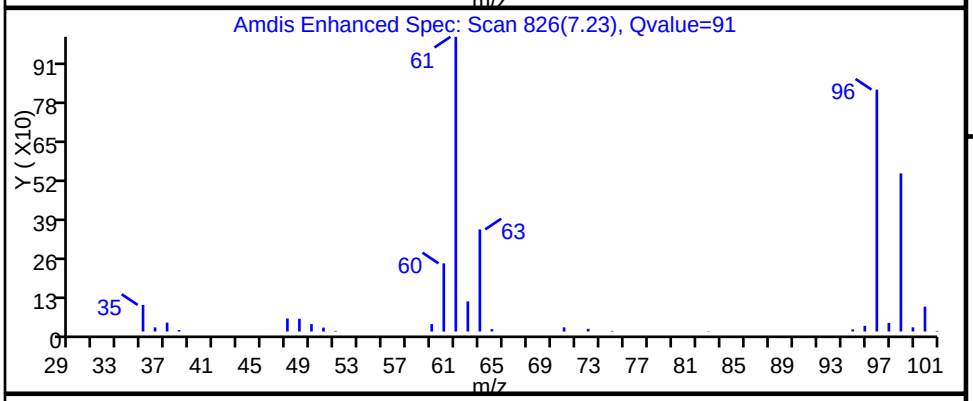
TestAmerica Knoxville

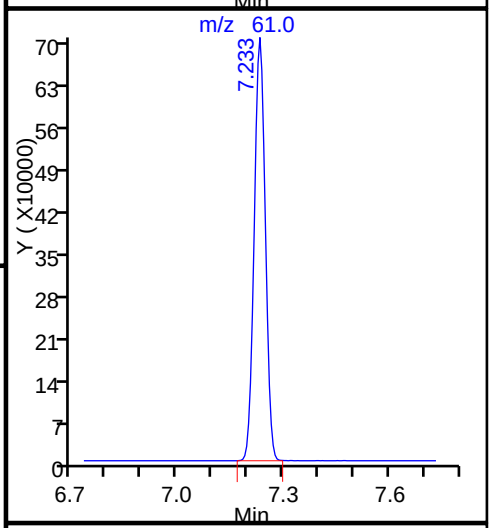
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

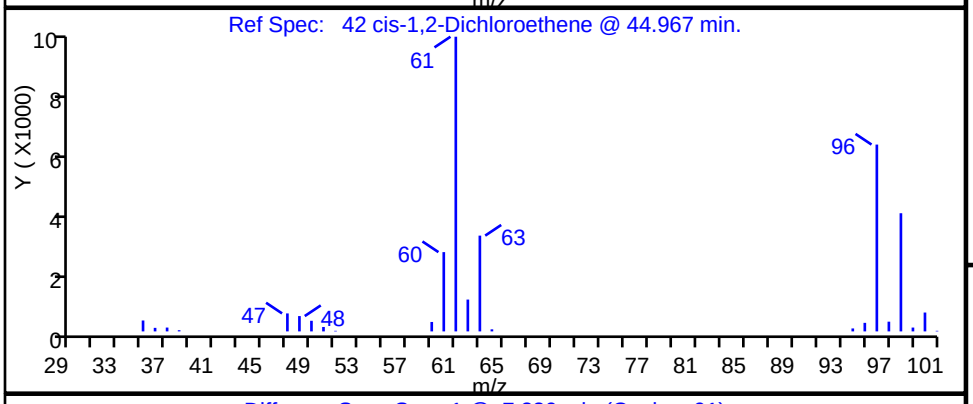
42 cis-1,2-Dichloroethene, CAS: 156-59-2

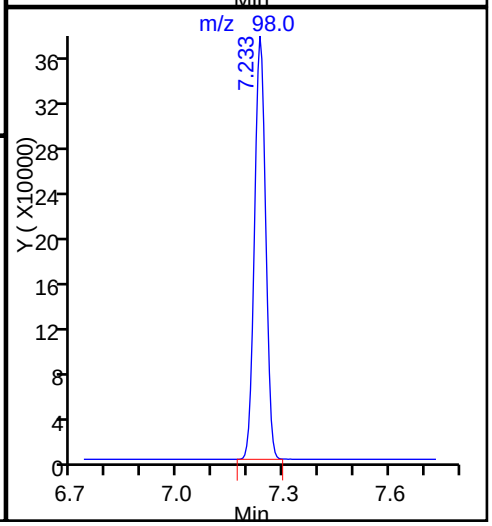


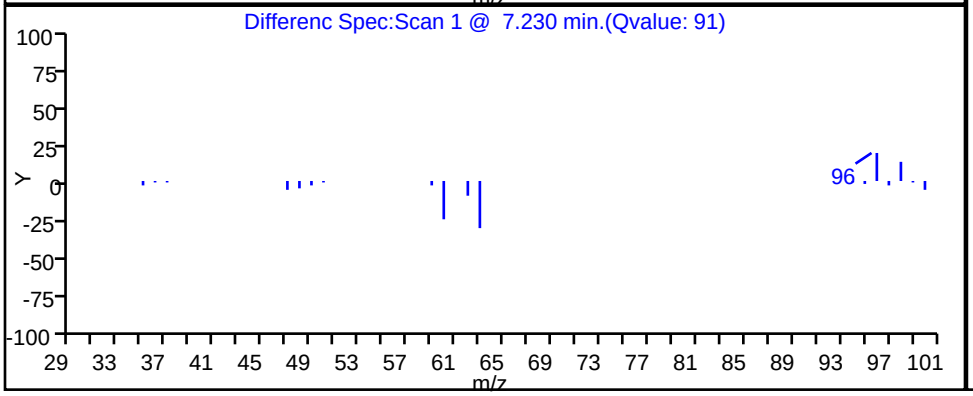








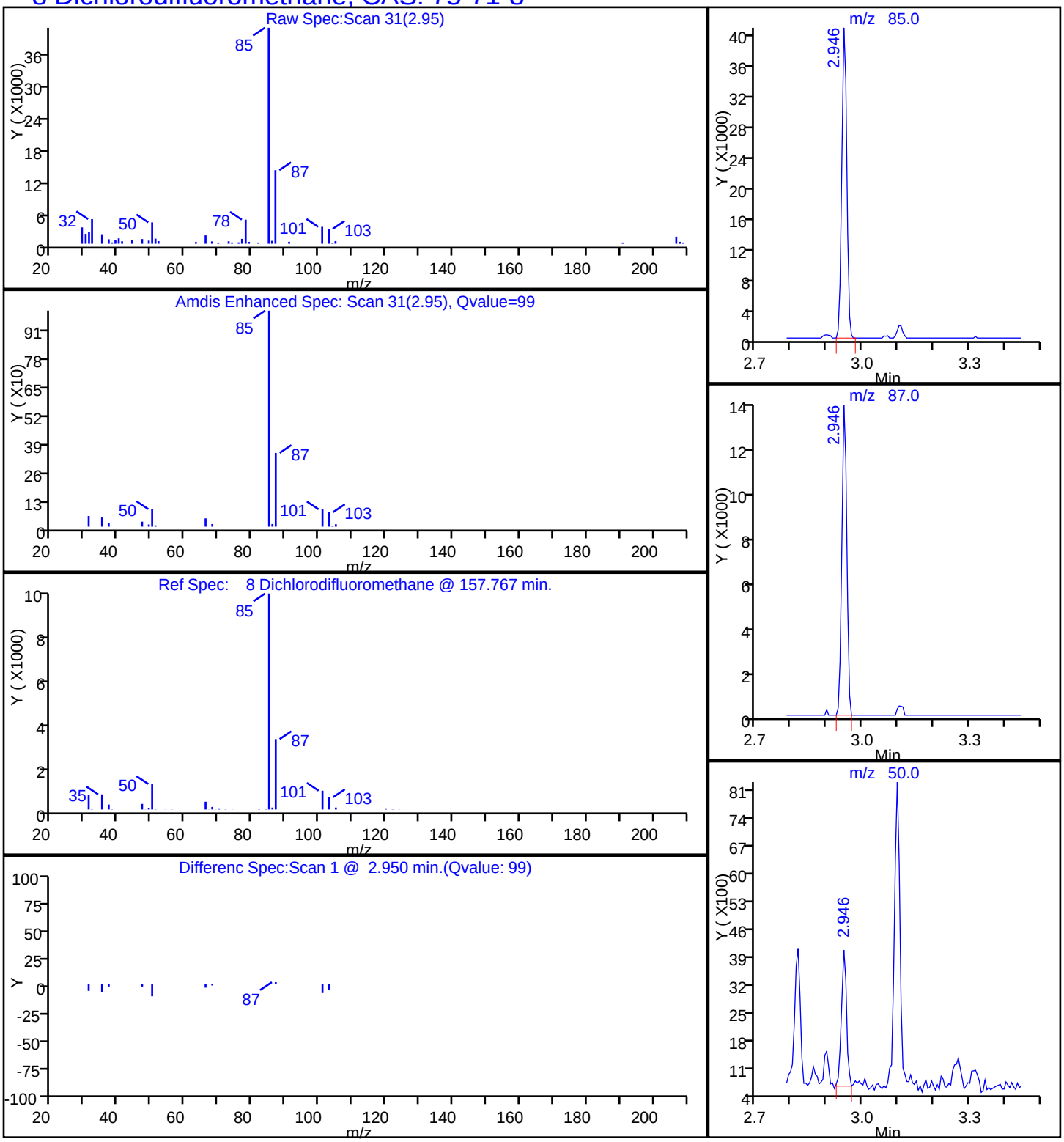




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D				
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME		
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3		
Client ID:	A-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

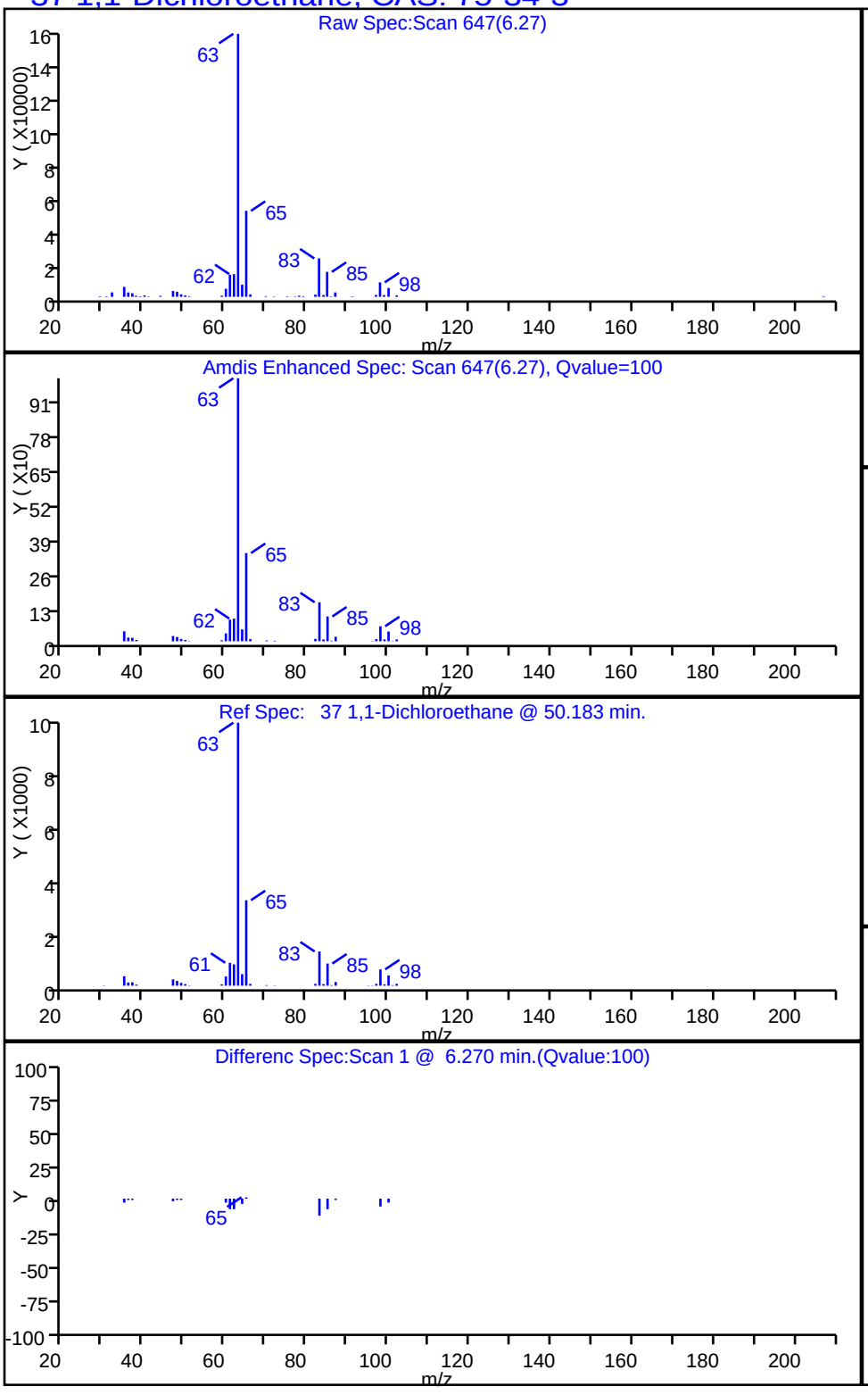
8 Dichlorodifluoromethane, CAS: 75-71-8

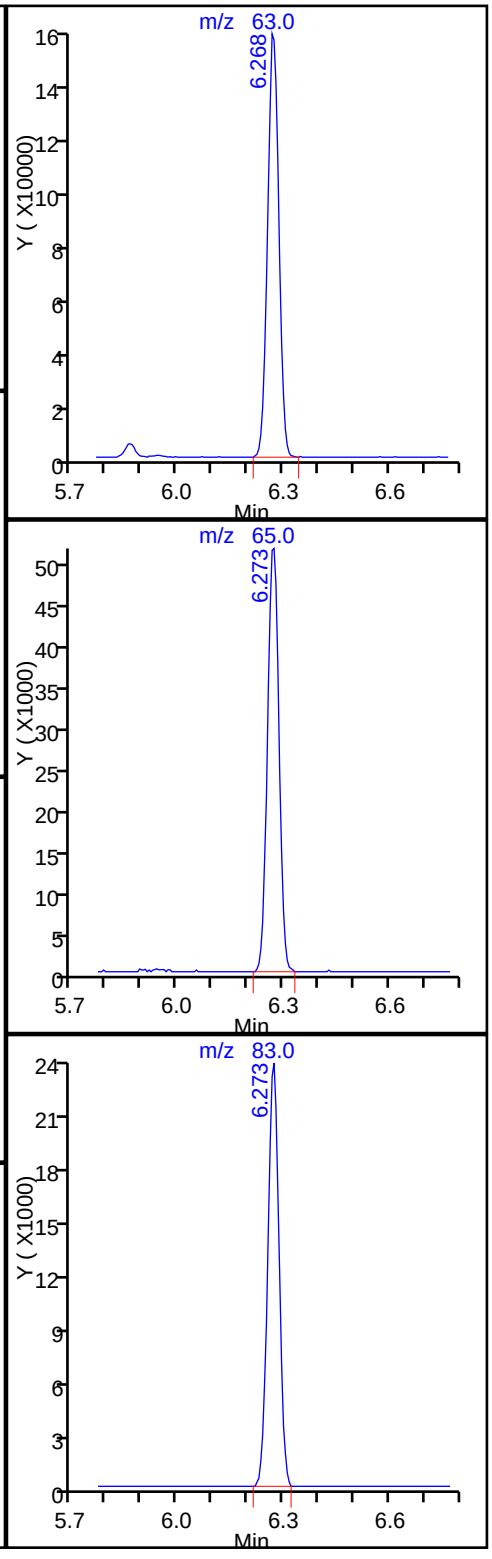


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

37 1,1-Dichloroethane, CAS: 75-34-3

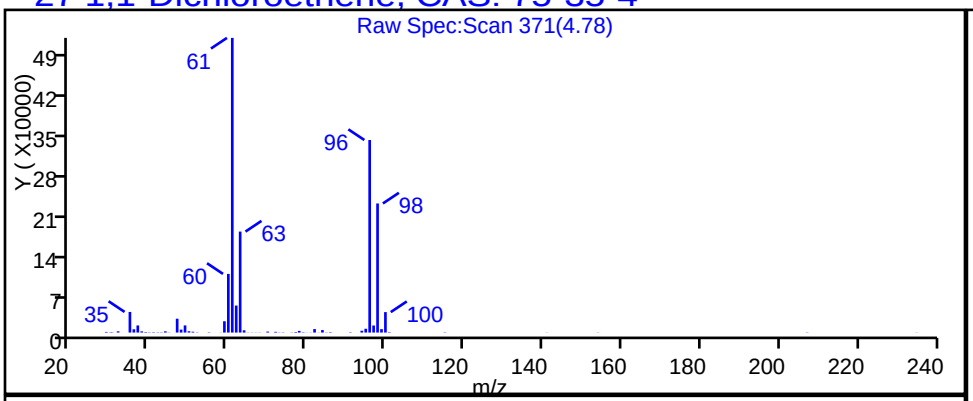


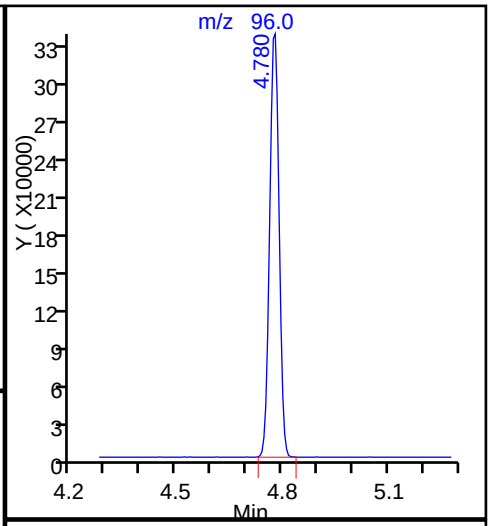


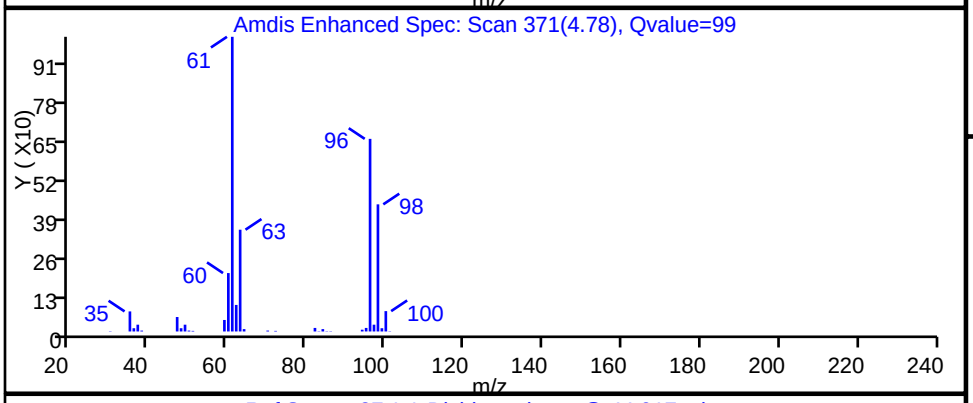
TestAmerica Knoxville

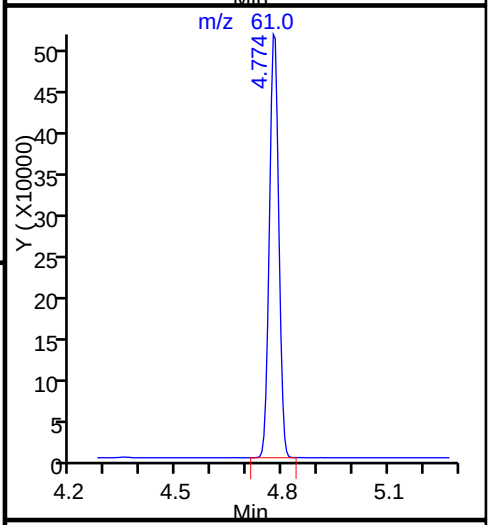
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

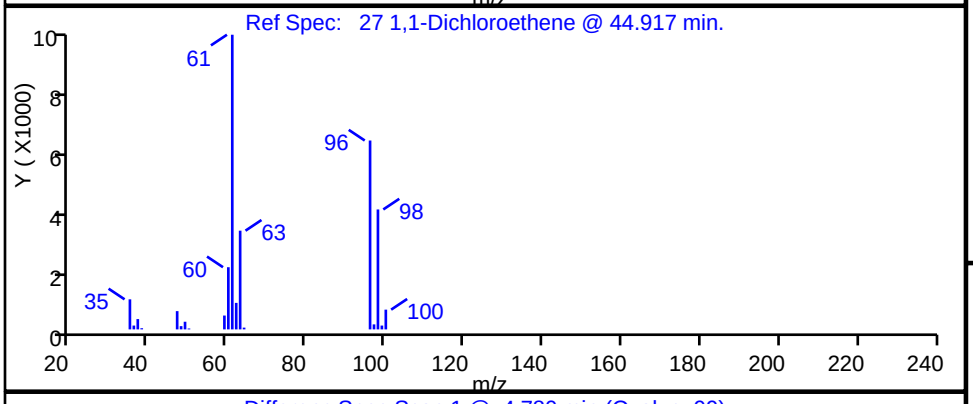
27 1,1-Dichloroethene, CAS: 75-35-4

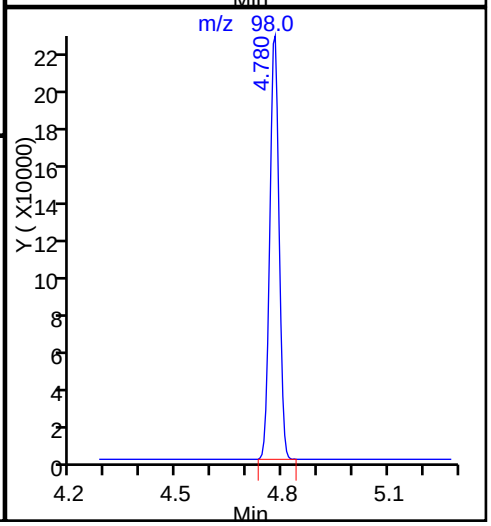


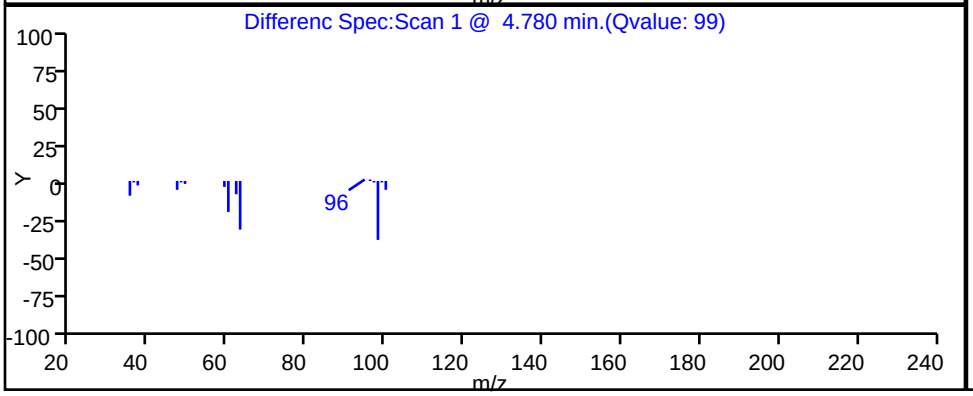








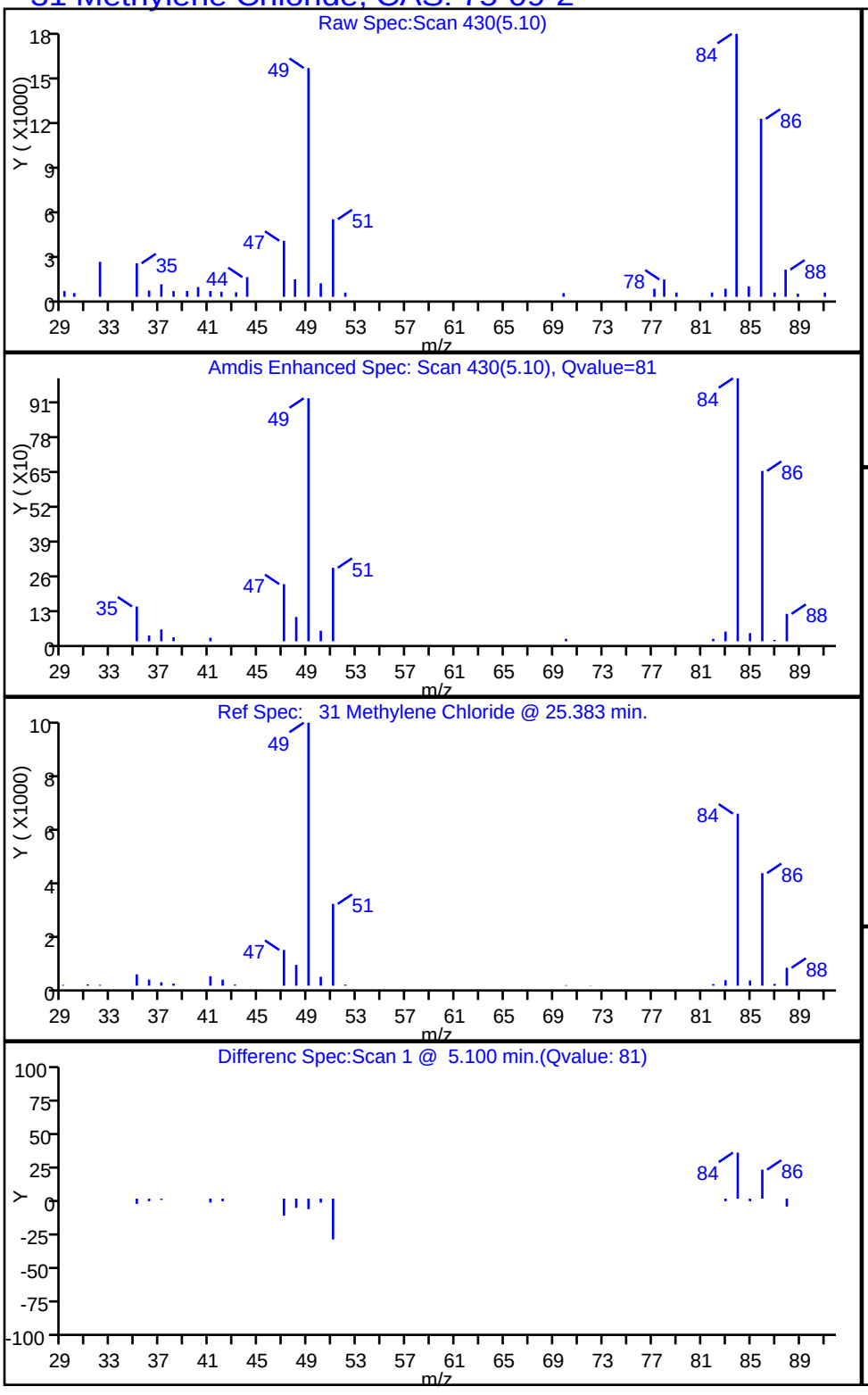


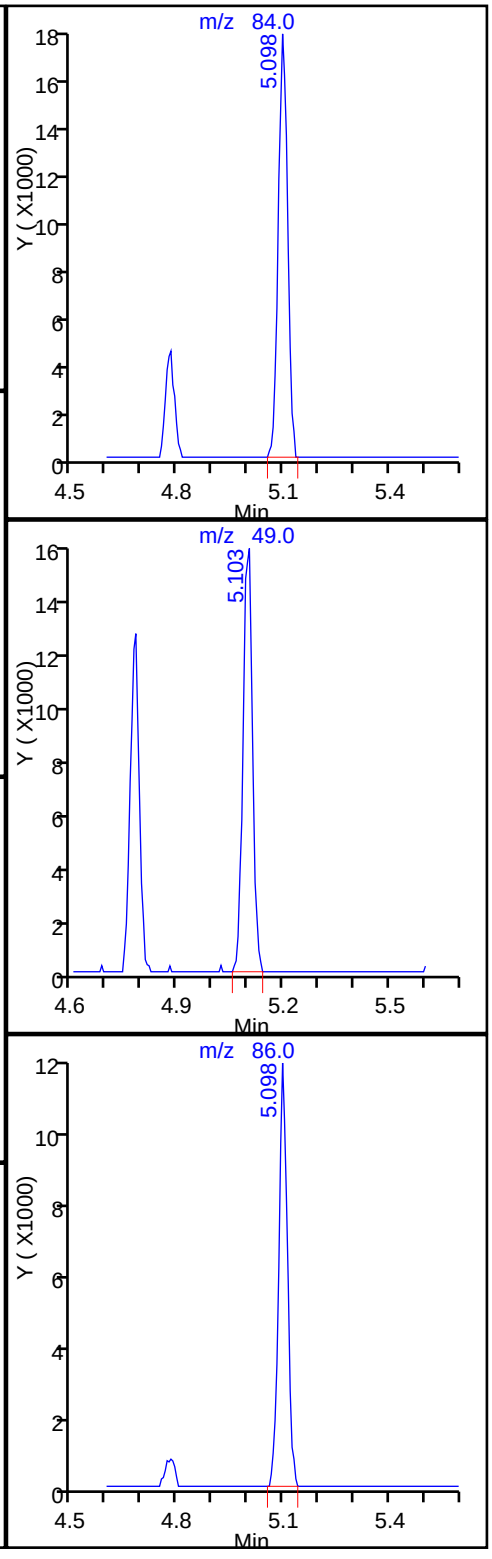


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D				
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME		
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3		
Client ID:	A-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

31 Methylene Chloride, CAS: 75-09-2

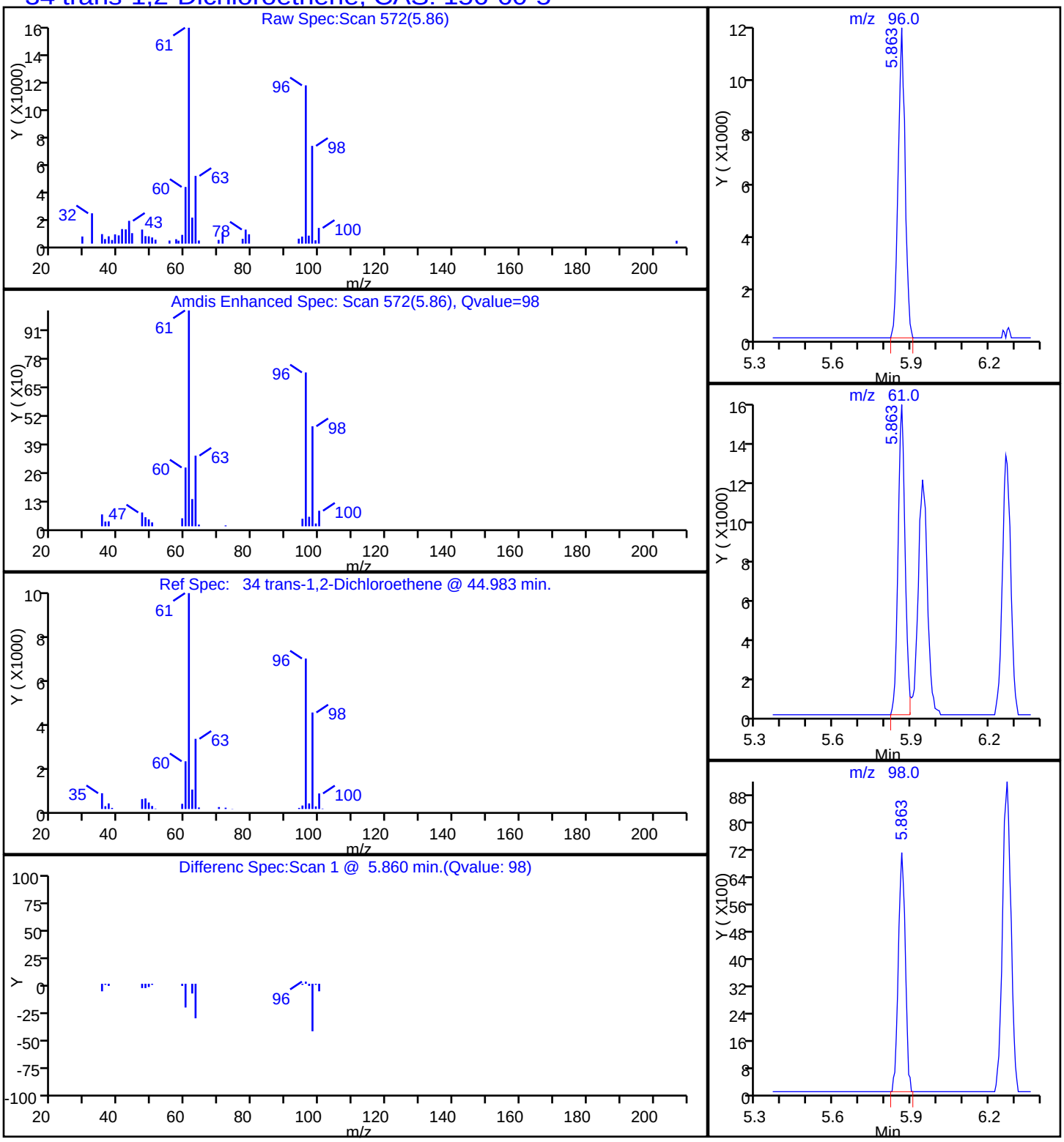




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D				
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME		
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3		
Client ID:	A-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

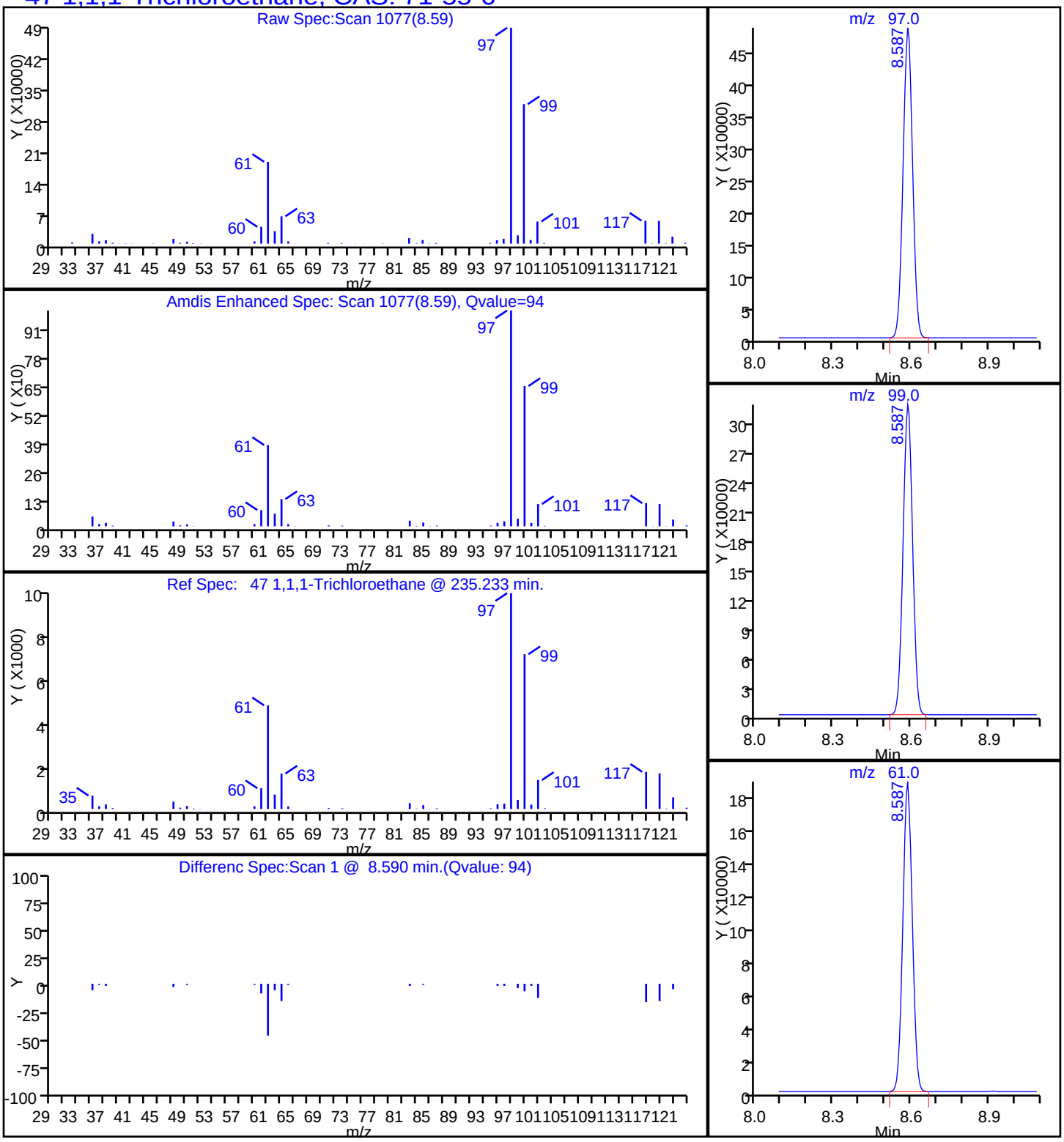
34 trans-1,2-Dichloroethene, CAS: 156-60-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D				
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME		
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3		
Client ID:	A-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	3	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

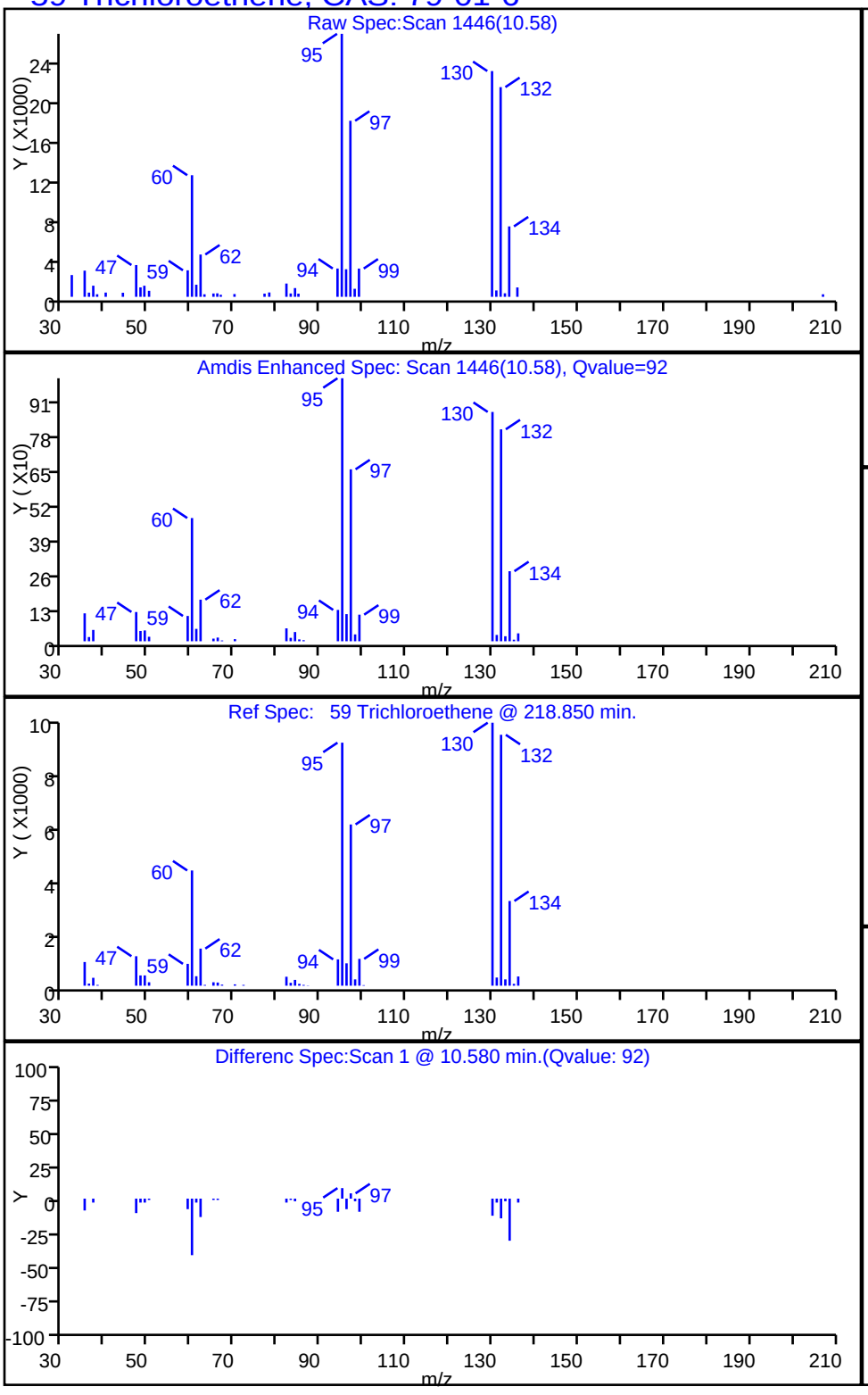
47 1,1,1-Trichloroethane, CAS: 71-55-6

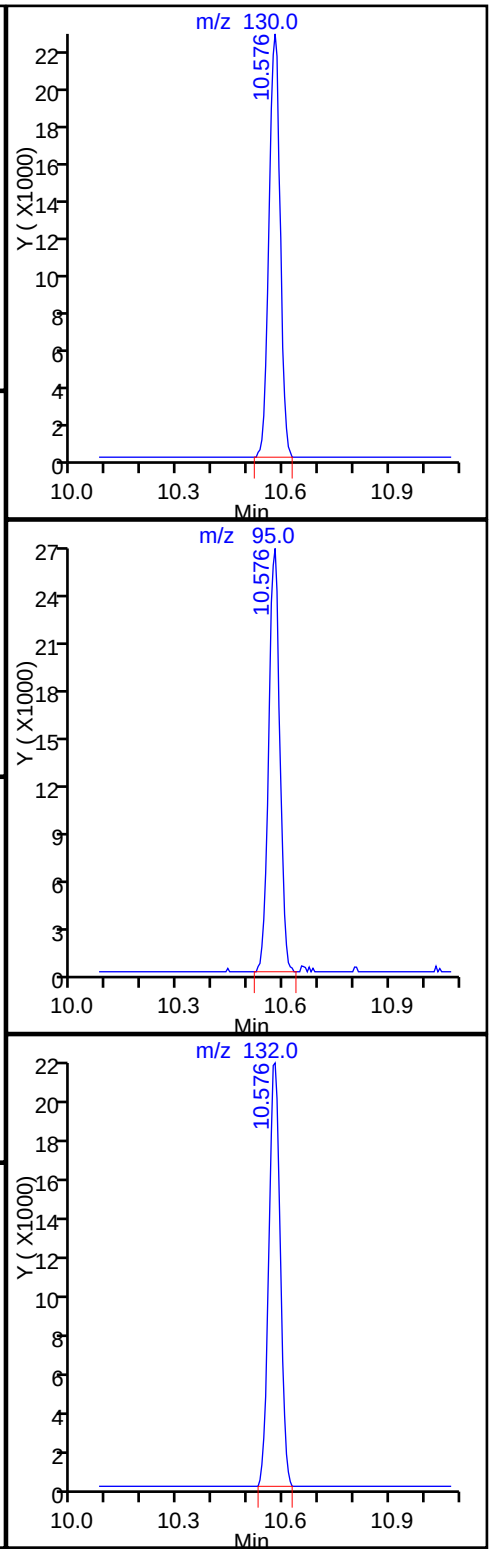


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

59 Trichloroethene, CAS: 79-01-6

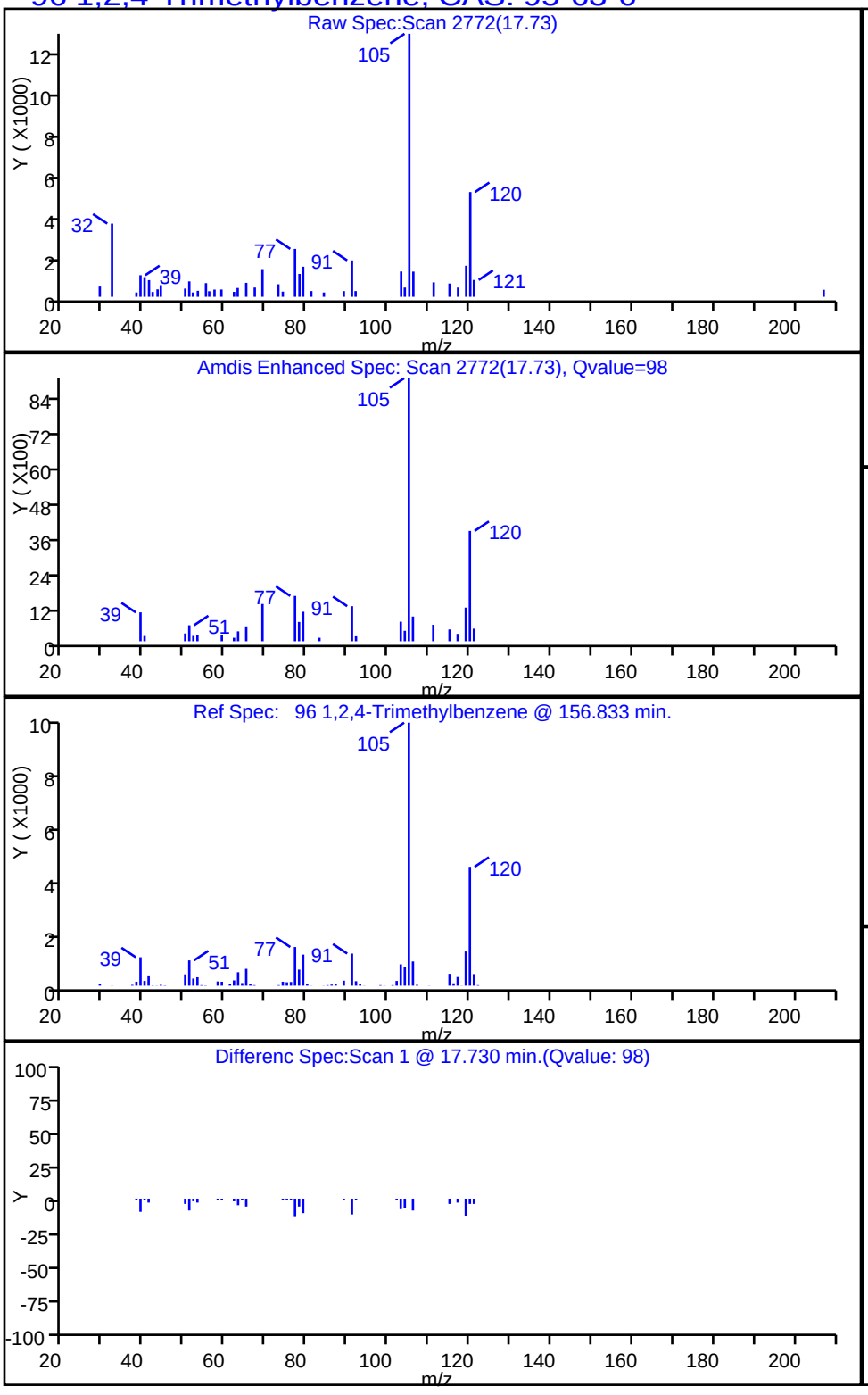


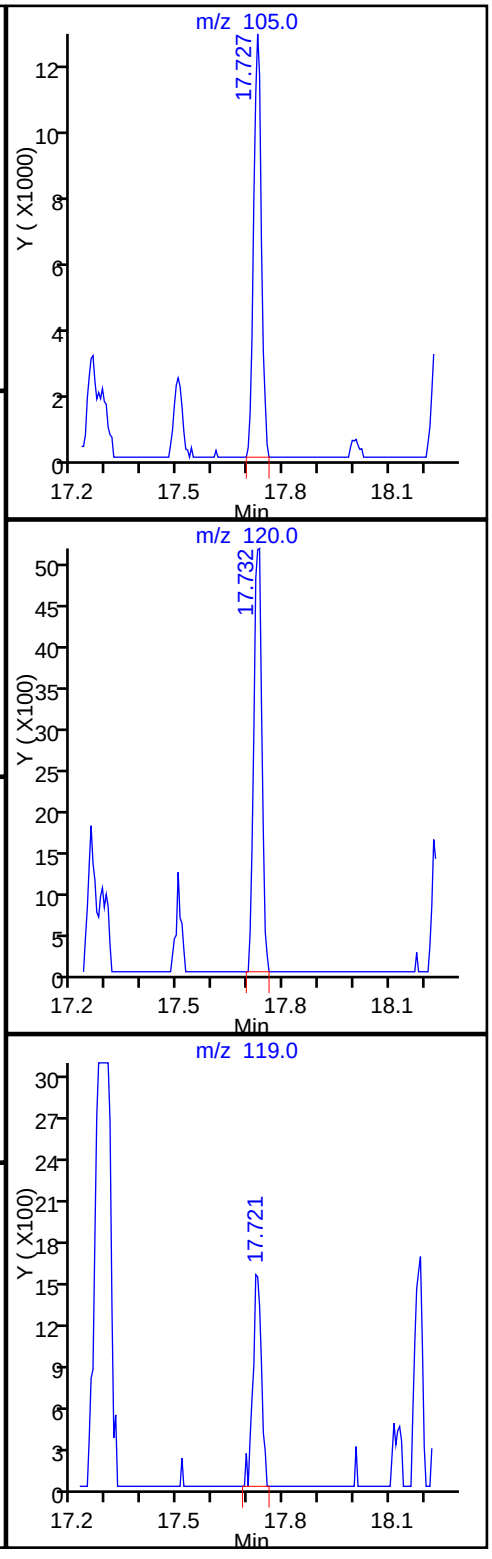


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p103.D		
Injection Date:	10-Sep-2016 19:49:30	Instrument ID:	ME
Lims ID:	140-5782-A-3	Lab Sample ID:	140-5782-3
Client ID:	A-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	3 Worklist Smp#: 10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

96 1,2,4-Trimethylbenzene, CAS: 95-63-6





FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: C-INFLUENT | Lab Sample ID: 140-5782-4

Matrix: Air | Lab File ID: EI10p104.D

Analysis Method: TO 15 LL | Date Collected: 09/07/2016 10:24

Sample wt/vol: 100(mL) | Date Analyzed: 09/10/2016 20:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6539 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.083	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.1		0.40	0.075
67-66-3	Chloroform	119.38	0.52		0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.64		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.49		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.0		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.49		0.40	0.070
100-41-4	Ethylbenzene	106.17	0.33	J	0.40	0.14
75-09-2	Methylene Chloride	84.93	1.5		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.15	J	0.40	0.080
108-88-3	Toluene	92.14	0.84		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	5.3		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	8.4		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.19	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.71		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.30	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	1.4		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: C-INFLUENT Lab Sample ID: 140-5782-4

Matrix: Air Lab File ID: EI10p104.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 10:24

Sample wt/vol: 100(mL) Date Analyzed: 09/10/2016 20:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	8.6		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.52	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	4.0		1.4	0.27
67-66-3	Chloroform	119.38	2.5		2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.5		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.4		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	4.2		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	1.9		1.6	0.28
100-41-4	Ethylbenzene	106.17	1.4	J	1.7	0.59
75-09-2	Methylene Chloride	84.93	5.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.0	J	2.7	0.54
108-88-3	Toluene	92.14	3.2		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	29		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	45		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	0.93	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	3.5		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.5	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	6.2		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Lims ID:	140-5782-A-4				
Client ID:	C-INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 20:34:30	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-011				
Misc. Info.:	140-5782-a-4				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: tajh		Date:	12-Sep-2016 11:24:44		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.568	7.568	0.000	74	362890	4.00	
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	94	1760181	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	89	1686283	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	88	1417862	4.11	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	94	9768	0.2269	
8 Dichlorodifluoromethane	85	2.946	2.952	-0.006	99	37439	0.0981	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	98	10869	0.0982	
31 Methylene Chloride	84	5.109	5.103	0.006	81	34837	0.3060	
37 1,1-Dichloroethane	63	6.279	6.279	0.000	100	41915	0.2077	
42 cis-1,2-Dichloroethene	96	7.244	7.239	0.005	90	15482	0.1275	
44 Chloroform	83	7.578	7.584	-0.006	90	31244	0.1033	
47 1,1,1-Trichloroethane	97	8.592	8.592	0.000	94	359543	1.06	
51 Benzene	78	9.196	9.196	0.000	94	194748	0.5398	
52 Carbon tetrachloride	117	9.218	9.223	-0.005	27	5761	0.0165	
59 Trichloroethene	130	10.577	10.582	-0.005	93	264408	1.68	
68 Toluene	91	12.777	12.777	0.000	95	67866	0.1678	
76 Tetrachloroethene	129	13.958	13.958	0.000	41	4844	0.0308	
79 Ethylbenzene	91	15.160	15.160	0.000	98	36210	0.0667	
81 m-Xylene & p-Xylene	91	15.322	15.327	-0.005	99	88481	0.2091	
85 o-Xylene	91	15.856	15.856	0.000	64	37706	0.0849	
92 1,3,5-Trimethylbenzene	120	17.252	17.258	-0.006	90	15264	0.0593	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	98	68058	0.1428	
102 1,2,3-Trimethylbenzene	105	18.234	18.234	0.000	97	13631	0.0379	
S 126 Xylenes, Total	100				0		0.2940	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

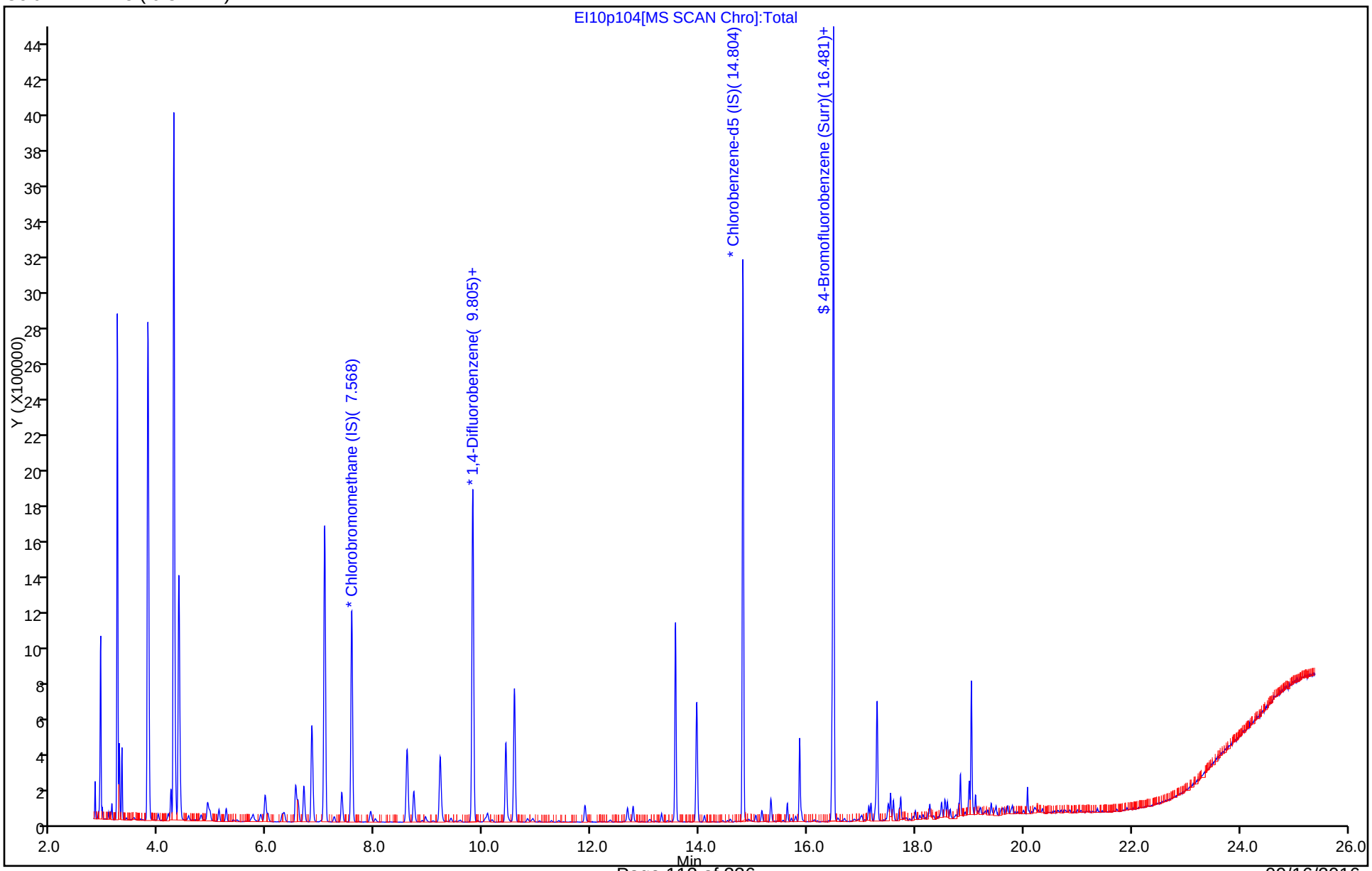
Report Date: 12-Sep-2016 11:33:57 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D

Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4	Worklist Smp#:	11
Client ID:	C-INFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	4
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Lims ID:	140-5782-A-4				
Client ID:	C-INFLUENT				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 20:34:30	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-011				
Misc. Info.:	140-5782-a-4				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

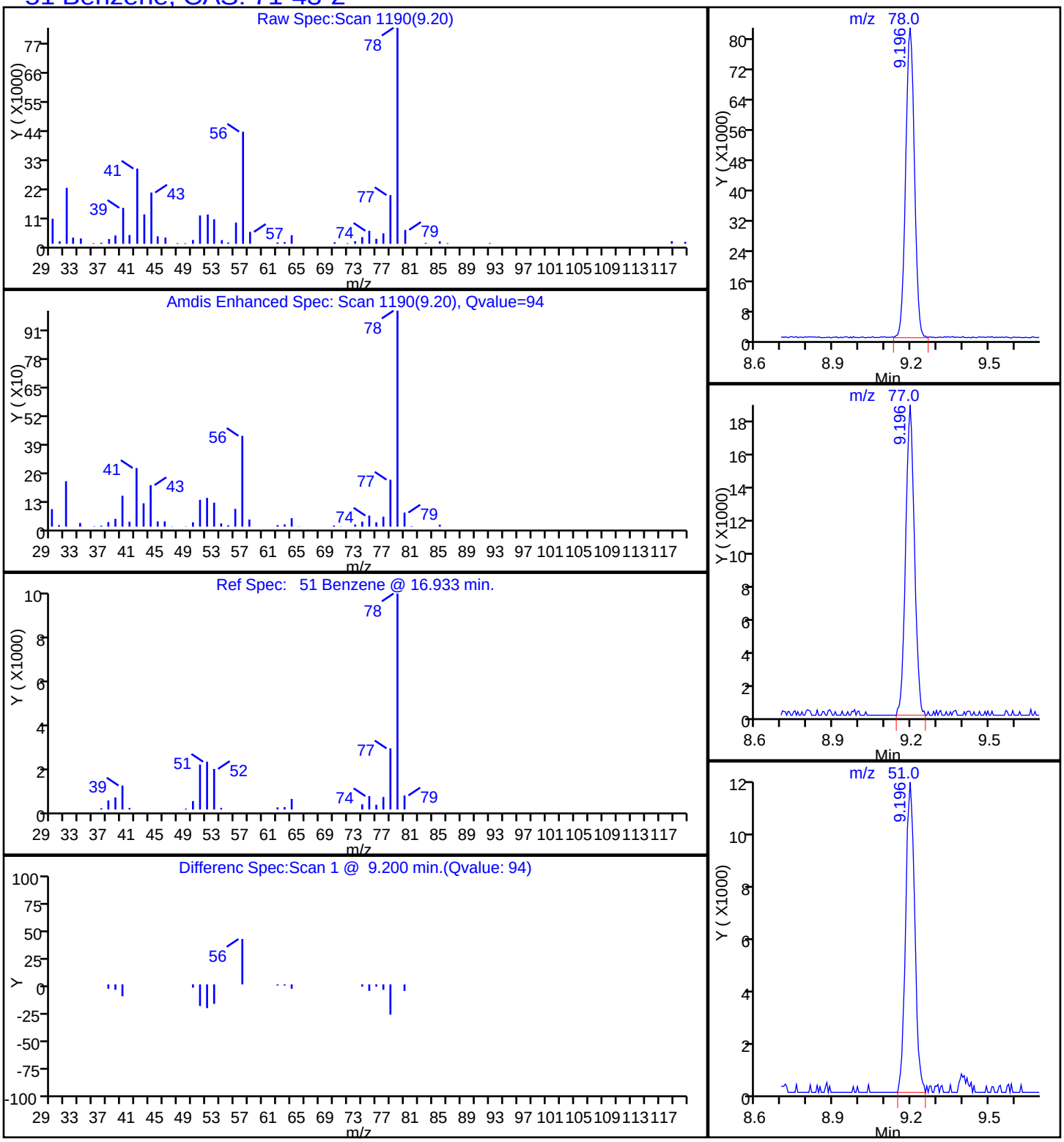
First Level Reviewer: tajh Date: 12-Sep-2016 11:24:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.11	102.73

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D		
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4
Client ID:	C-INFLUENT		
Operator ID:	403648	ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

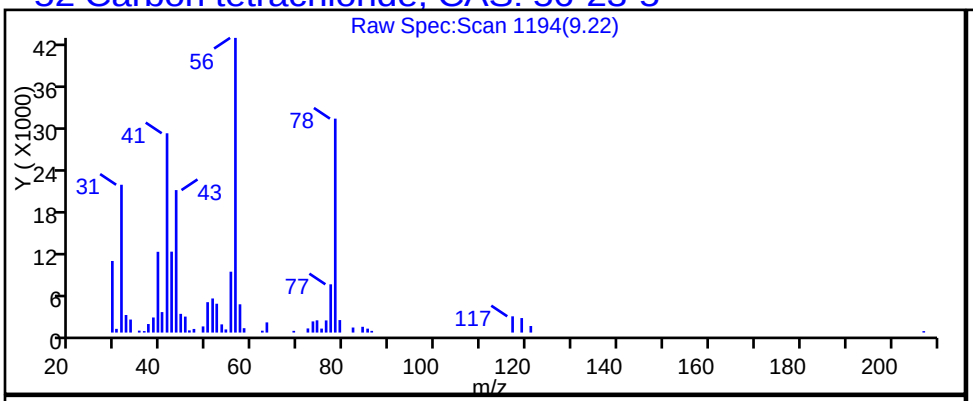
51 Benzene, CAS: 71-43-2

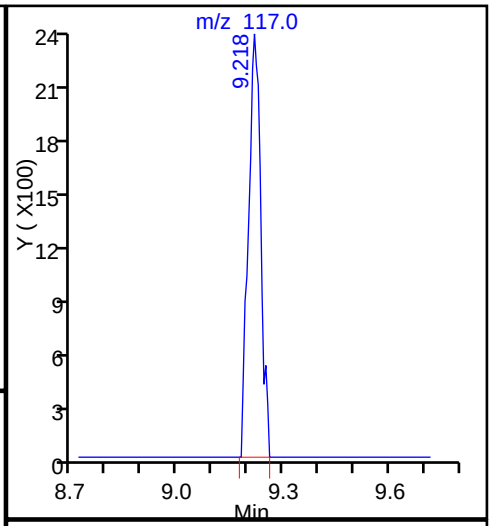


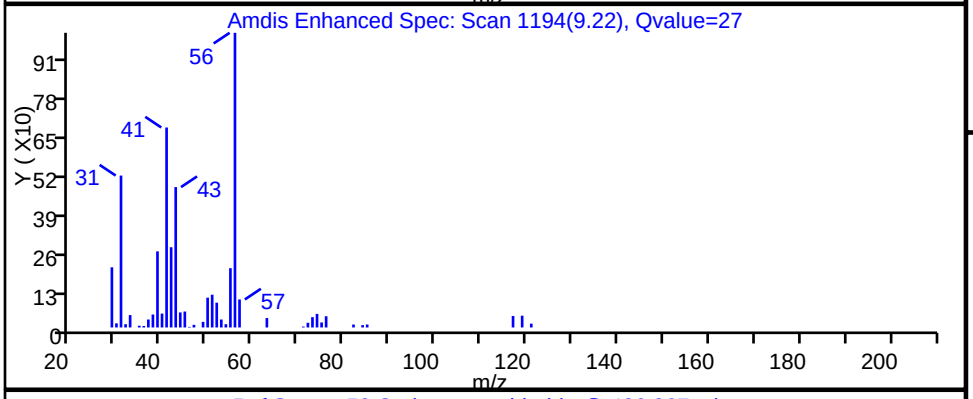
TestAmerica Knoxville

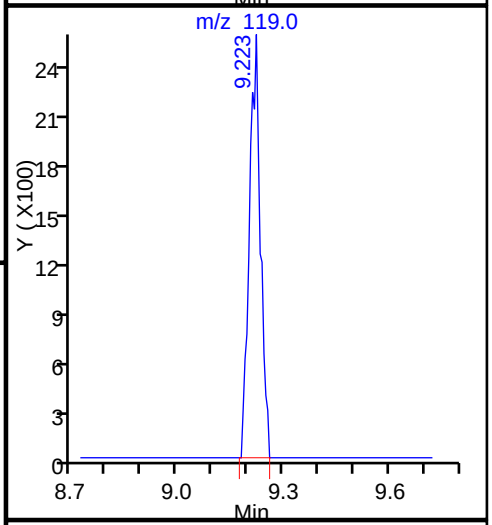
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

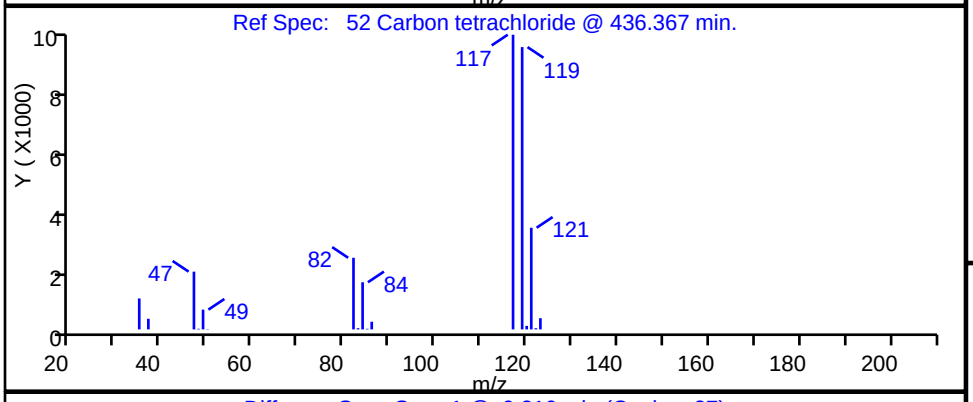
52 Carbon tetrachloride, CAS: 56-23-5

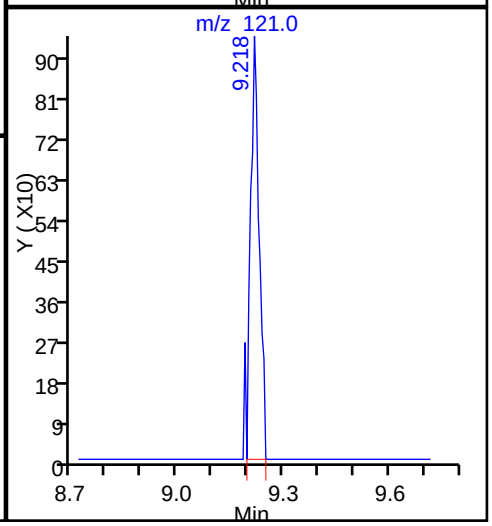


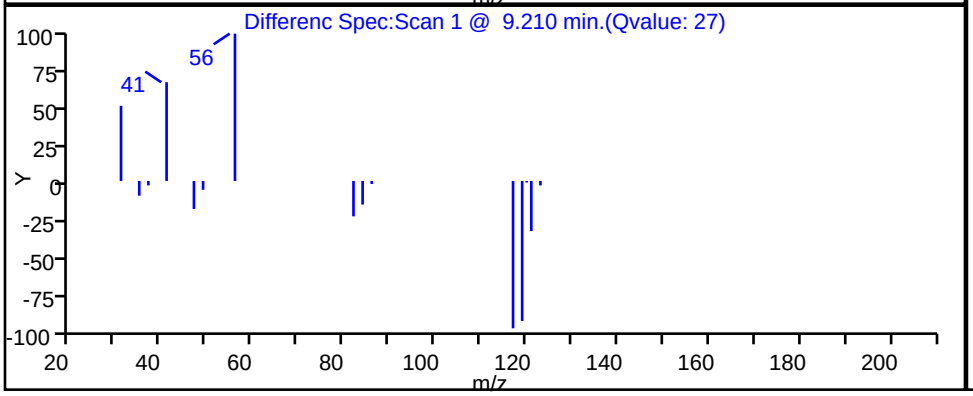








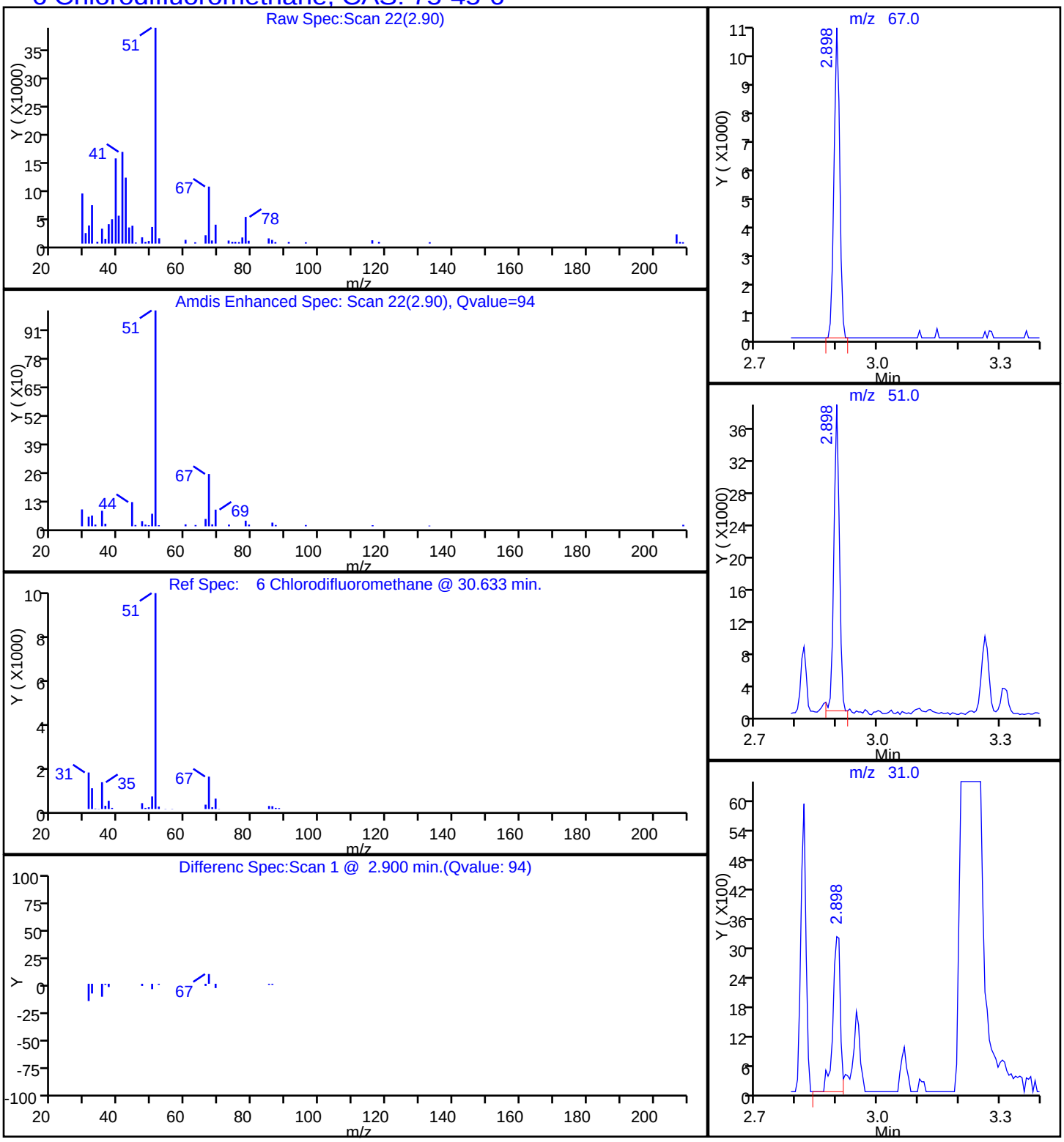




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D		
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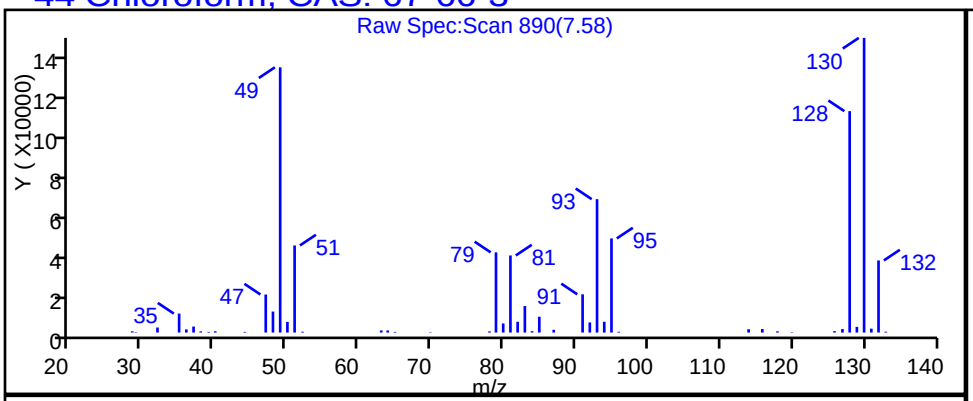
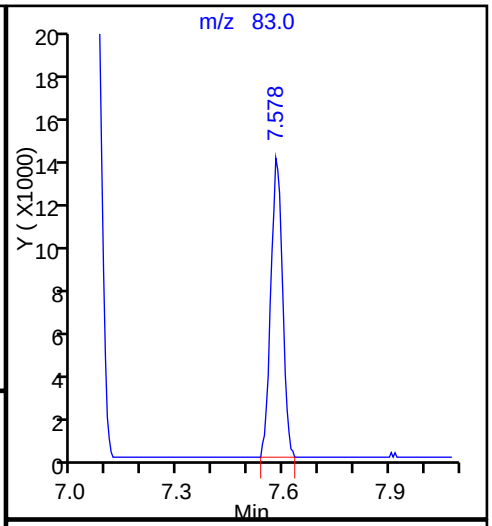
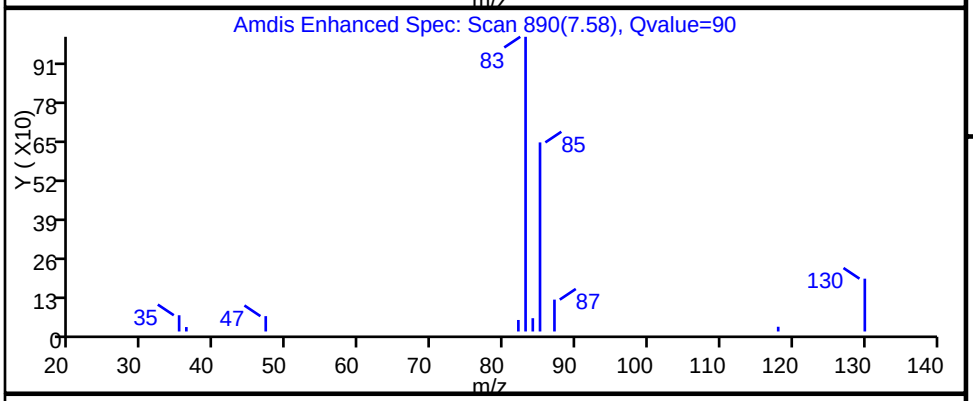
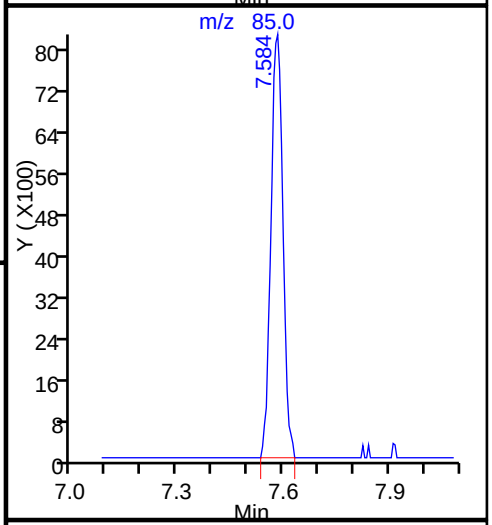
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4
Client ID:	C-INFLUENT		
Operator ID:	403648	ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

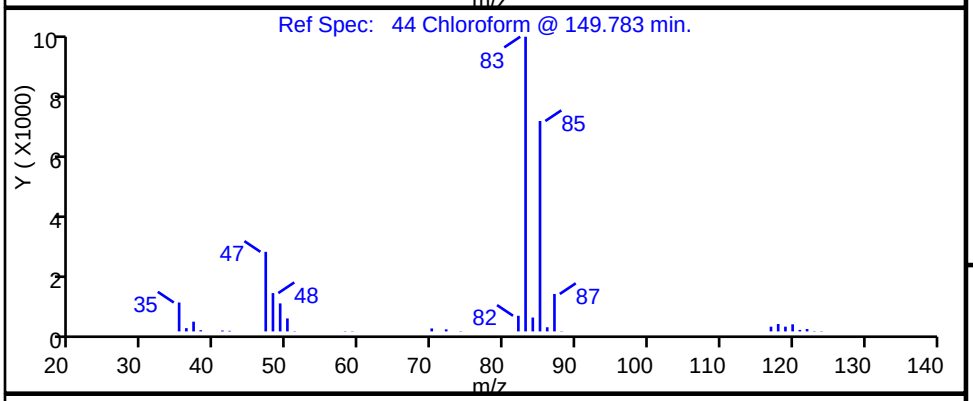
44 Chloroform, CAS: 67-66-3

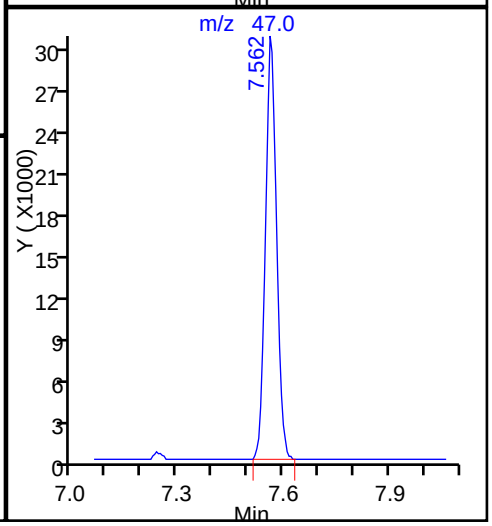


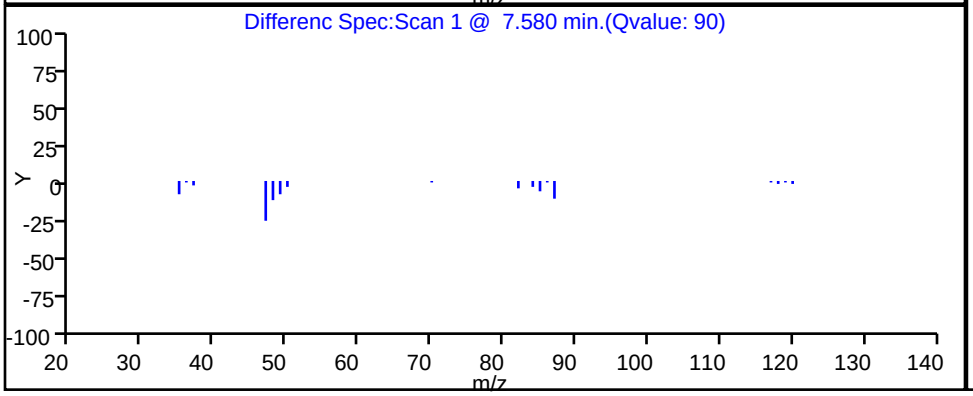








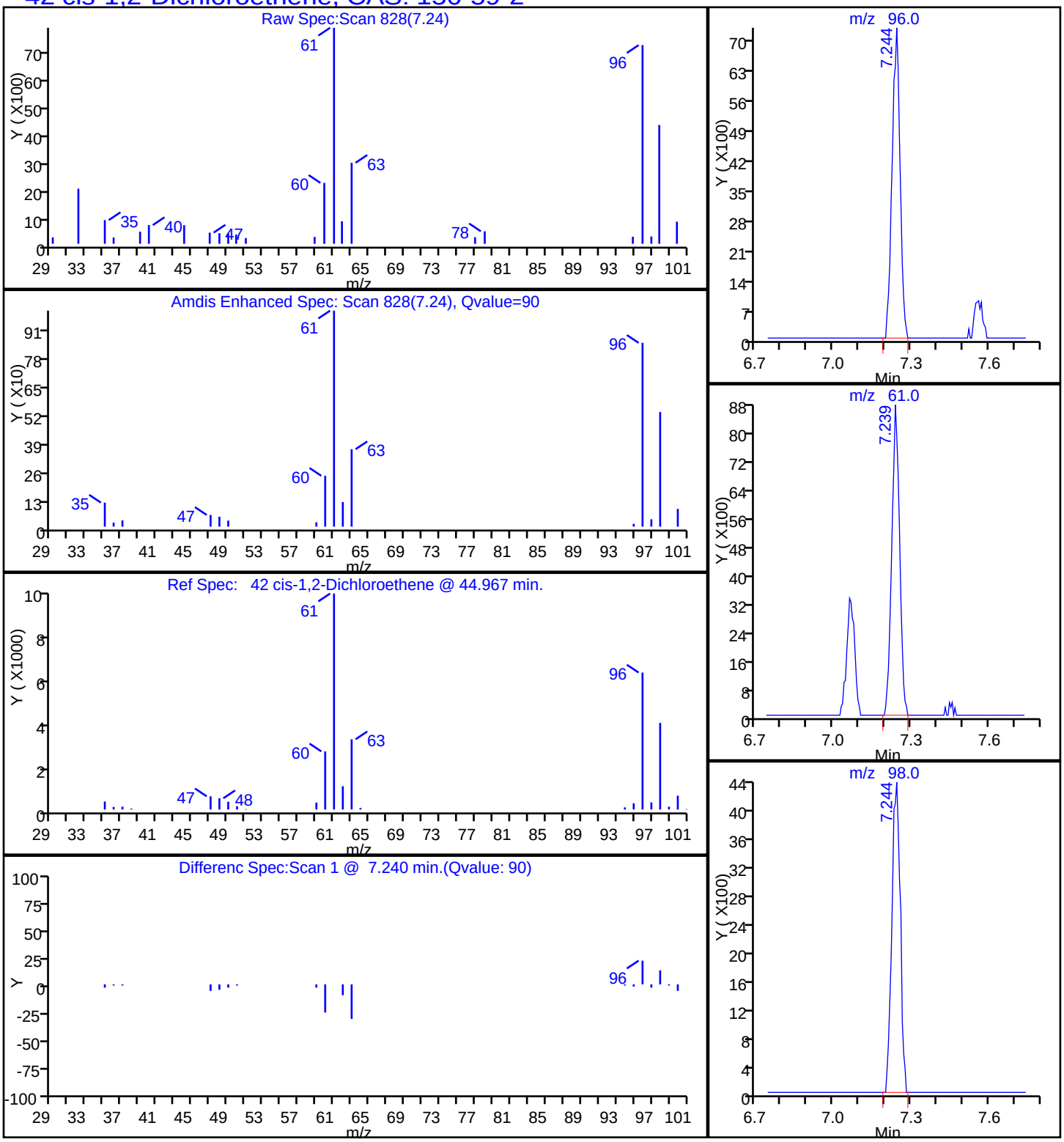




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

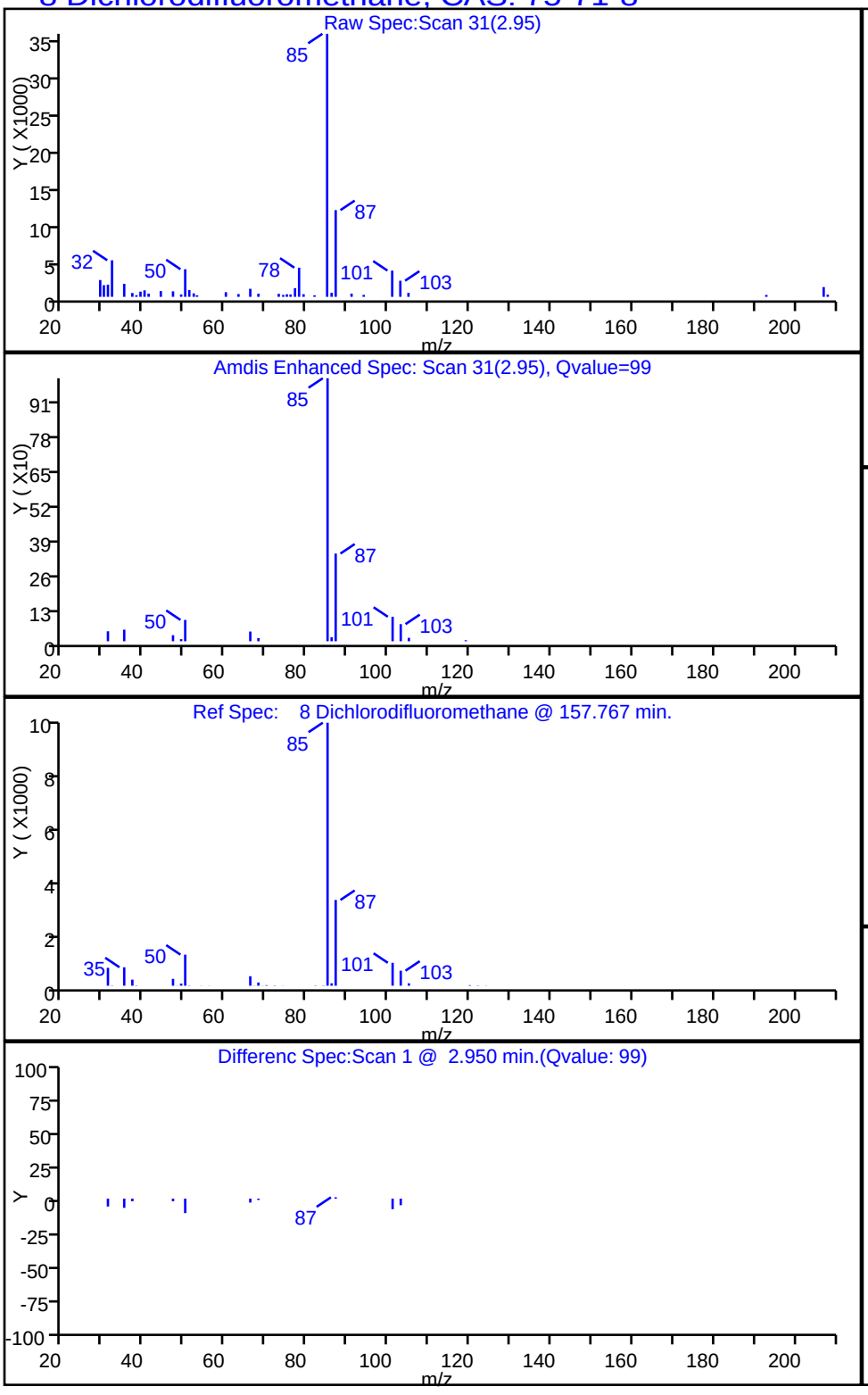
42 cis-1,2-Dichloroethene, CAS: 156-59-2

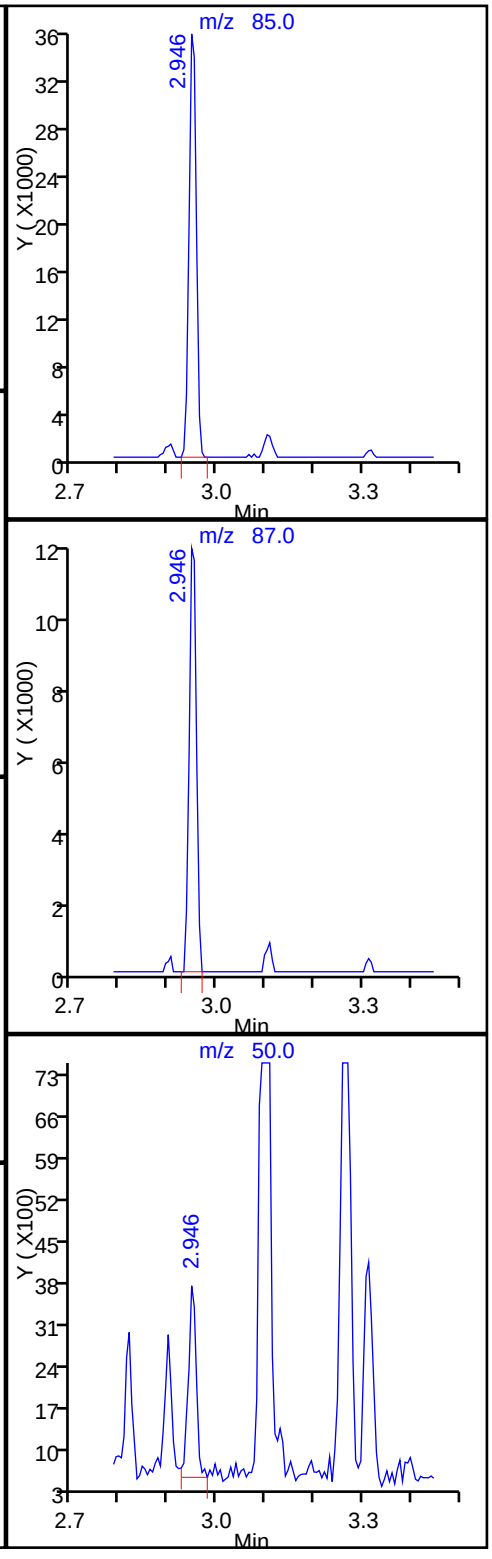


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D		
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4
Client ID:	C-INFLUENT		
Operator ID:	403648	ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

8 Dichlorodifluoromethane, CAS: 75-71-8

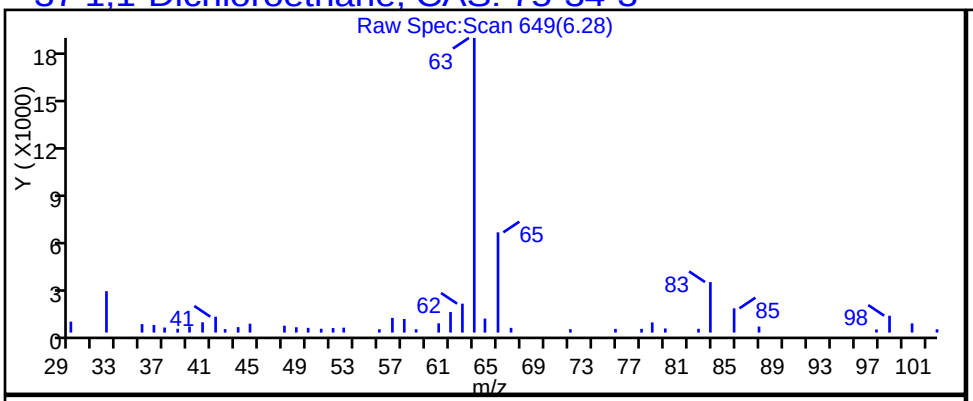


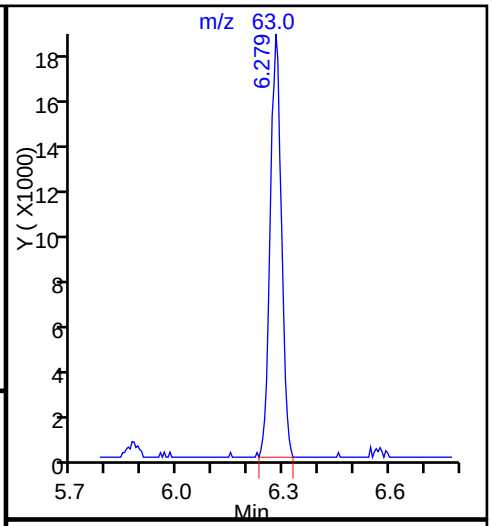


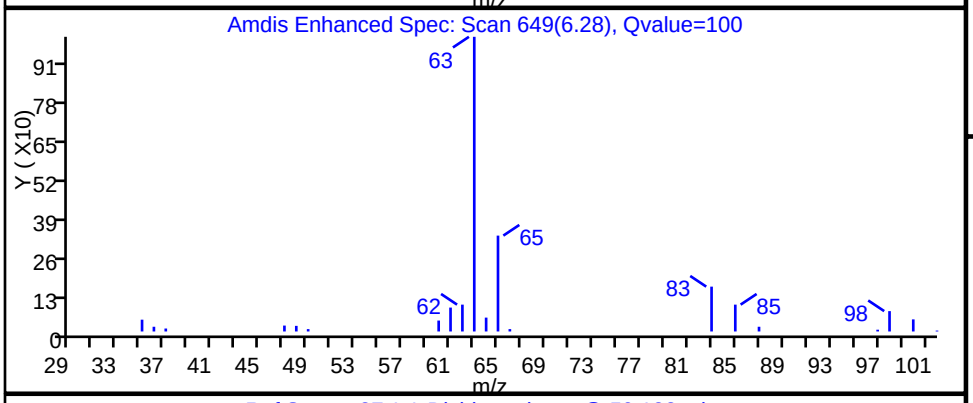
TestAmerica Knoxville

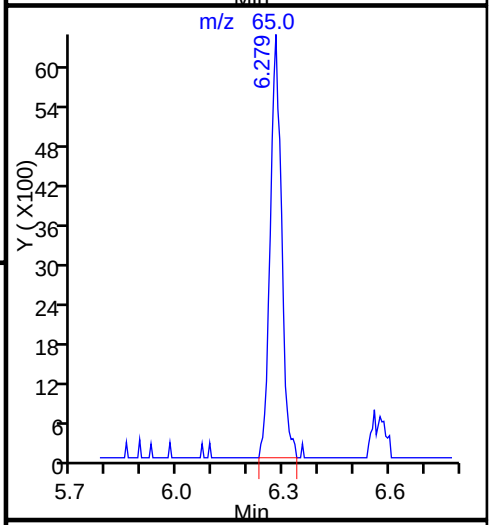
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D		
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4
Client ID:	C-INFLUENT		
Operator ID:	403648	ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

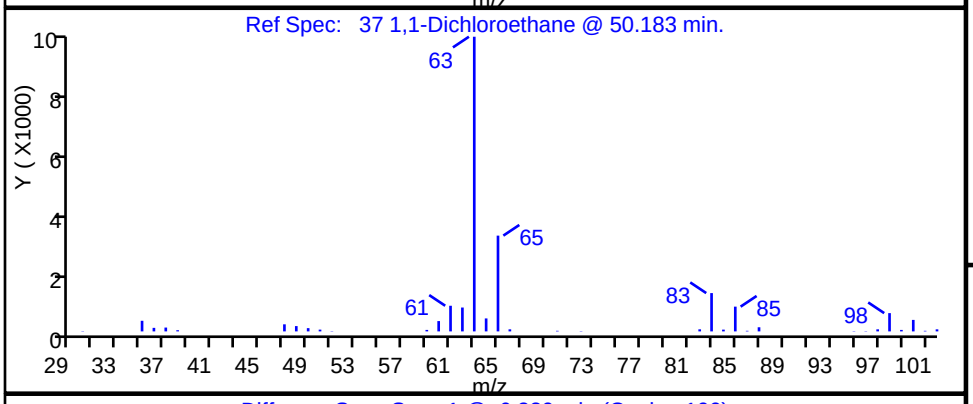
37 1,1-Dichloroethane, CAS: 75-34-3

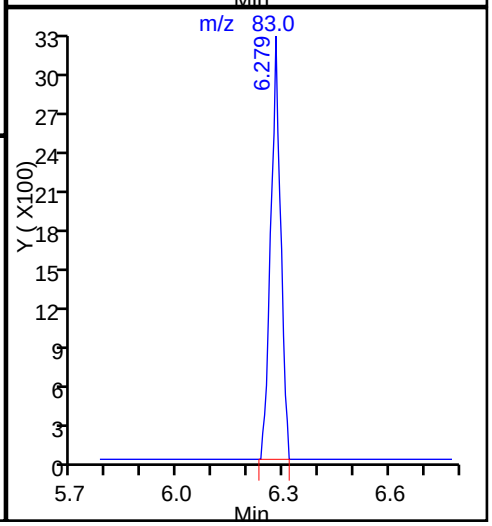


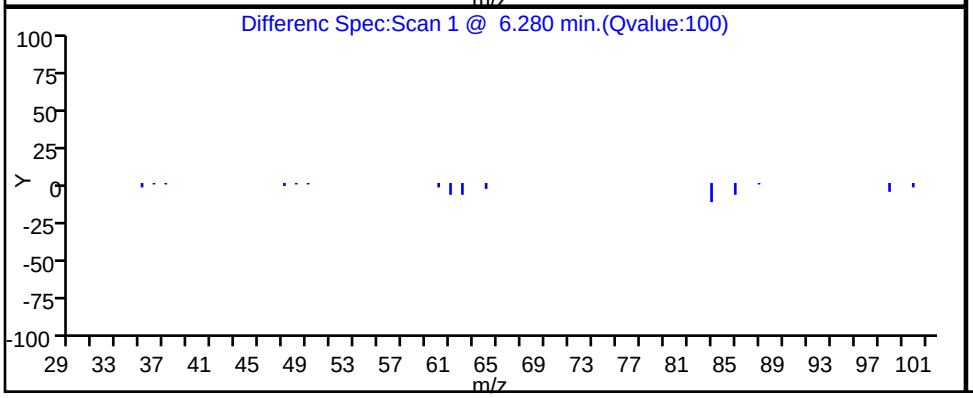








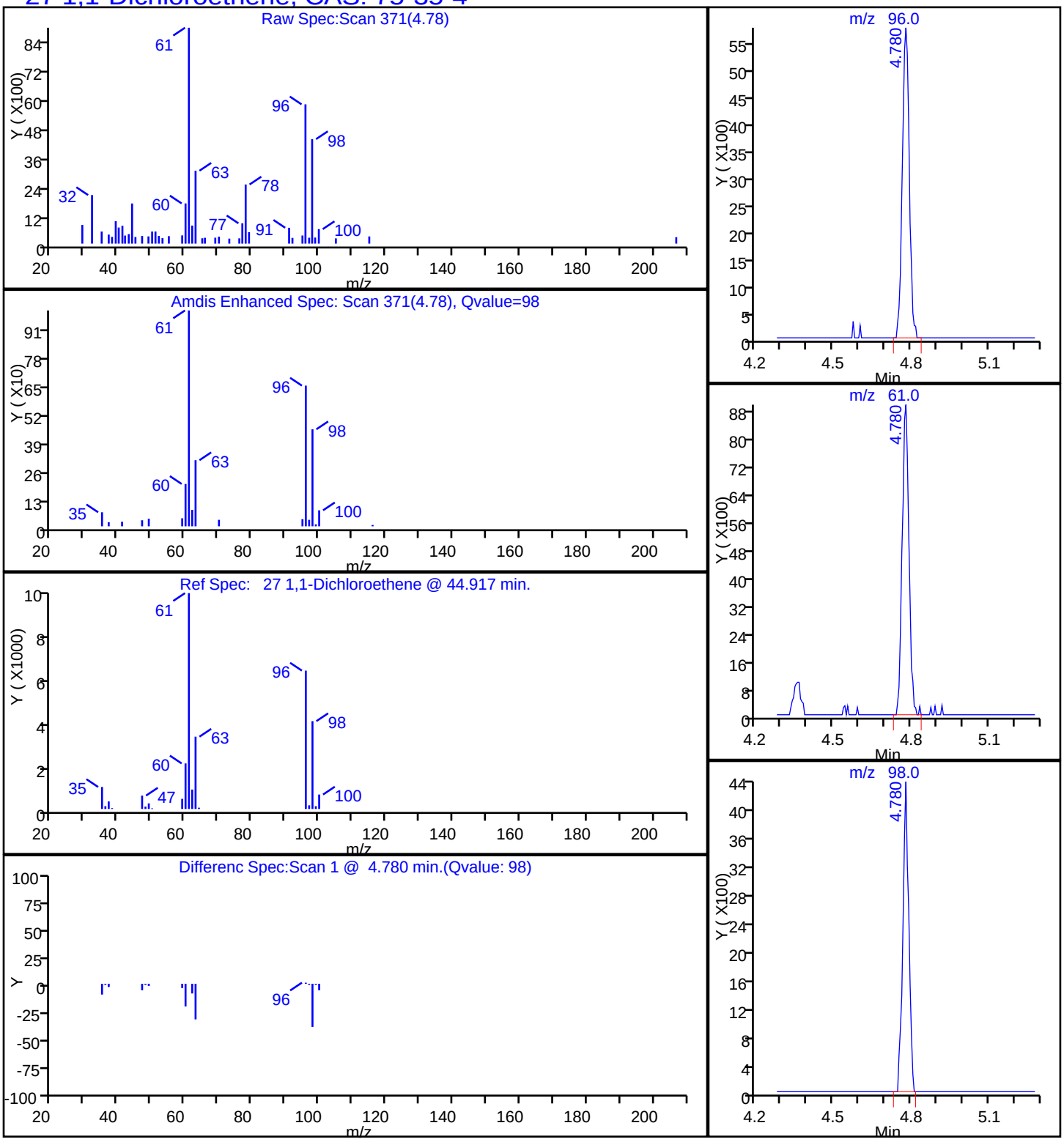




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

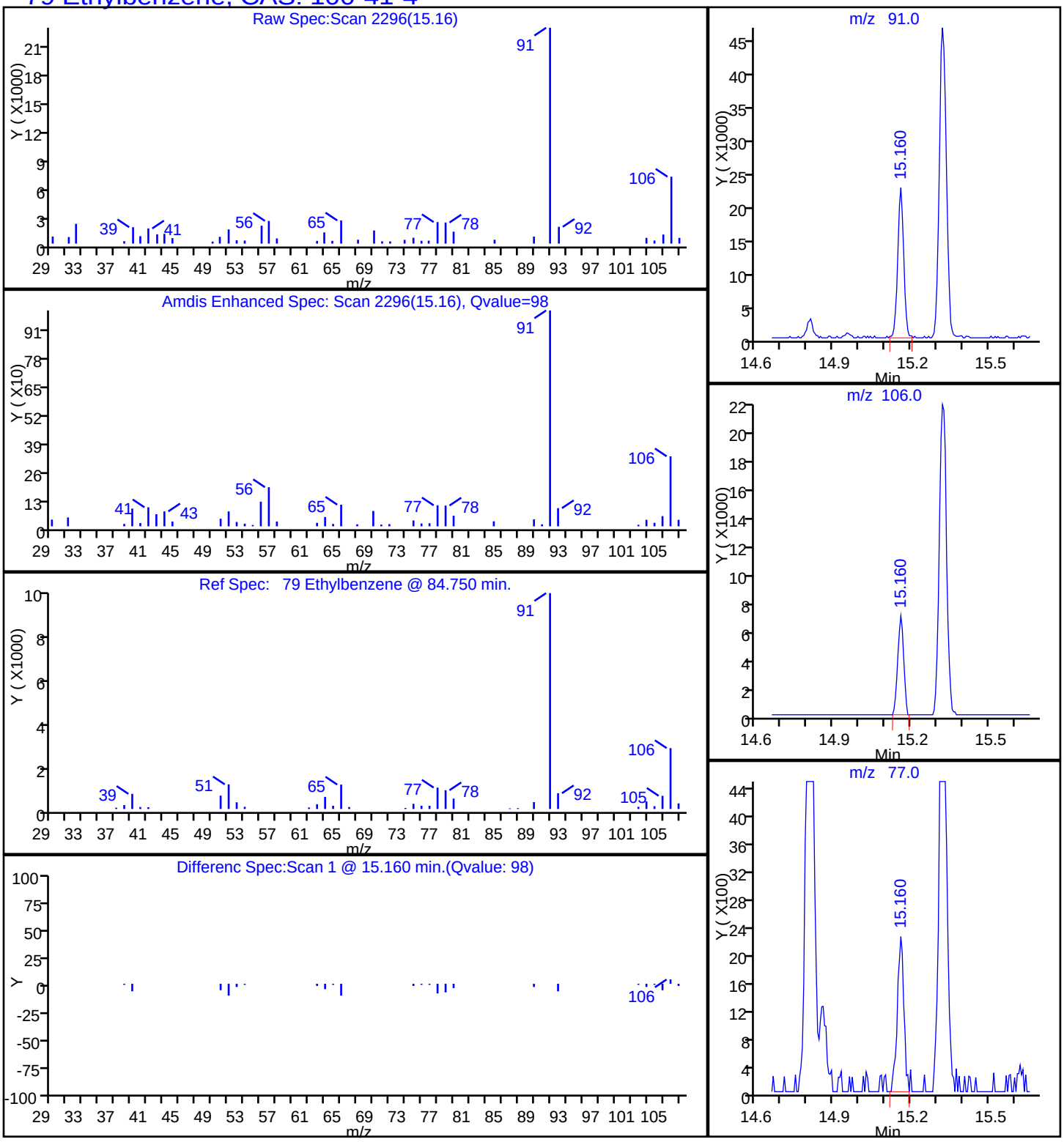
27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

79 Ethylbenzene, CAS: 100-41-4



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
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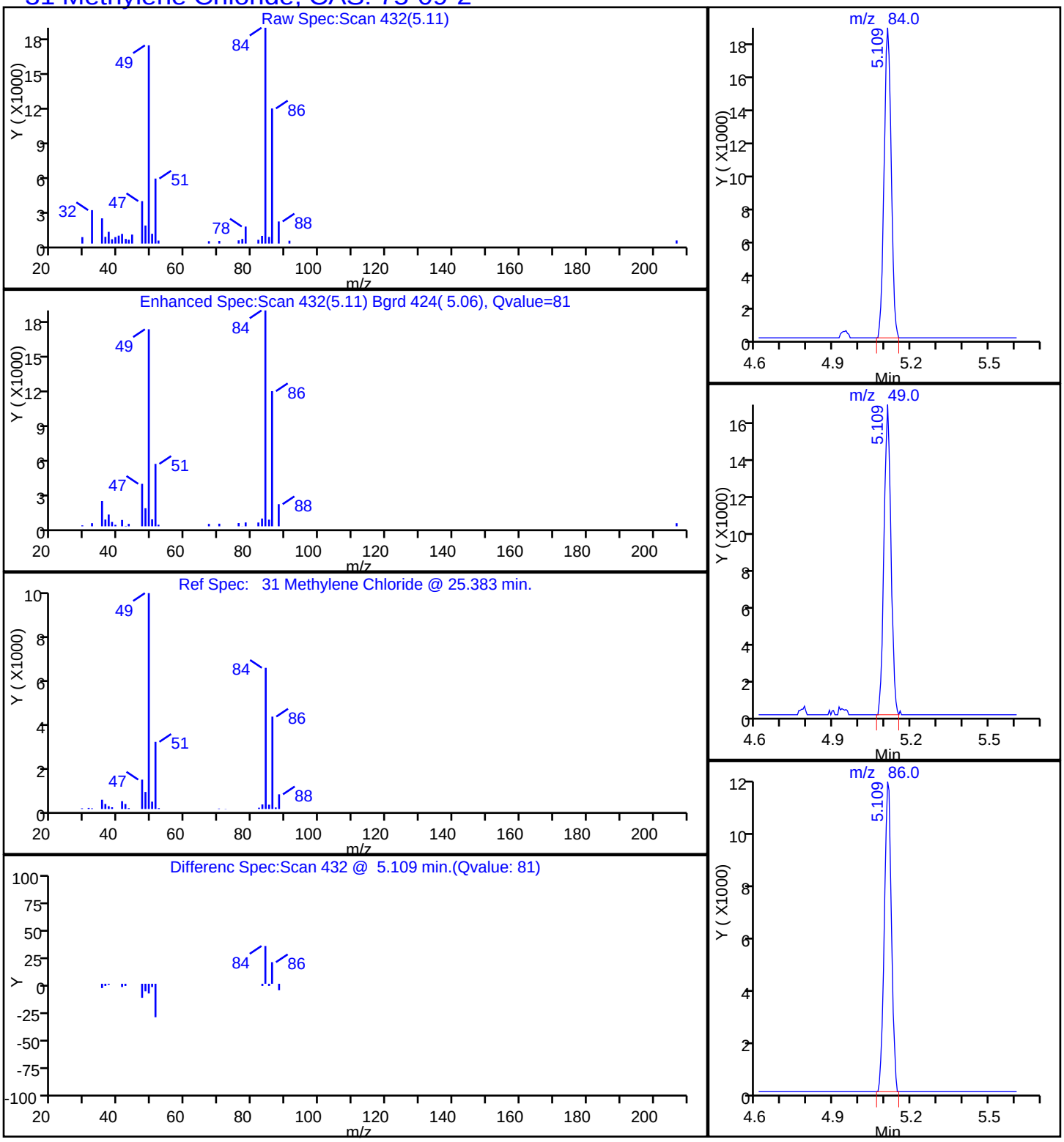
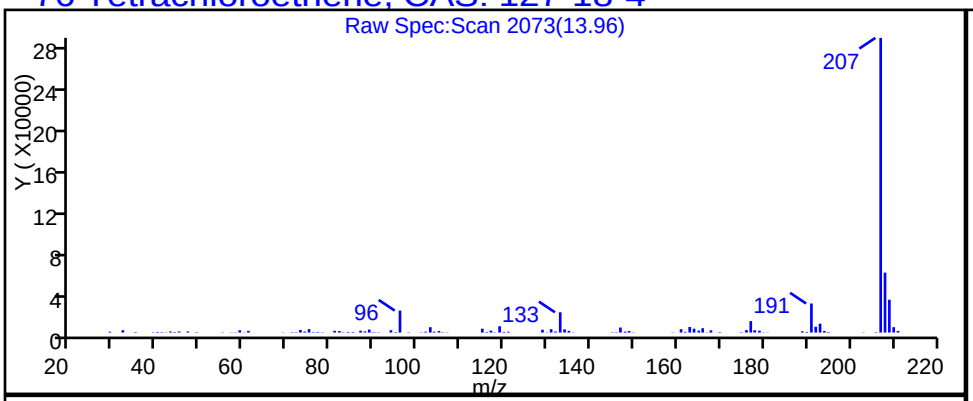
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

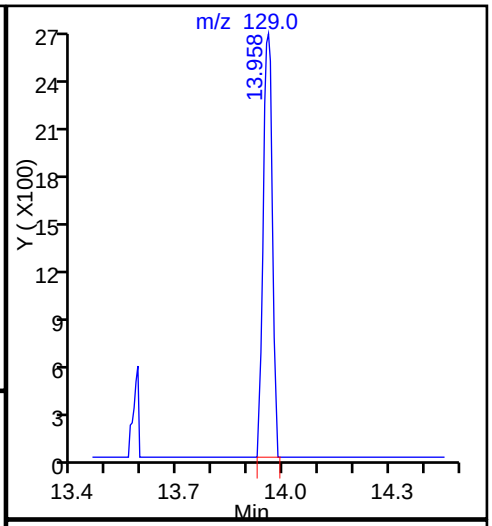
31 Methylene Chloride, CAS: 75-09-2

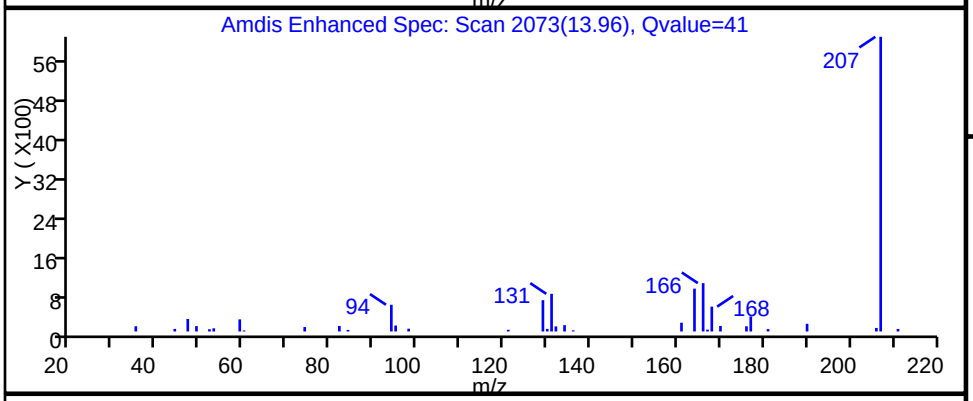


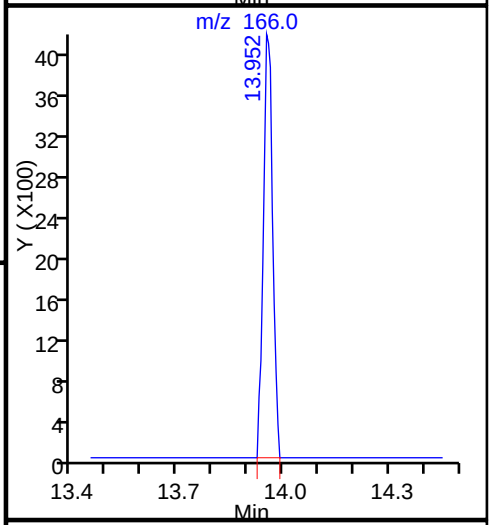
Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D
Injection Date: 10-Sep-2016 20:34:30 Instrument ID: ME
Lims ID: 140-5782-A-4 Lab Sample ID: 140-5782-4
Client ID: C-INFLUENT
Operator ID: 403648 ALS Bottle#: 4 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

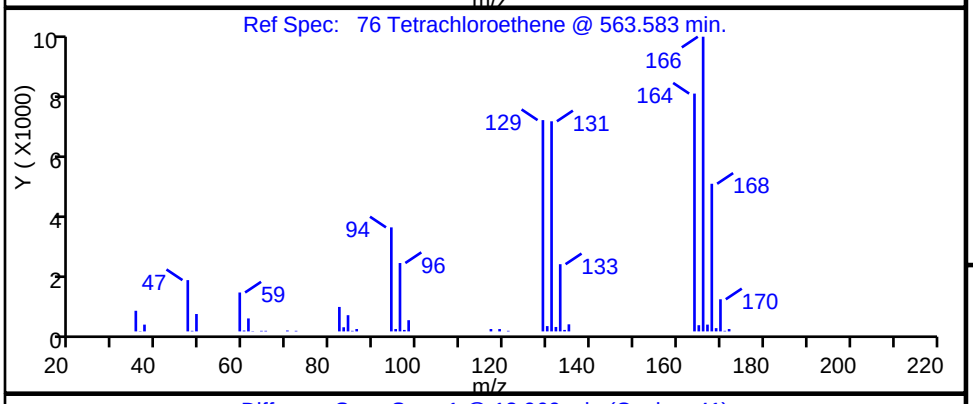
76 Tetrachloroethene, CAS: 127-18-4

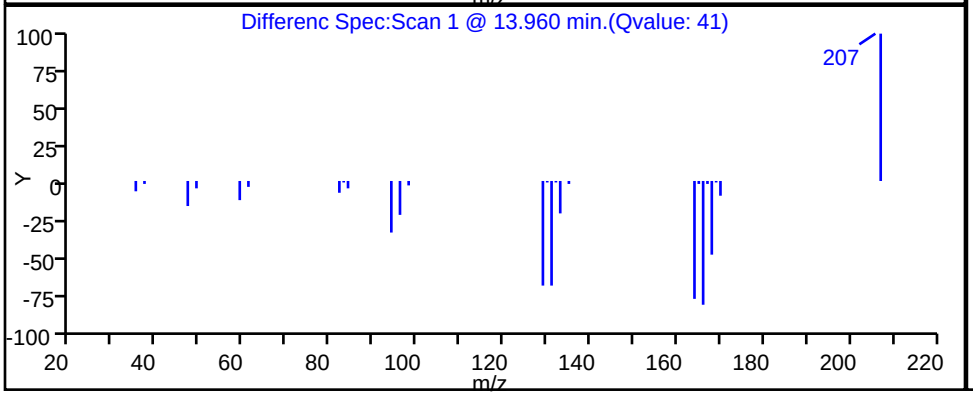


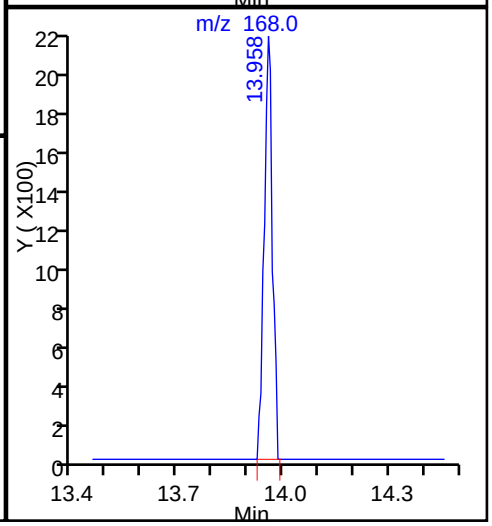








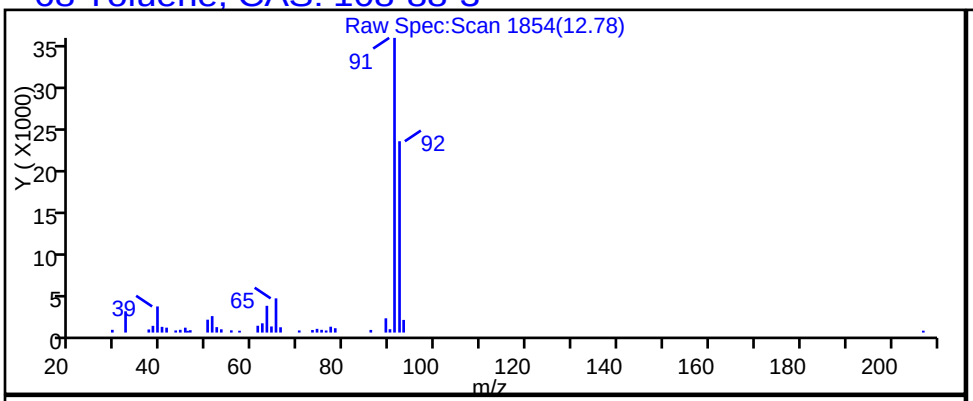


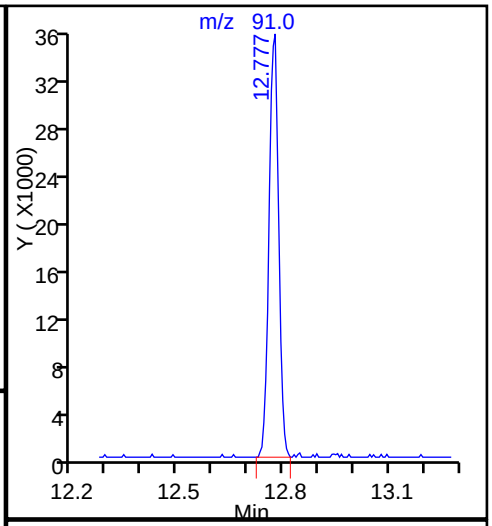


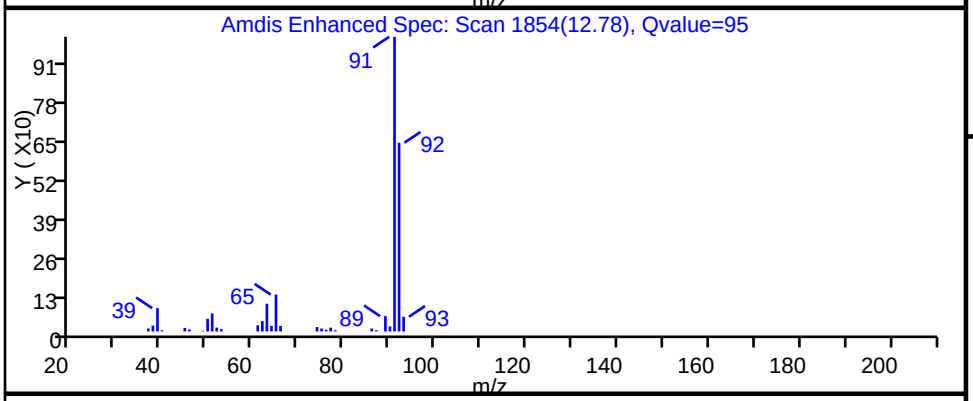
TestAmerica Knoxville

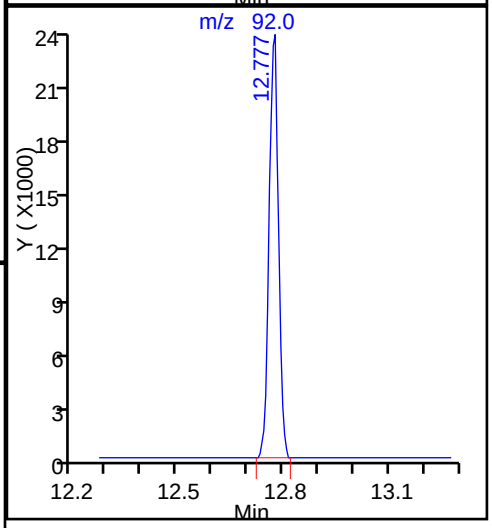
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

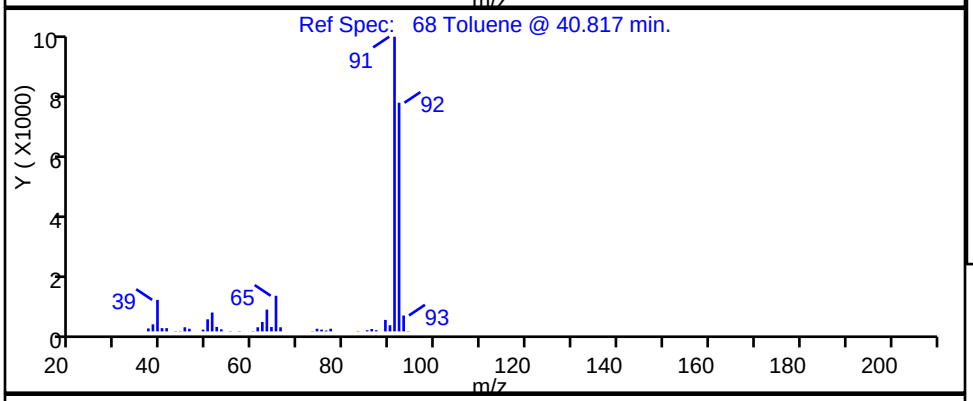
68 Toluene, CAS: 108-88-3

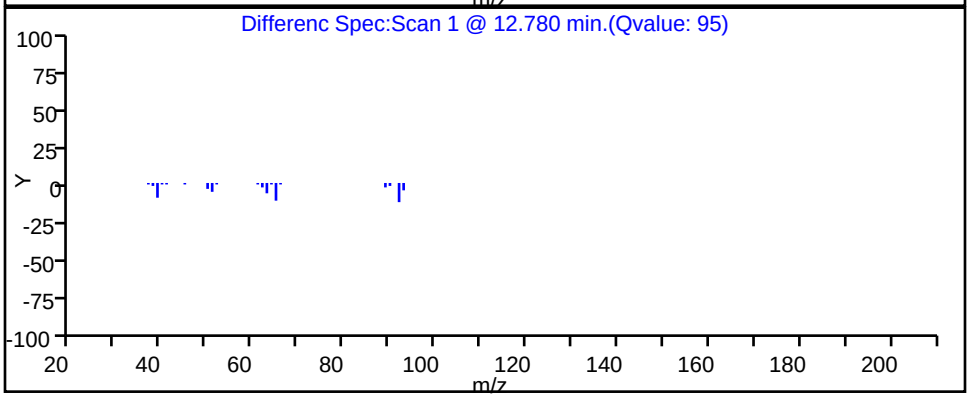










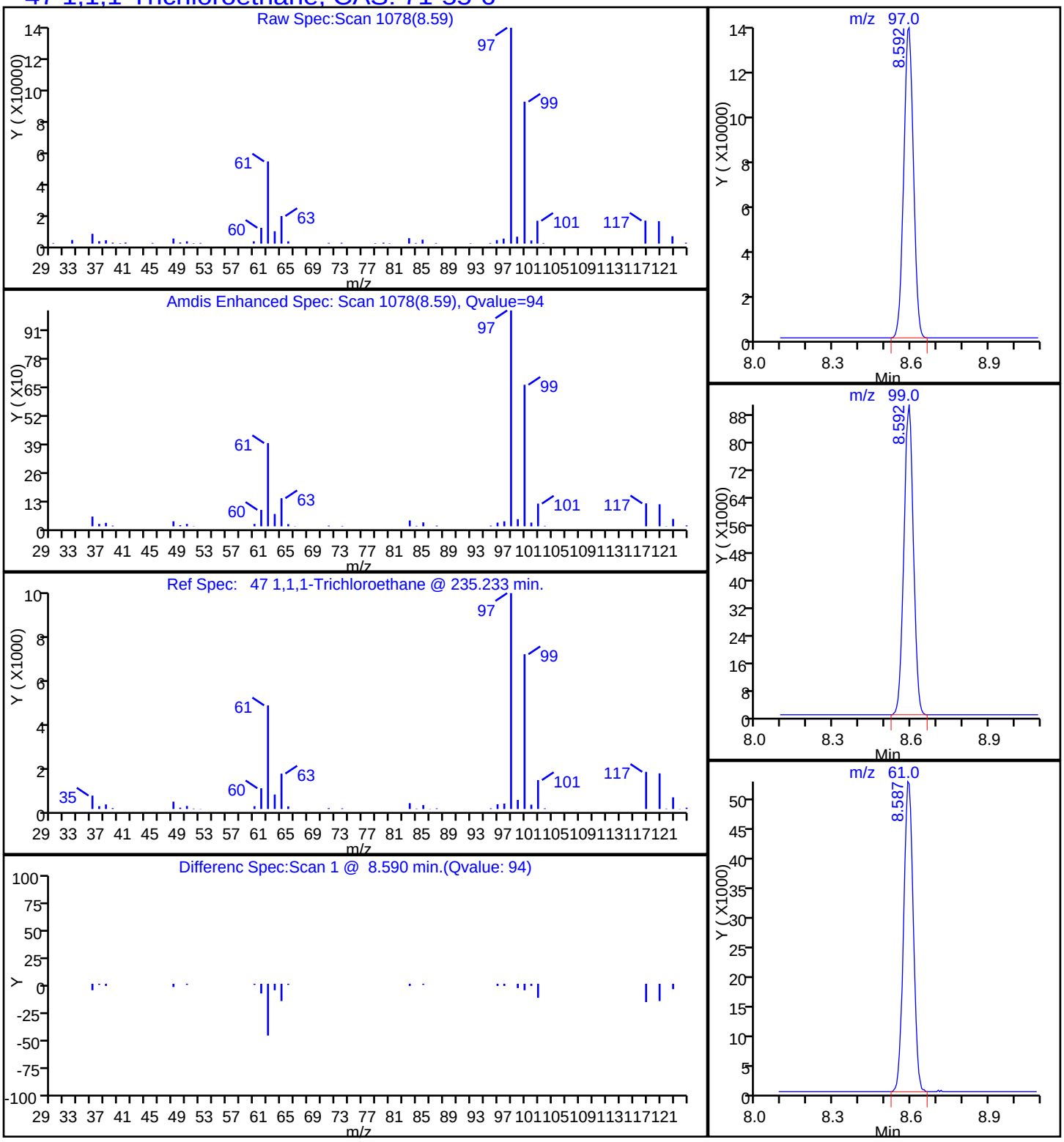


Report Date: 12-Sep-2016 11:33:58 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

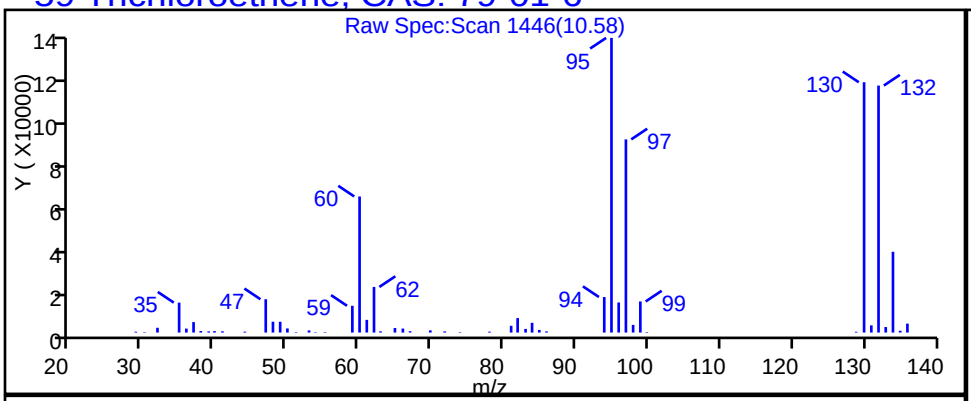
47 1,1,1-Trichloroethane, CAS: 71-55-6

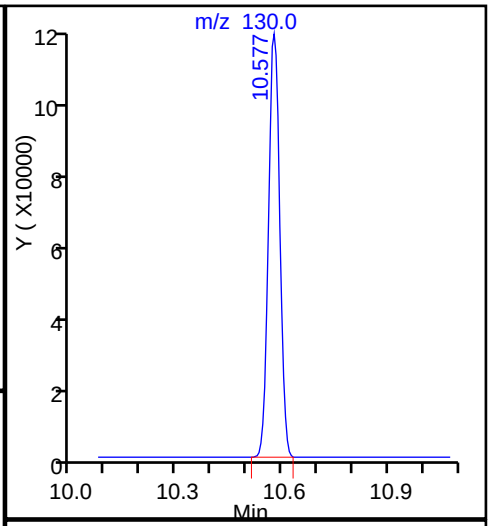


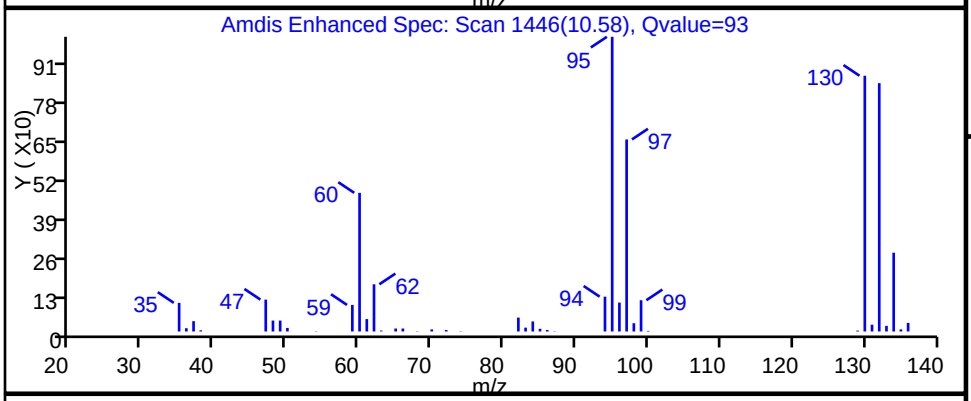
TestAmerica Knoxville

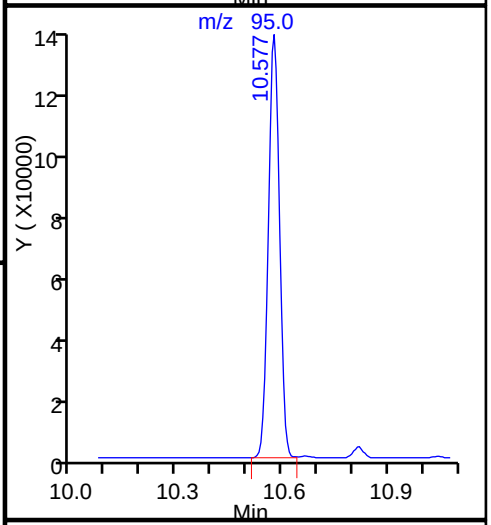
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

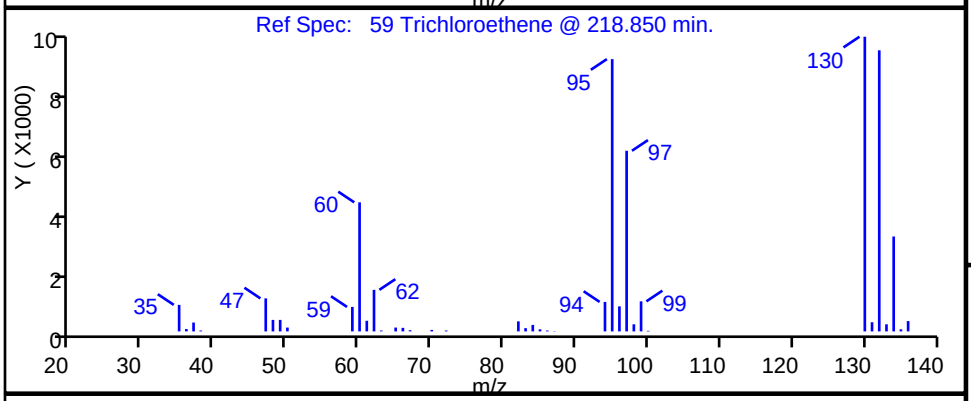
59 Trichloroethene, CAS: 79-01-6

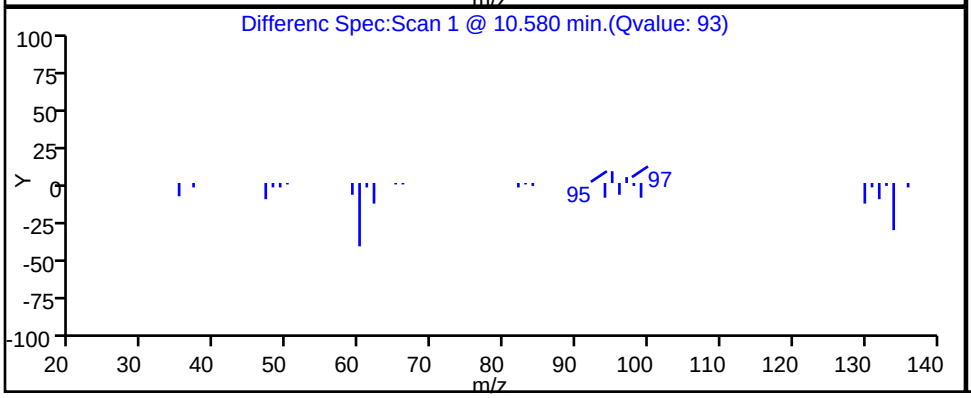


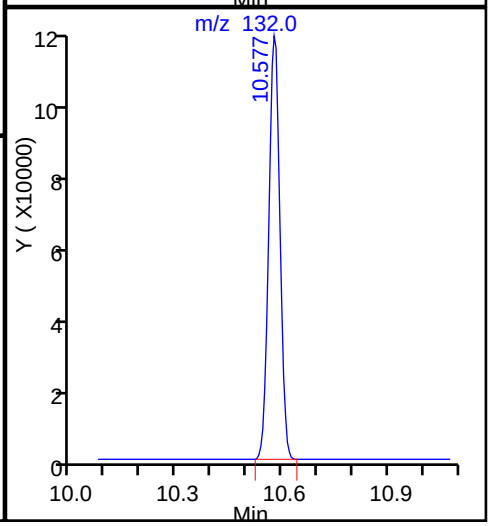








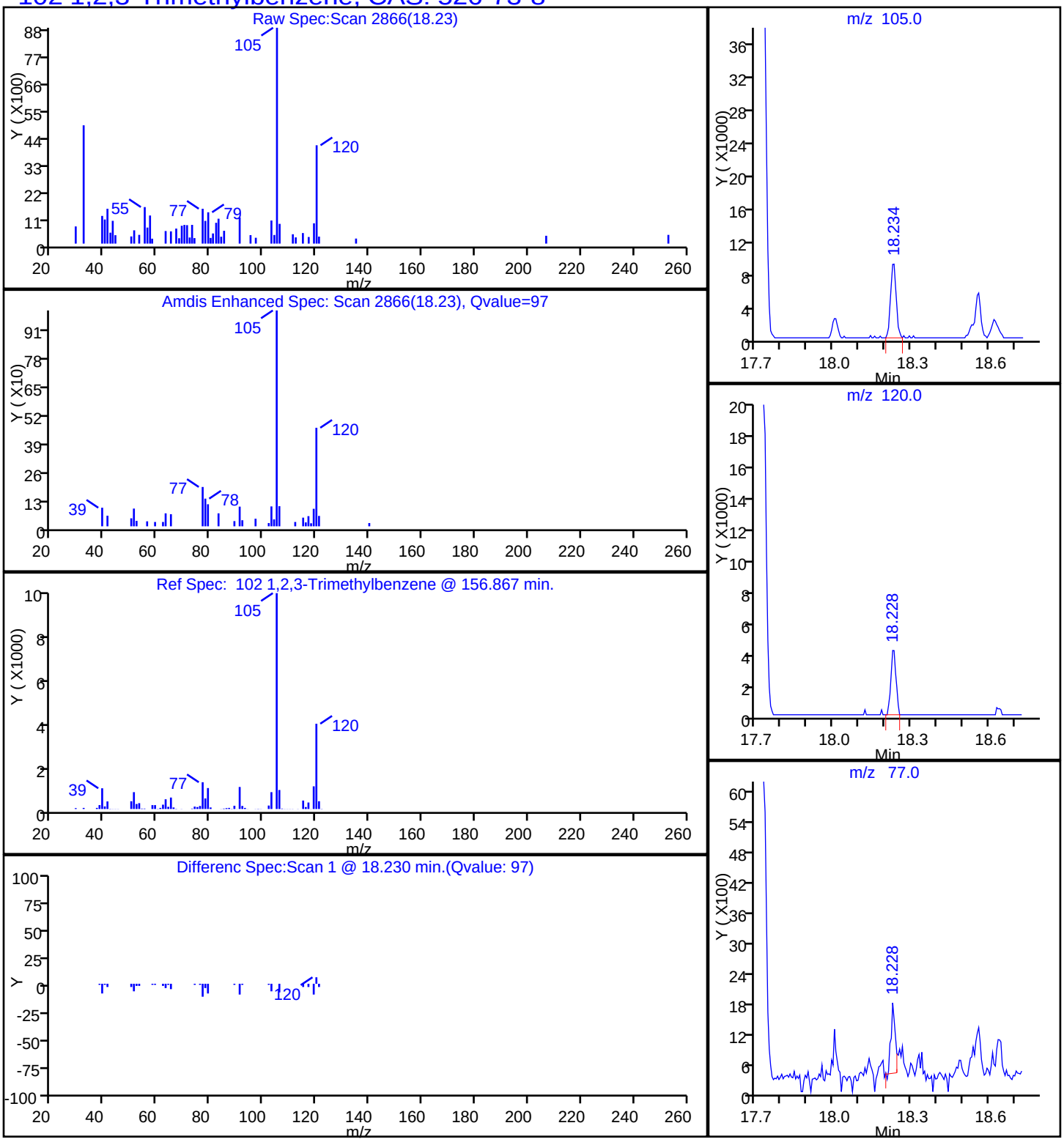




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

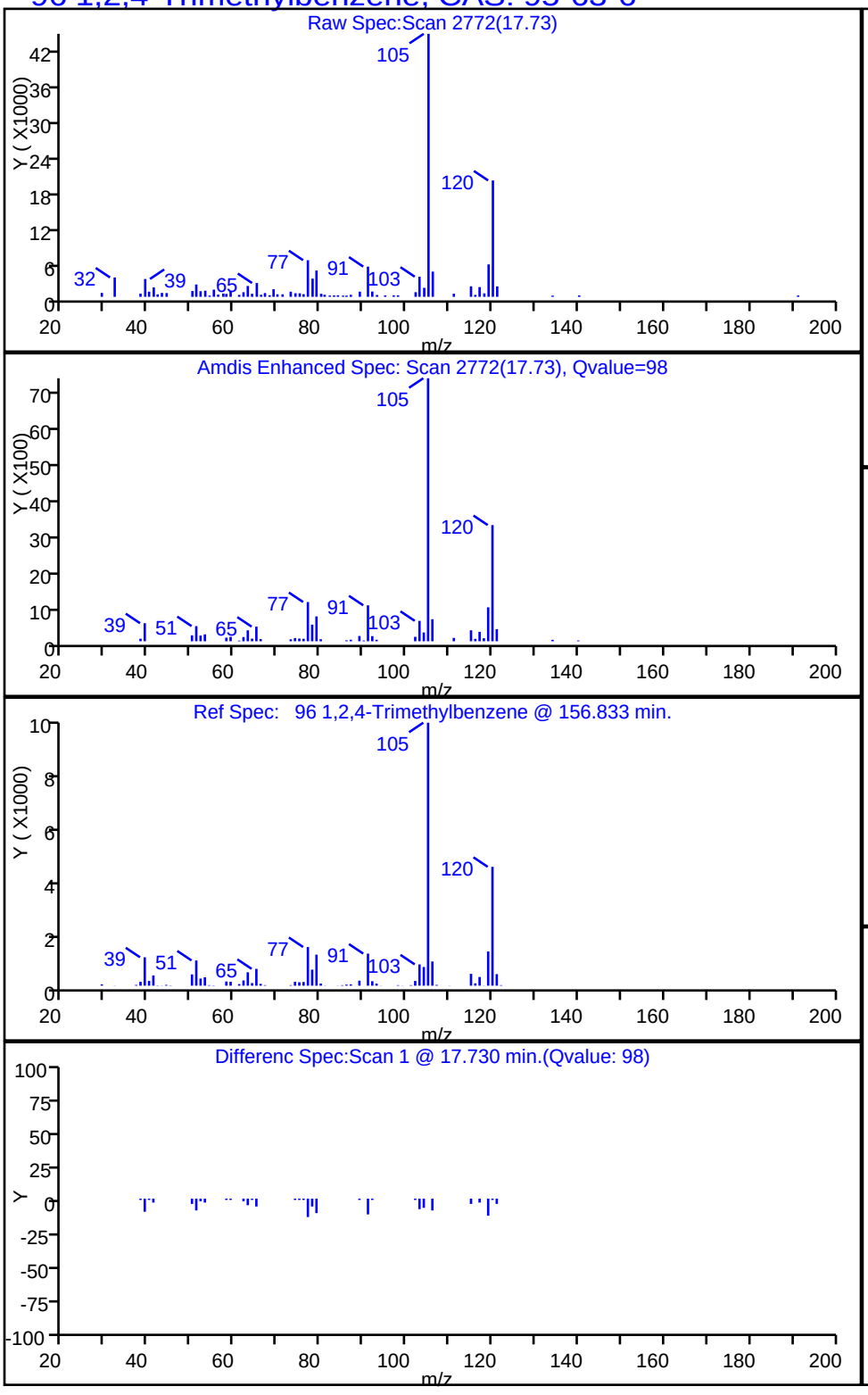
102 1,2,3-Trimethylbenzene, CAS: 526-73-8

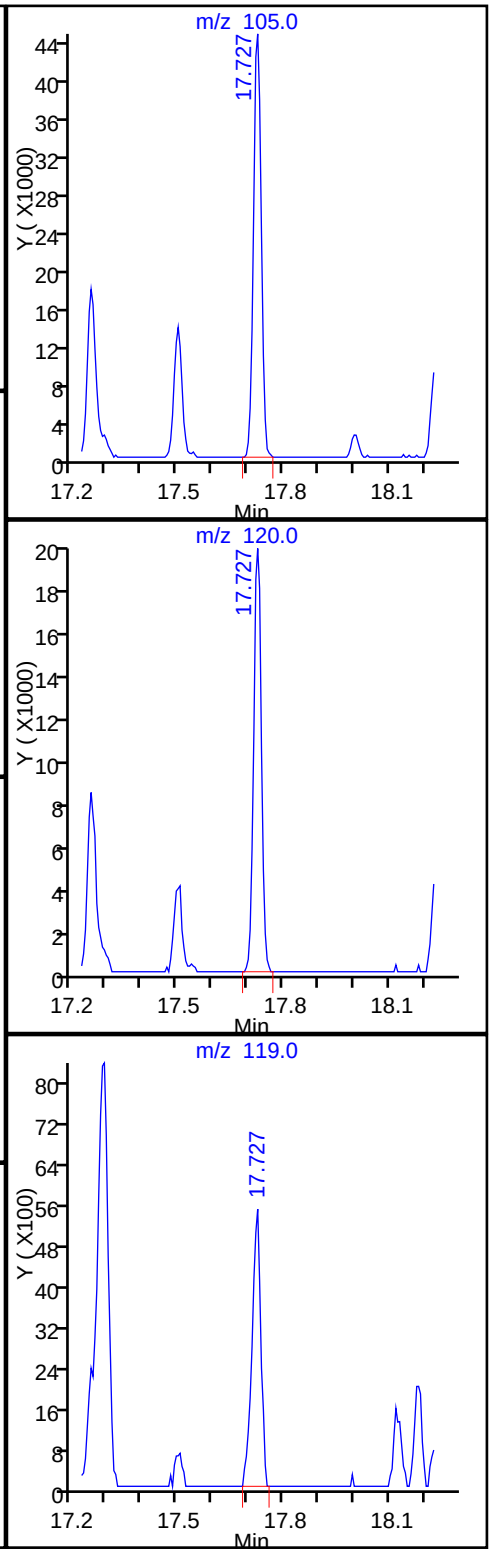


TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

96 1,2,4-Trimethylbenzene, CAS: 95-63-6

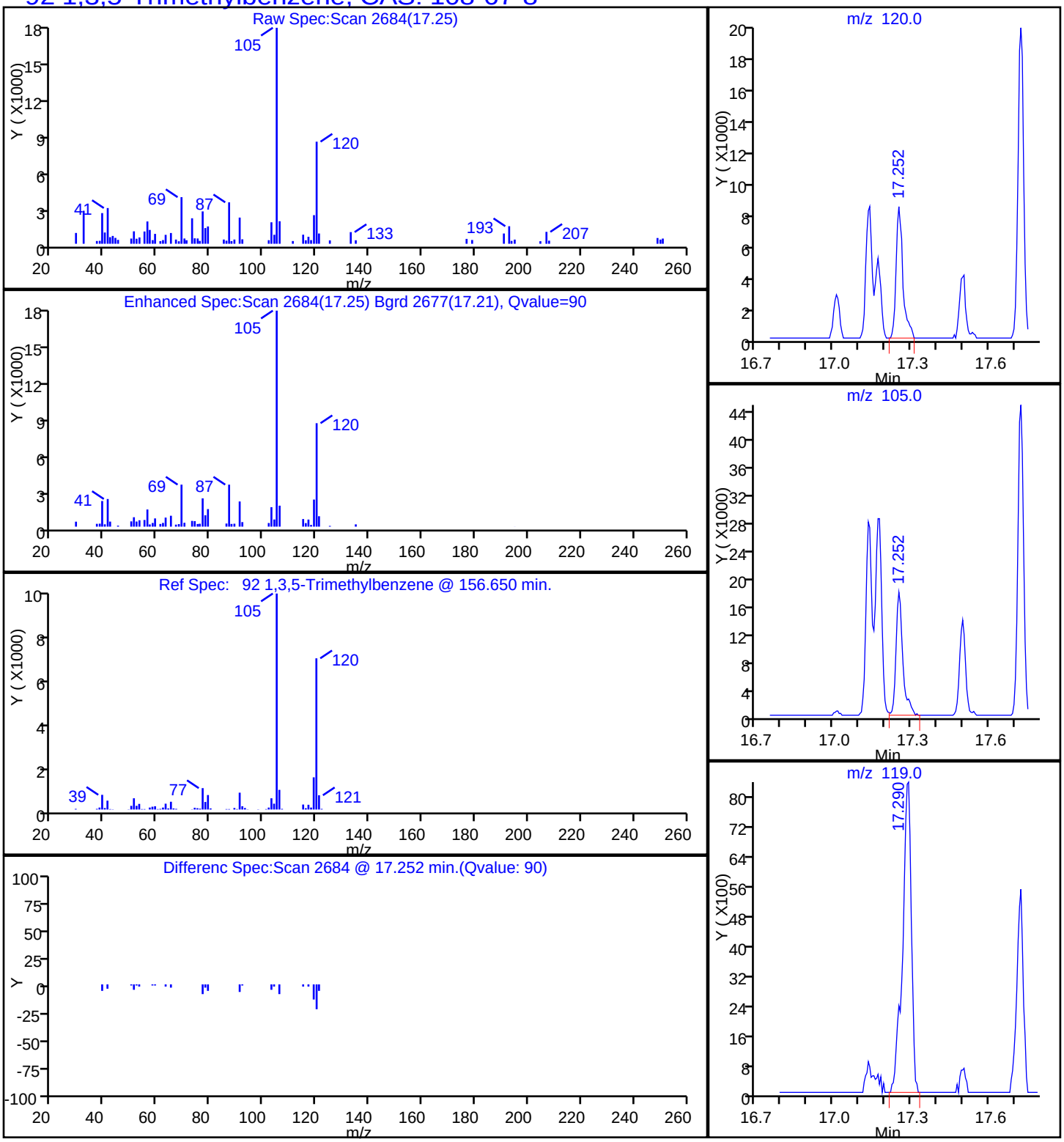




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

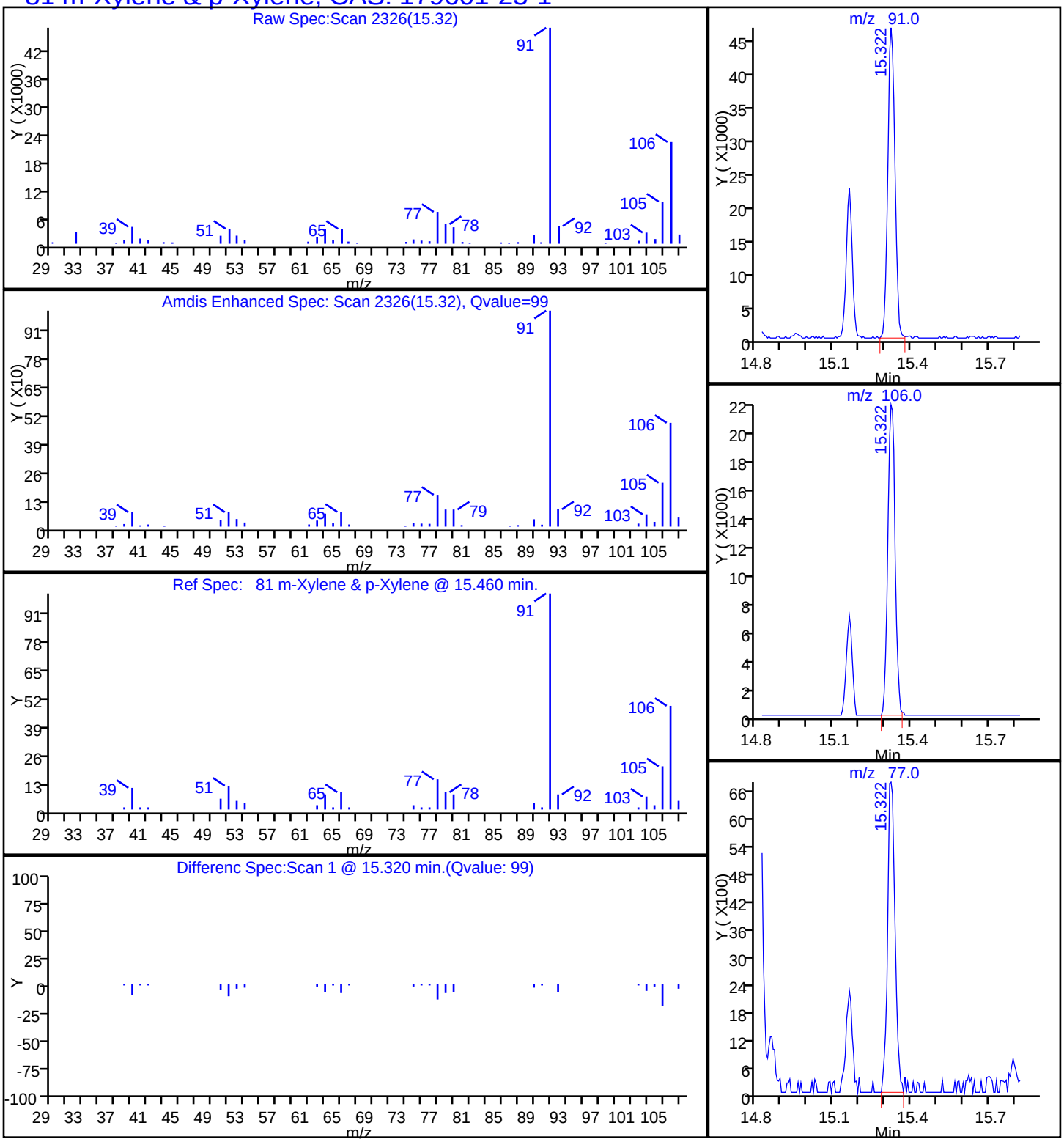
92 1,3,5-Trimethylbenzene, CAS: 108-67-8



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D				
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME		
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4		
Client ID:	C-INFLUENT				
Operator ID:	403648	ALS Bottle#:	4	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

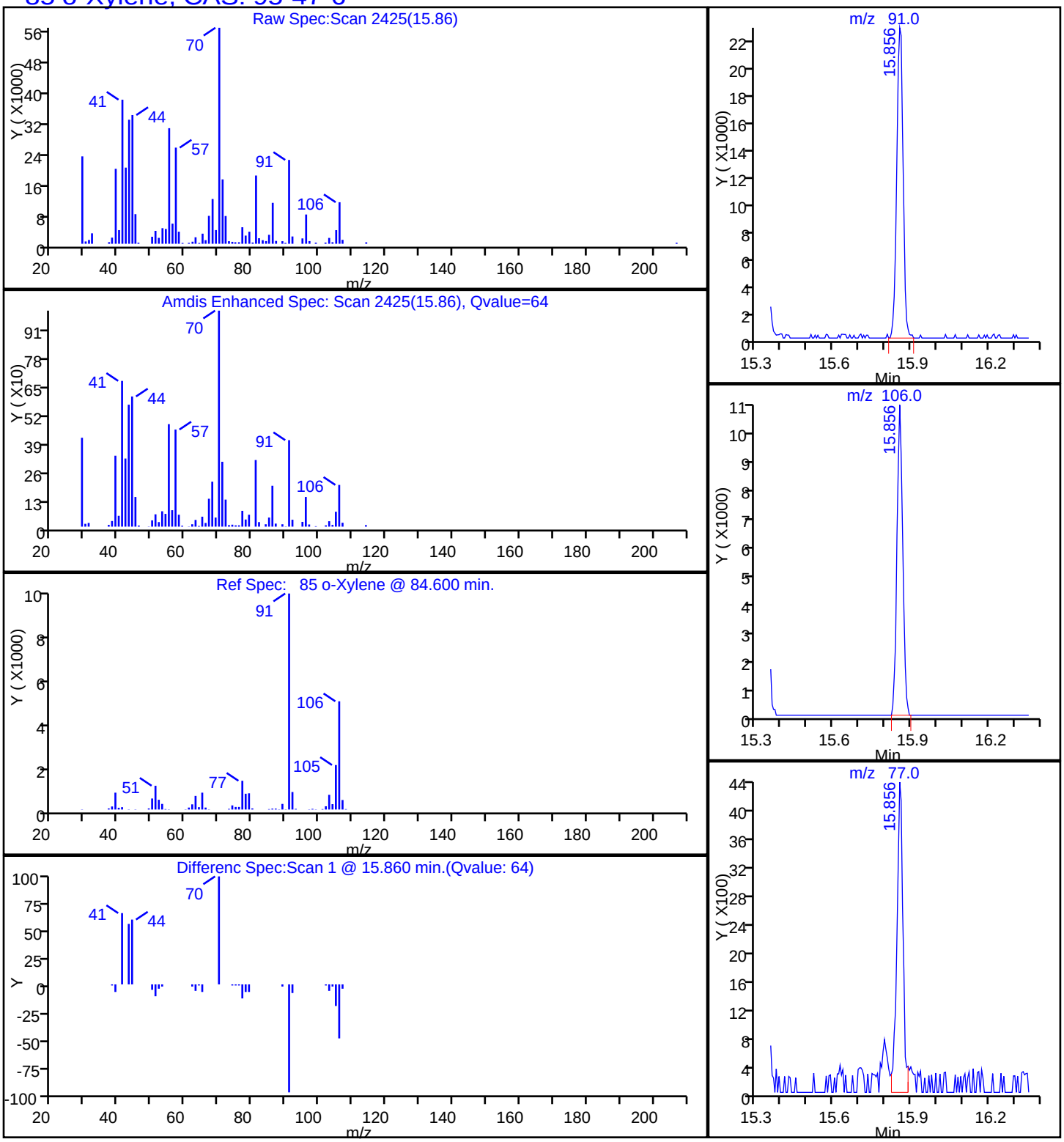
81 m-Xylene & p-Xylene, CAS: 179601-23-1



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p104.D		
Injection Date:	10-Sep-2016 20:34:30	Instrument ID:	ME
Lims ID:	140-5782-A-4	Lab Sample ID:	140-5782-4
Client ID:	C-INFLUENT		
Operator ID:	403648	ALS Bottle#:	4 Worklist Smp#: 11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

85 o-Xylene, CAS: 95-47-6



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: C-MID GAC | Lab Sample ID: 140-5782-5

Matrix: Air | Lab File ID: EI10p105.D

Analysis Method: TO 15 LL | Date Collected: 09/07/2016 10:22

Sample wt/vol: 100(mL) | Date Analyzed: 09/10/2016 21:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6539 | Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	3.7		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	0.10	J	0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	1.0		0.40	0.075
67-66-3	Chloroform	119.38	0.30	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.67		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.41		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.7		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.68		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.4		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	0.16	J	0.40	0.080
108-88-3	Toluene	92.14	ND		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.8		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	0.59		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.23	J	0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: C-MID GAC Lab Sample ID: 140-5782-5

Matrix: Air Lab File ID: EI10p105.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 10:22

Sample wt/vol: 100(mL) Date Analyzed: 09/10/2016 21:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	12		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	0.65	J	2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	1.5	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.7		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.0		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	7.0		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	2.7		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.7		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	1.1	J	2.7	0.54
108-88-3	Toluene	92.14	ND		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	16		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	3.2		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	1.1	J	2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	99		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D				
Lims ID:	140-5782-A-5				
Client ID:	C-MID GAC				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 21:19:30	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-012				
Misc. Info.:	140-5782-a-5				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: barlozhetskayaa		Date:	12-Sep-2016 10:08:06		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.557	7.568	-0.011	74	413550	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.805	-0.005	94	1987999	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	88	1829818	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	89	1476262	3.94	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	95	9826	0.2003	
8 Dichlorodifluoromethane	85	2.946	2.952	-0.006	99	35890	0.0825	
27 1,1-Dichloroethene	96	4.774	4.780	-0.006	98	17034	0.1351	
31 Methylene Chloride	84	5.103	5.103	0.000	81	35179	0.2712	
37 1,1-Dichloroethane	63	6.274	6.279	-0.005	100	79355	0.3451	
42 cis-1,2-Dichloroethene	96	7.233	7.239	-0.006	89	18515	0.1338	
44 Chloroform	83	7.573	7.584	-0.011	93	20657	0.0599	
47 1,1,1-Trichloroethane	97	8.587	8.592	-0.005	93	220233	0.5699	
51 Benzene	78	9.191	9.196	-0.005	93	298376	0.7323	
52 Carbon tetrachloride	117	9.218	9.223	-0.005	43	8078	0.0205	
59 Trichloroethene	130	10.577	10.582	-0.005	94	21096	0.1184	
76 Tetrachloroethene	129	13.952	13.958	-0.006	30	5307	0.0311	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	96	23780	0.0460	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

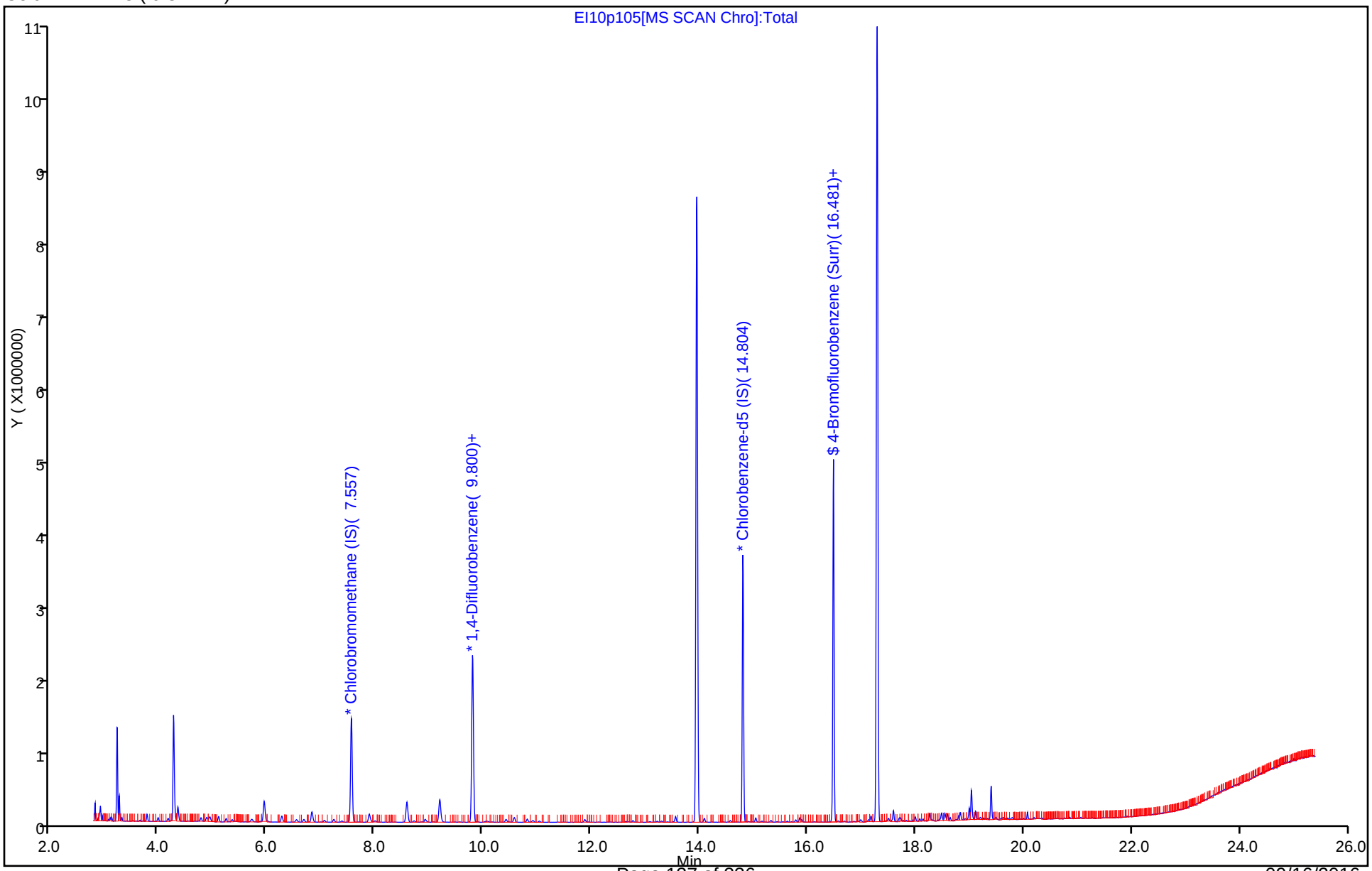
Report Date: 12-Sep-2016 11:34:04 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D

Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5	Worklist Smp#:	12
Client ID:	C-MID GAC				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D				
Lims ID:	140-5782-A-5				
Client ID:	C-MID GAC				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 21:19:30	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-012				
Misc. Info.:	140-5782-a-5				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

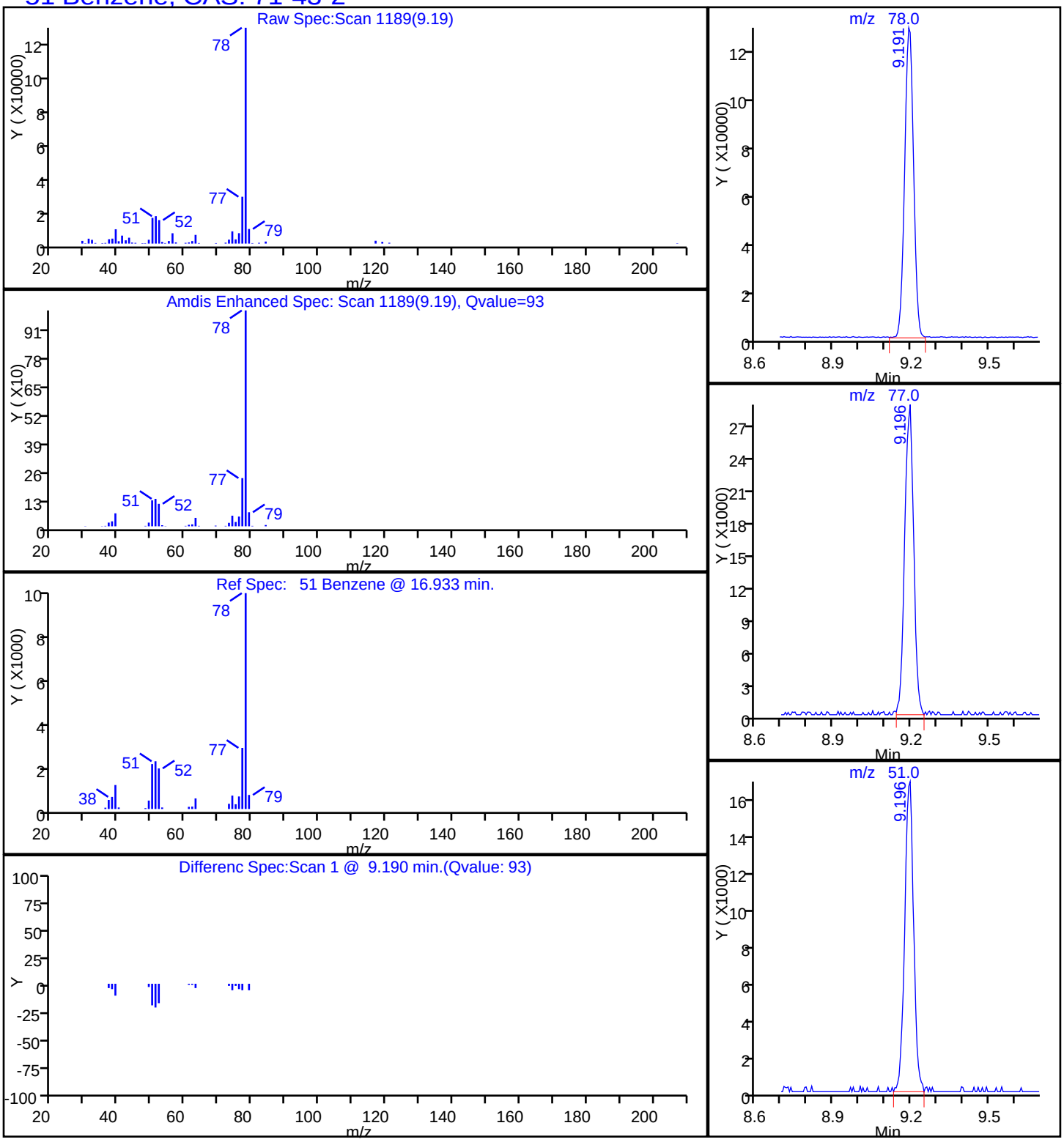
First Level Reviewer: barlozhetskayaa Date: 12-Sep-2016 10:08:06

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.94	98.57

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

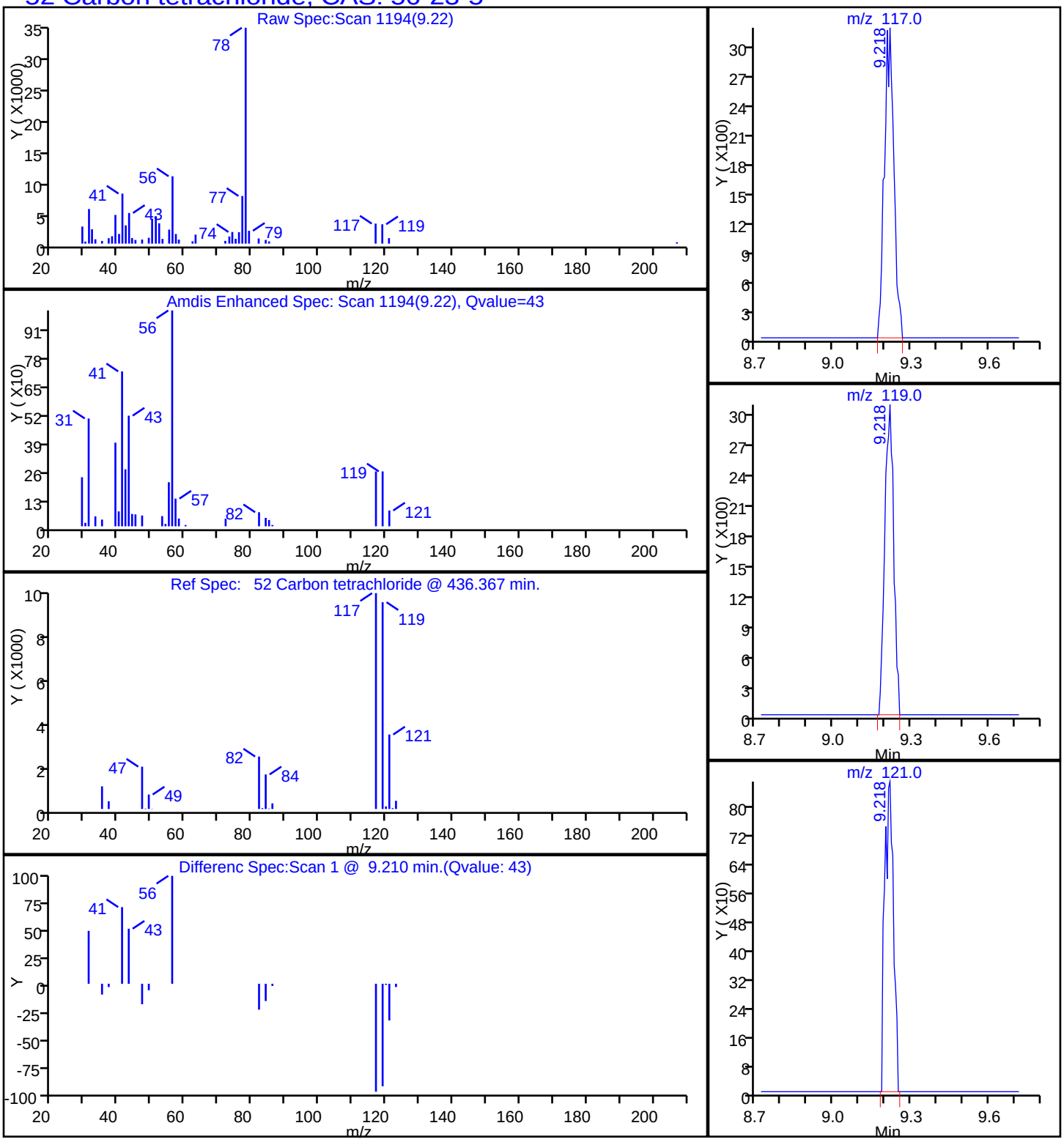
51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

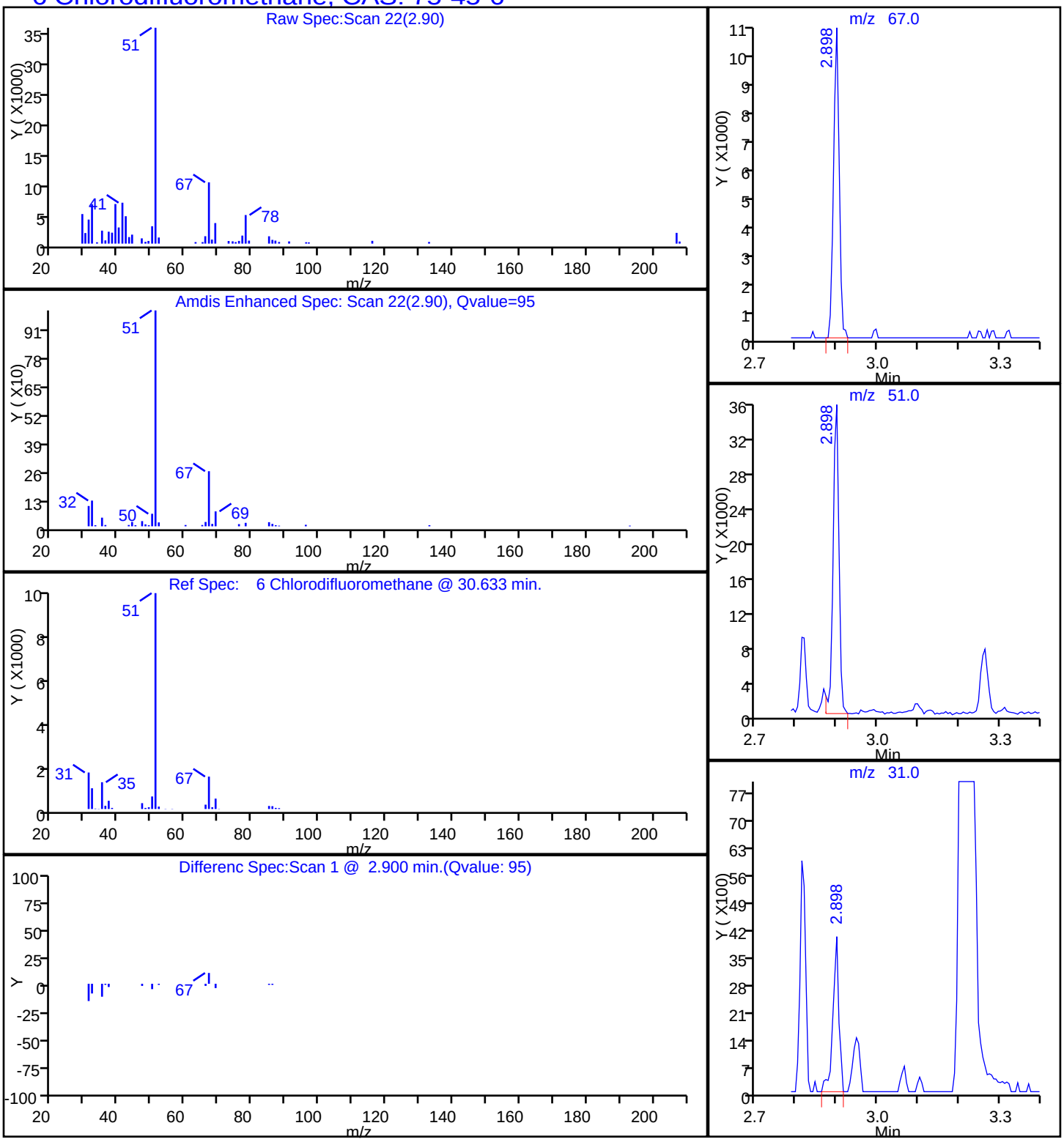
52 Carbon tetrachloride, CAS: 56-23-5



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D				
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5		
Client ID:	C-MID GAC				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

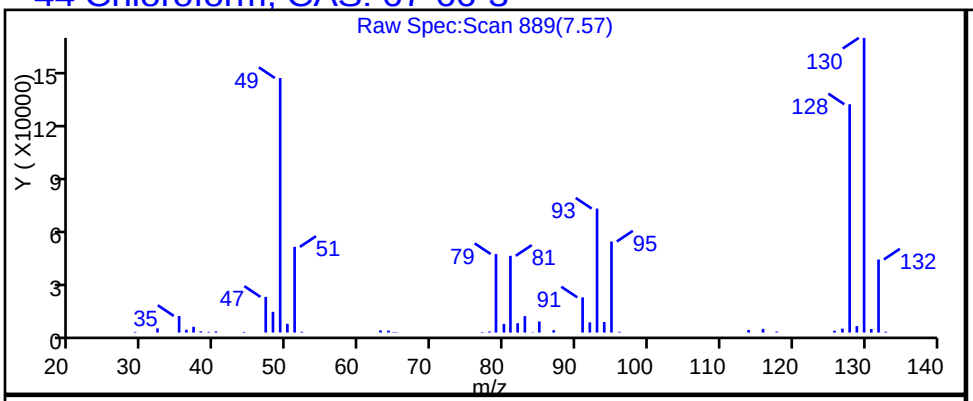
6 Chlorodifluoromethane, CAS: 75-45-6

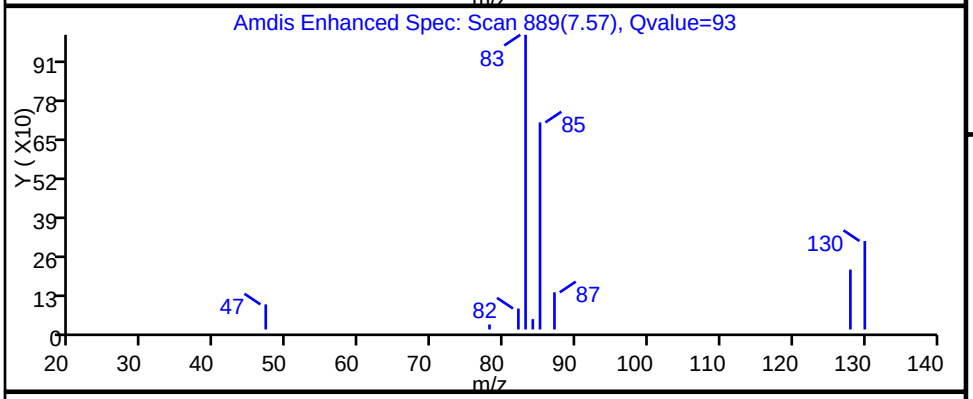


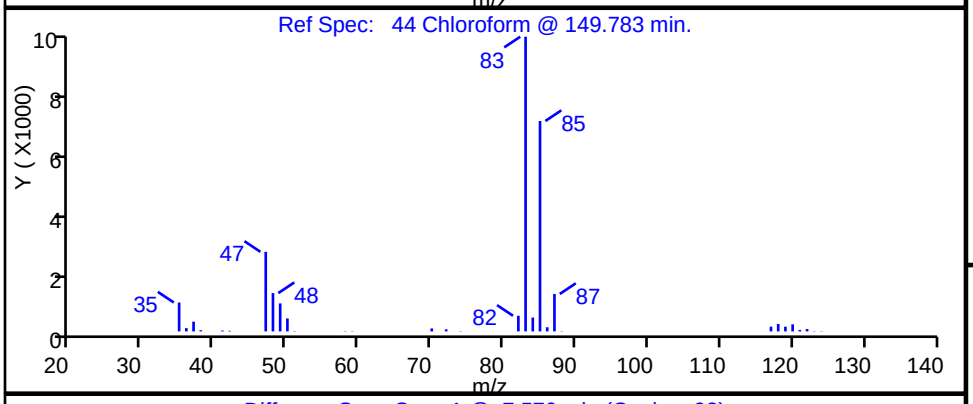
TestAmerica Knoxville

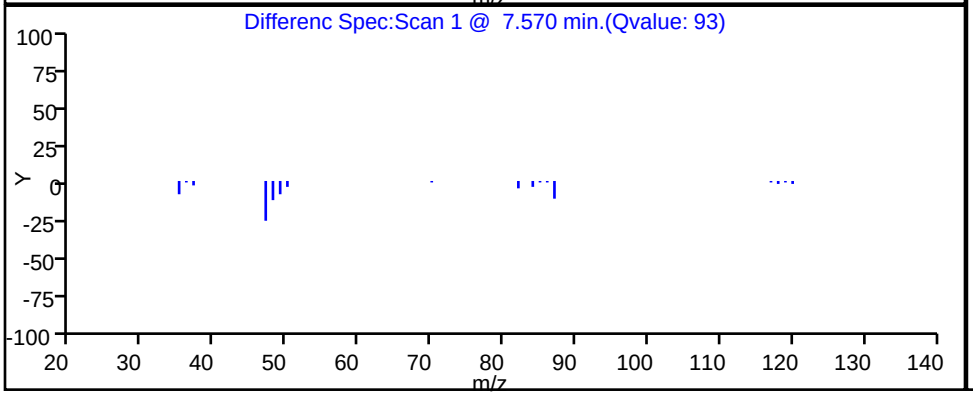
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

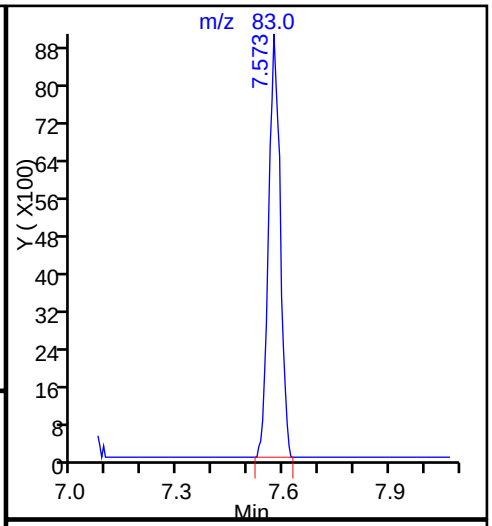
44 Chloroform, CAS: 67-66-3

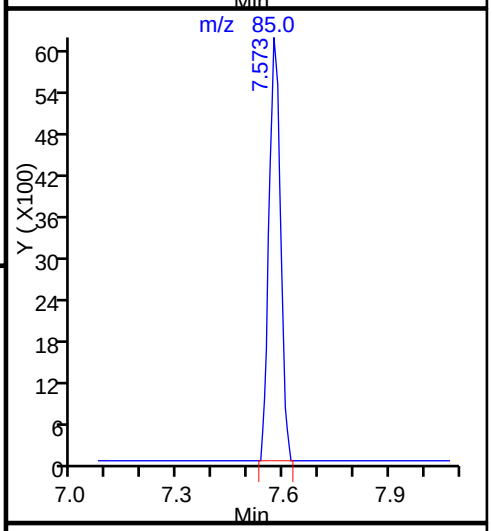


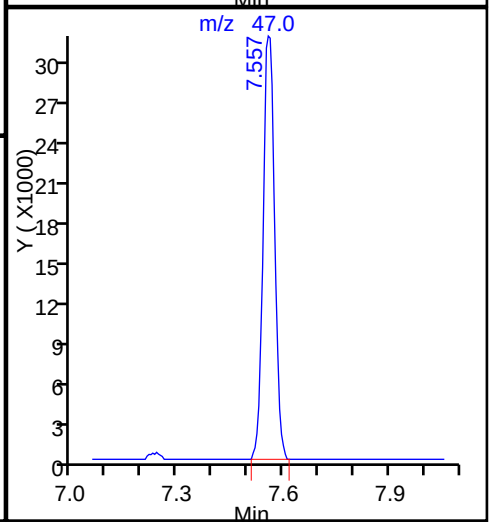








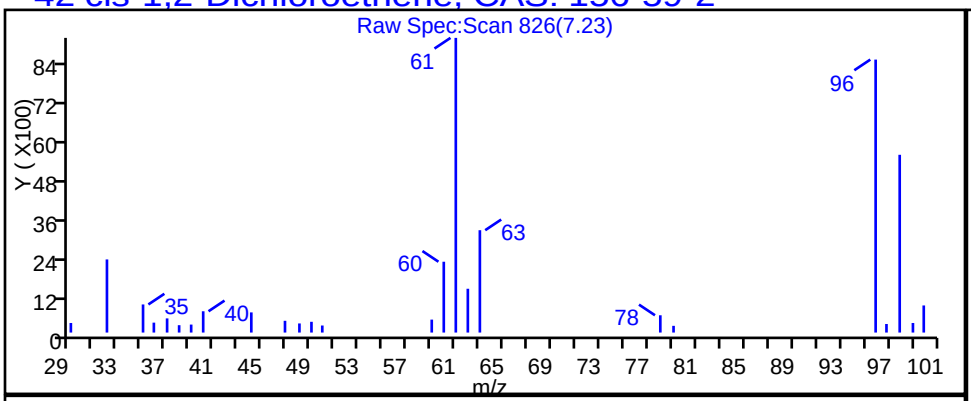


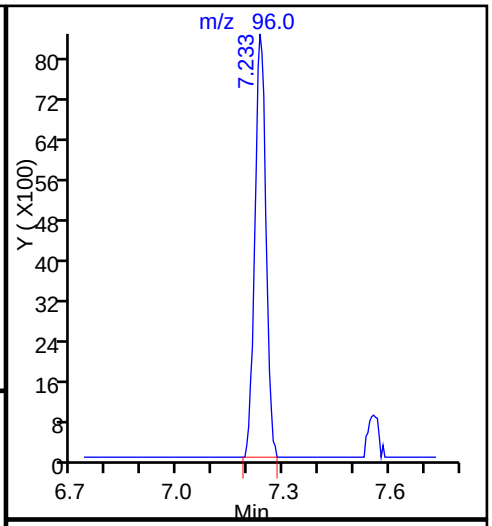


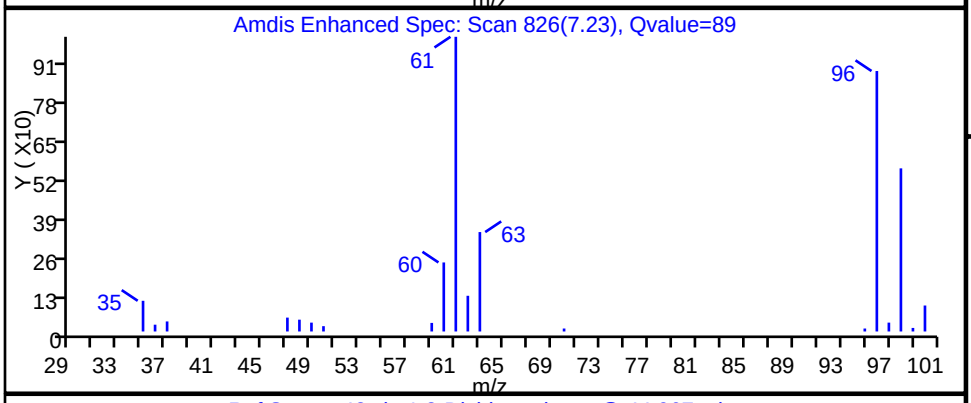
TestAmerica Knoxville

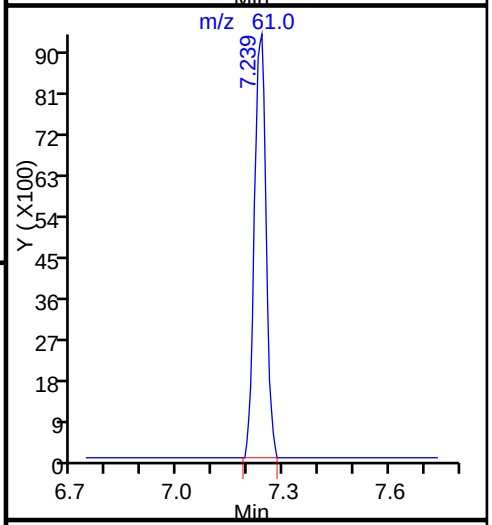
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D				
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5		
Client ID:	C-MID GAC				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

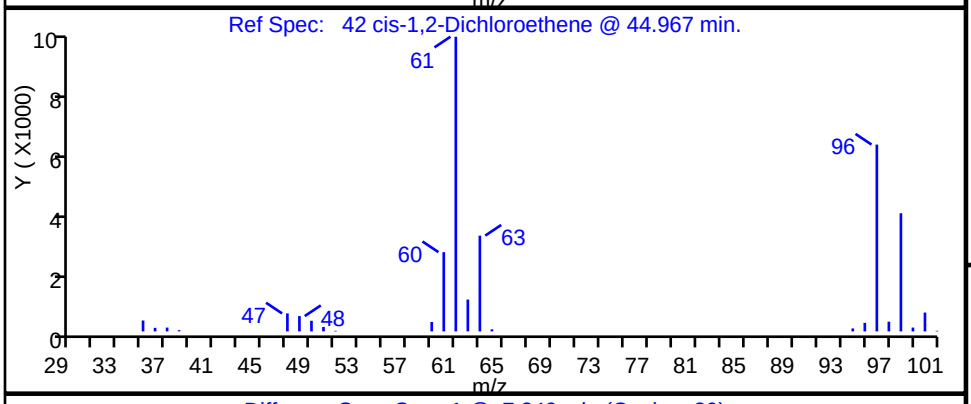
42 cis-1,2-Dichloroethene, CAS: 156-59-2

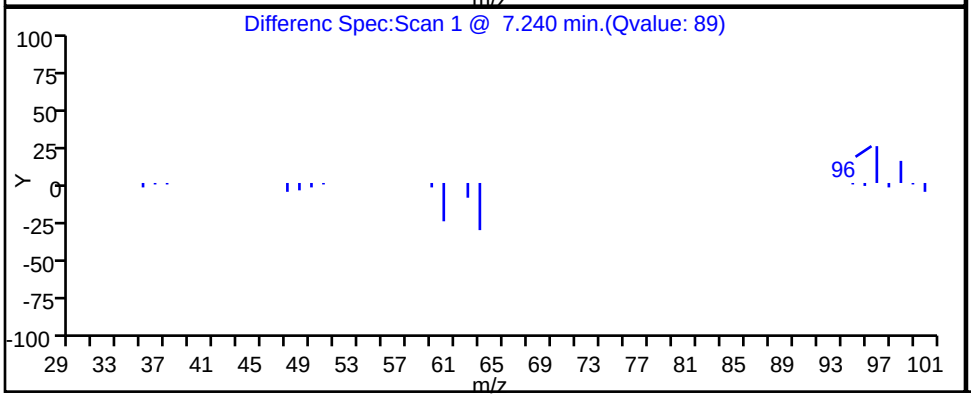


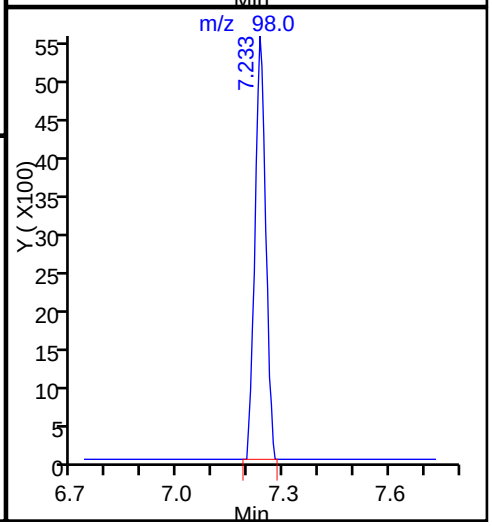








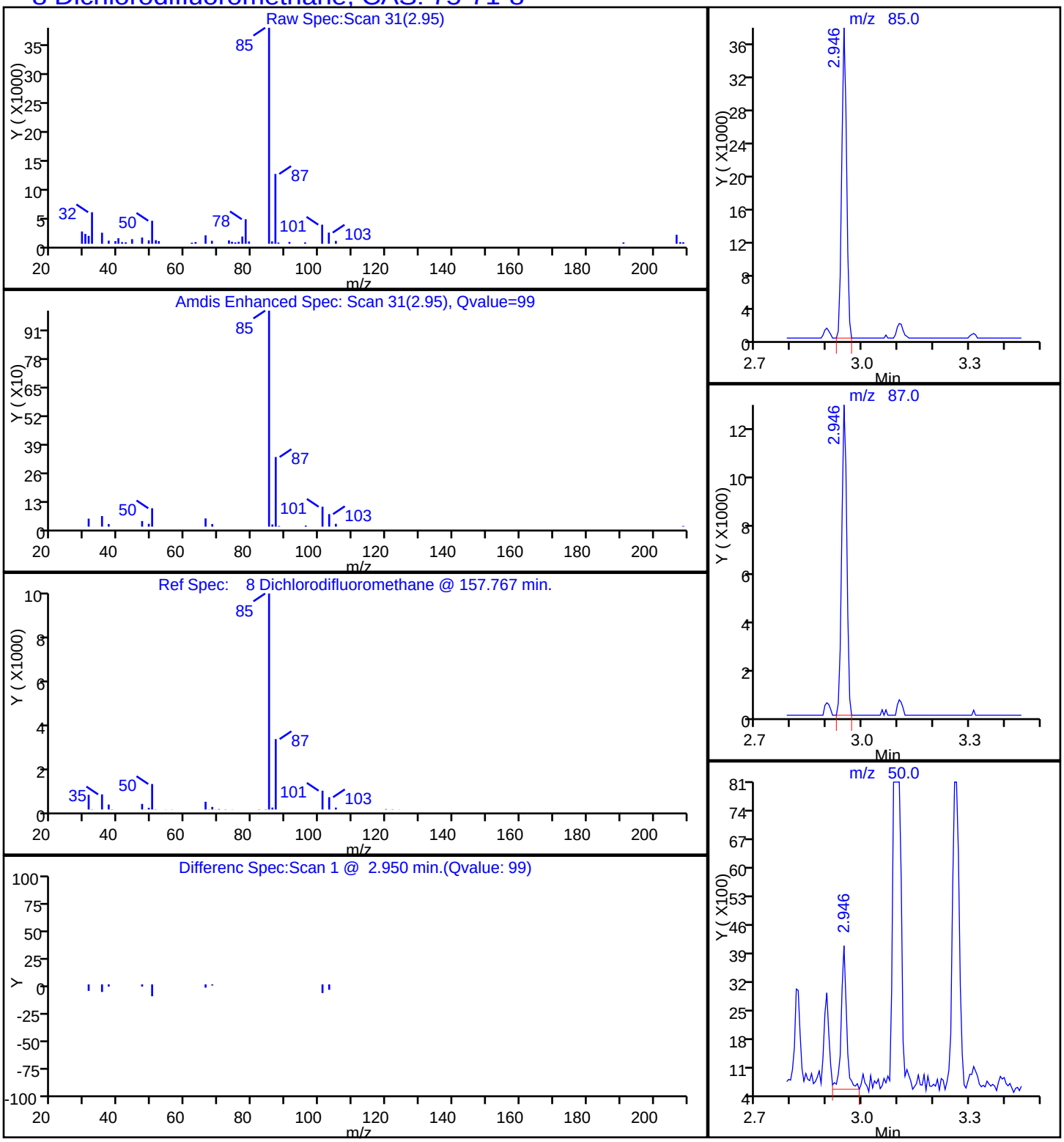




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

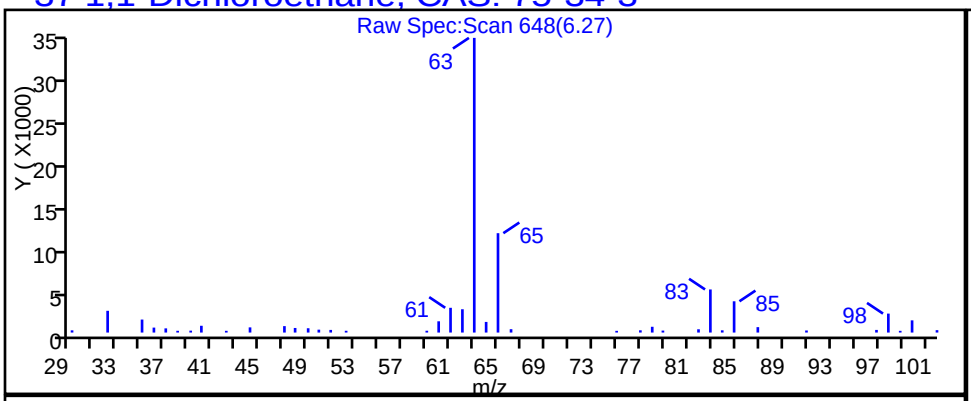
8 Dichlorodifluoromethane, CAS: 75-71-8

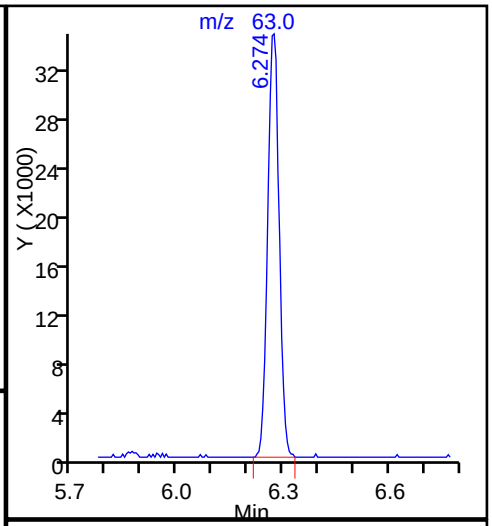


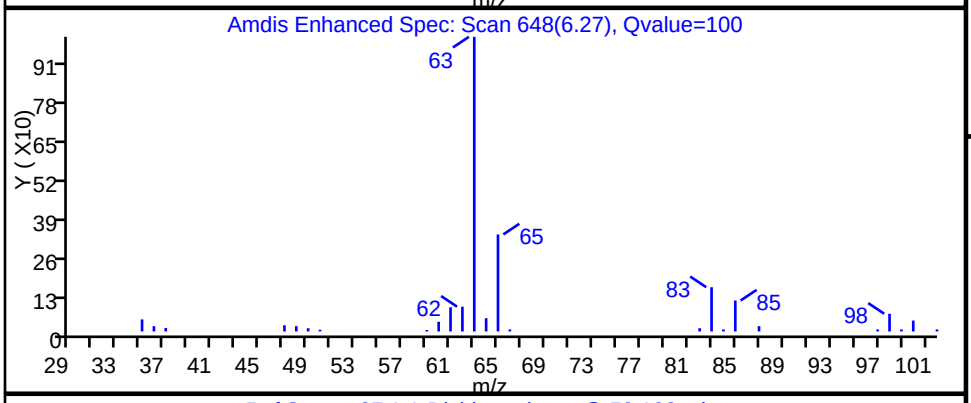
TestAmerica Knoxville

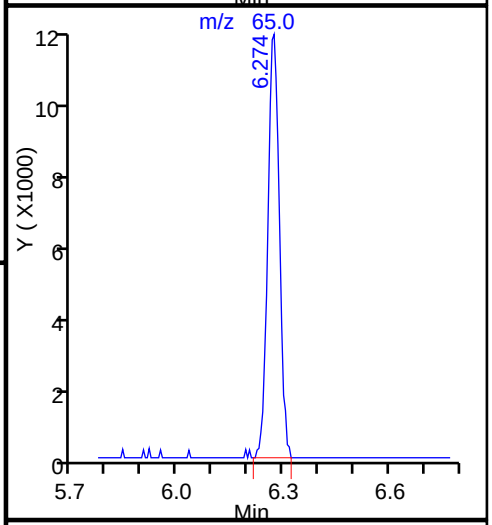
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

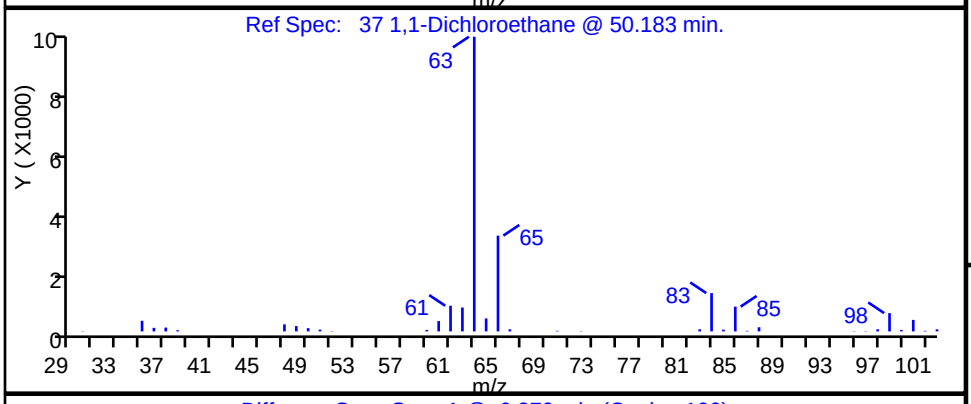
37 1,1-Dichloroethane, CAS: 75-34-3

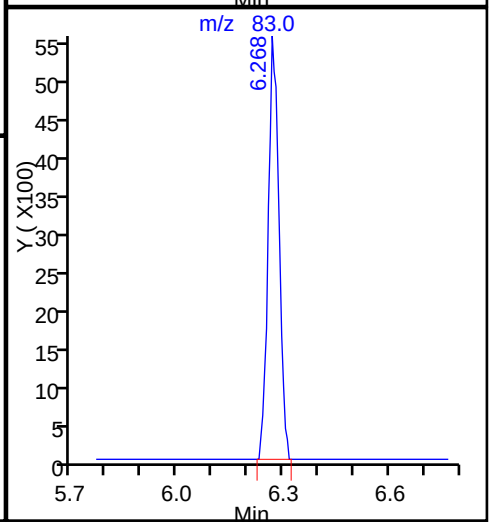


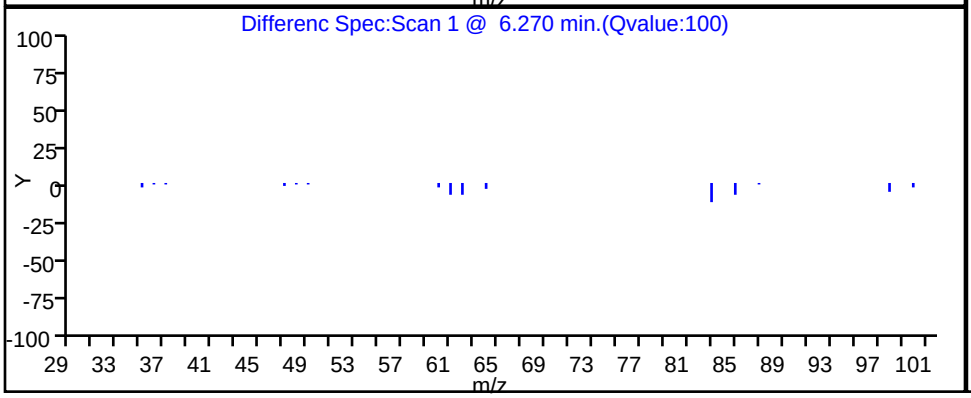








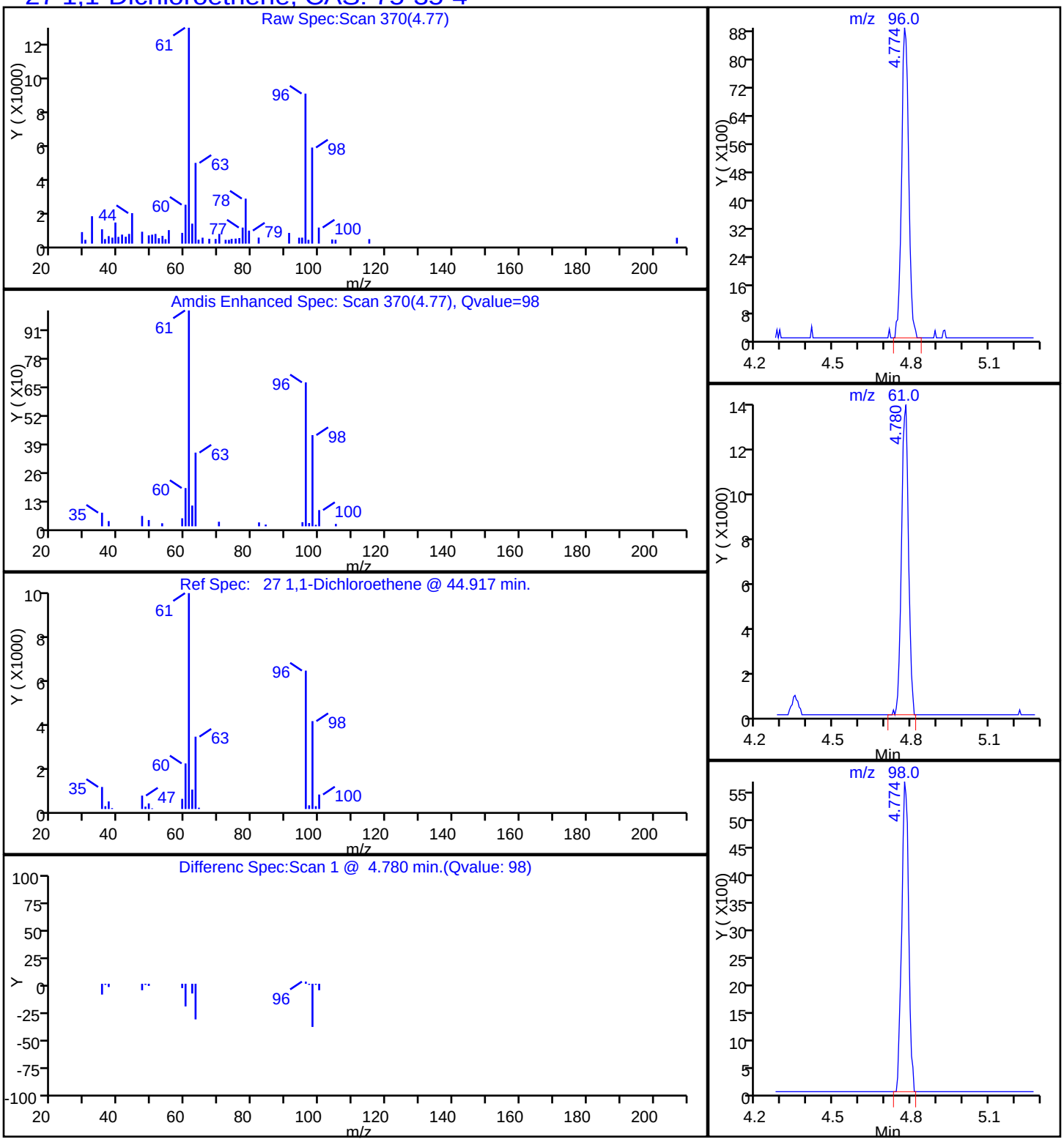




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

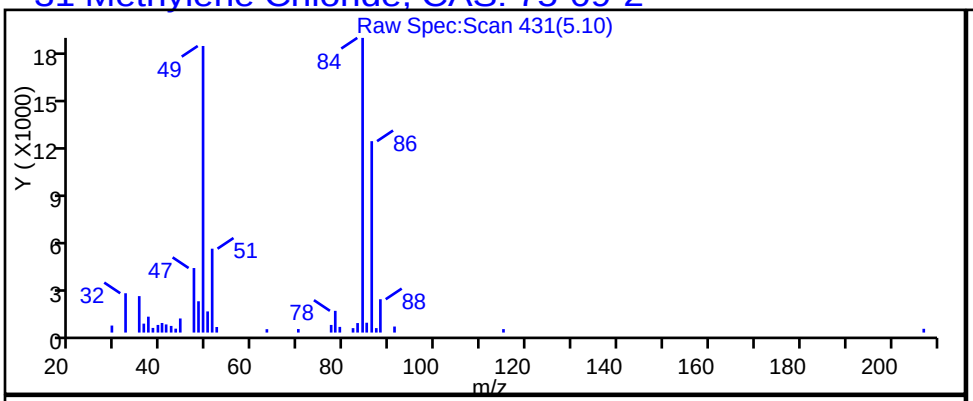
27 1,1-Dichloroethene, CAS: 75-35-4

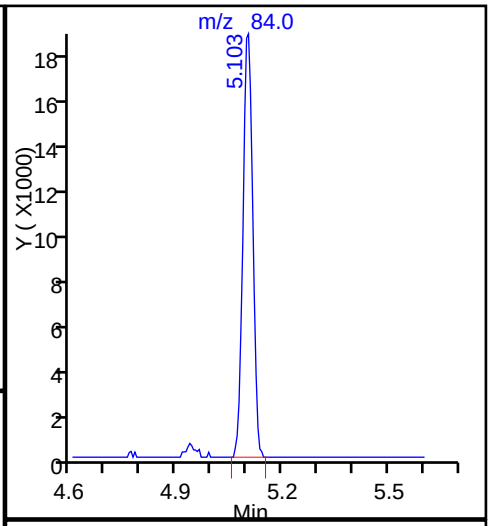


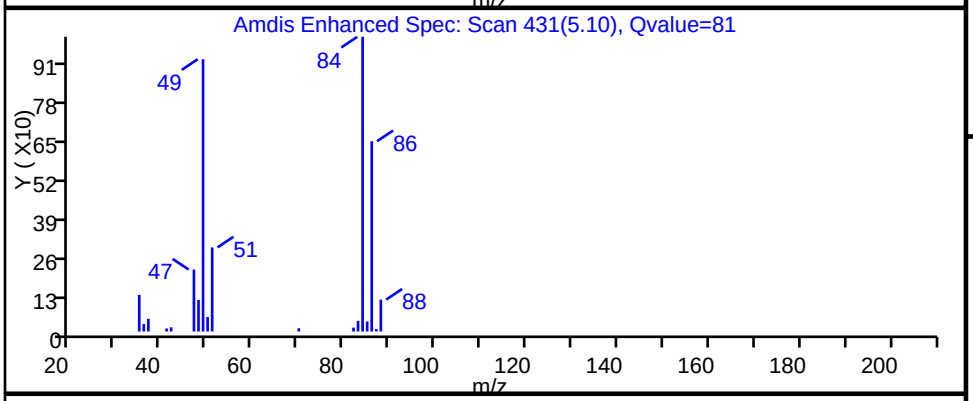
TestAmerica Knoxville

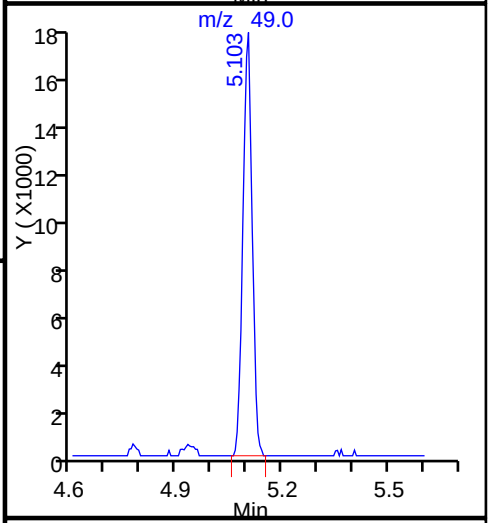
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

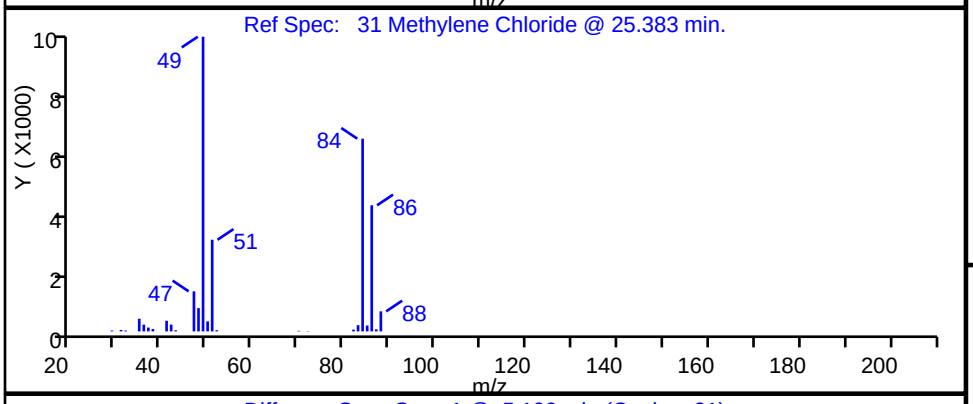
31 Methylene Chloride, CAS: 75-09-2

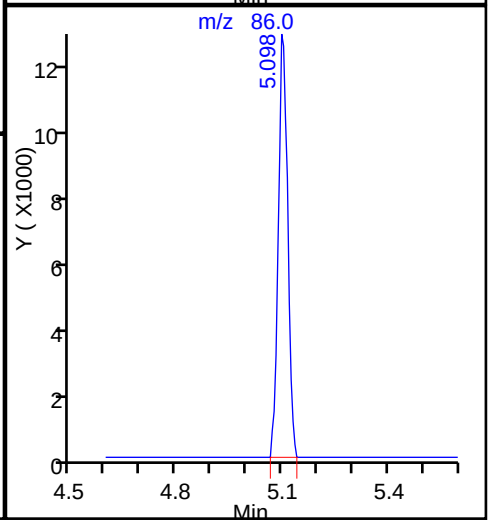


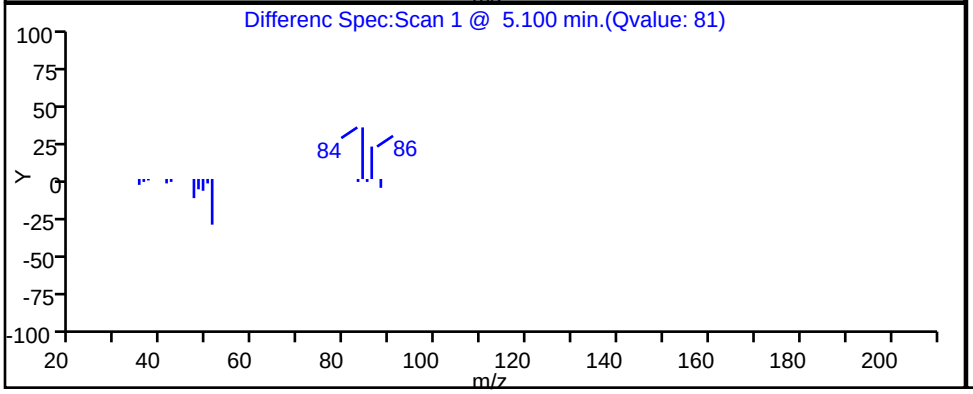






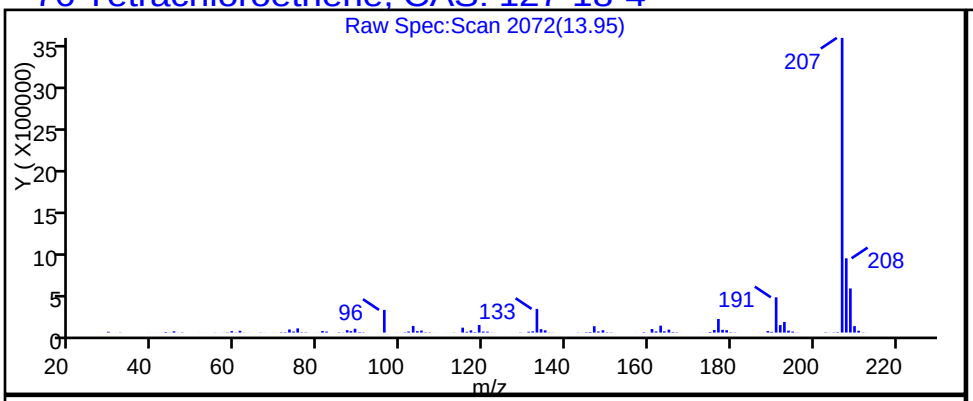


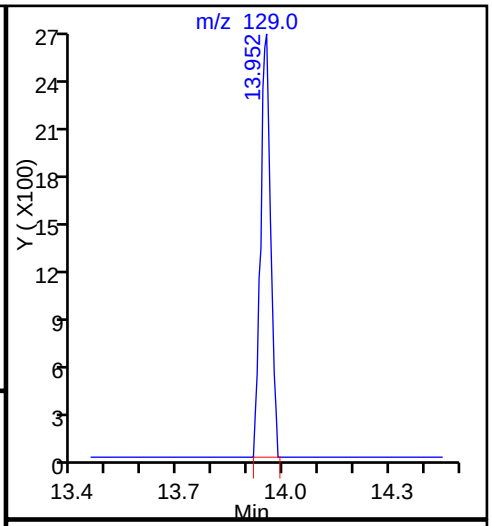


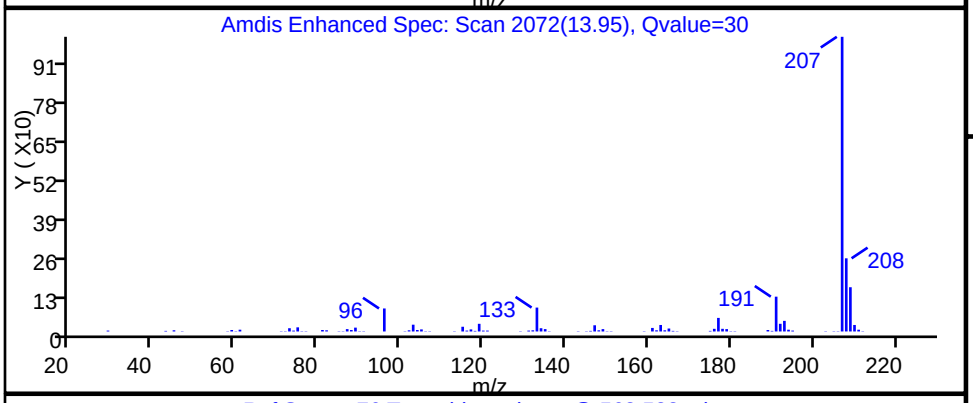


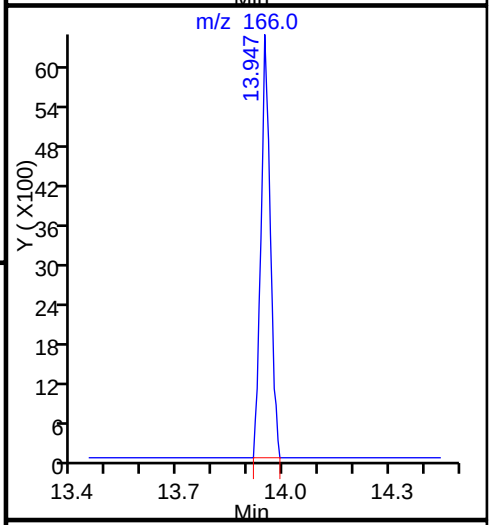
Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D
Injection Date: 10-Sep-2016 21:19:30 Instrument ID: ME
Lims ID: 140-5782-A-5 Lab Sample ID: 140-5782-5
Client ID: C-MID GAC
Operator ID: 403648 ALS Bottle#: 5 Worklist Smp#: 12
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

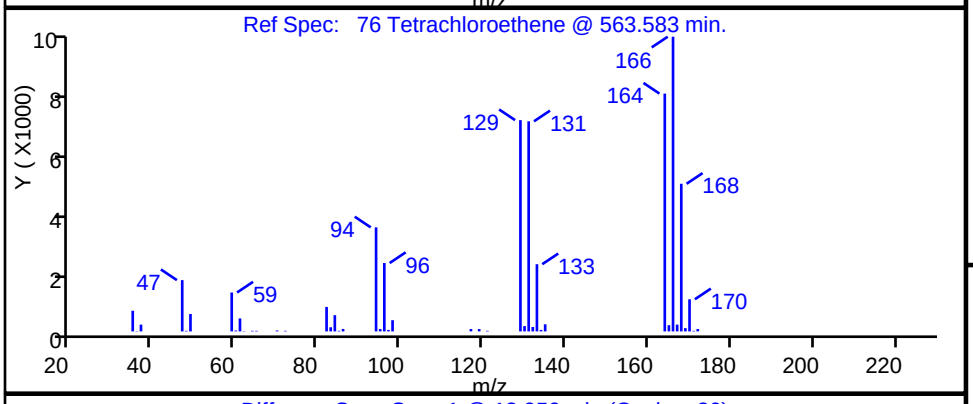
76 Tetrachloroethene, CAS: 127-18-4

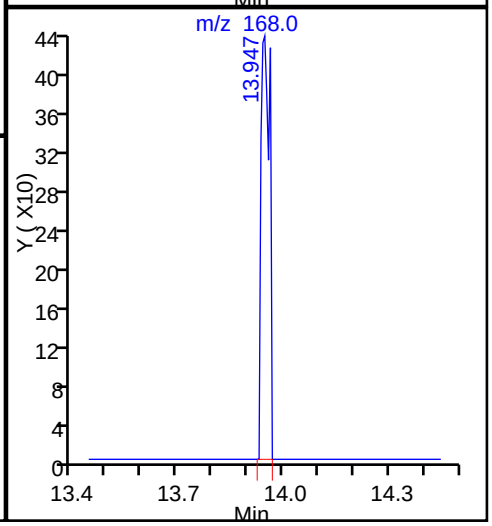


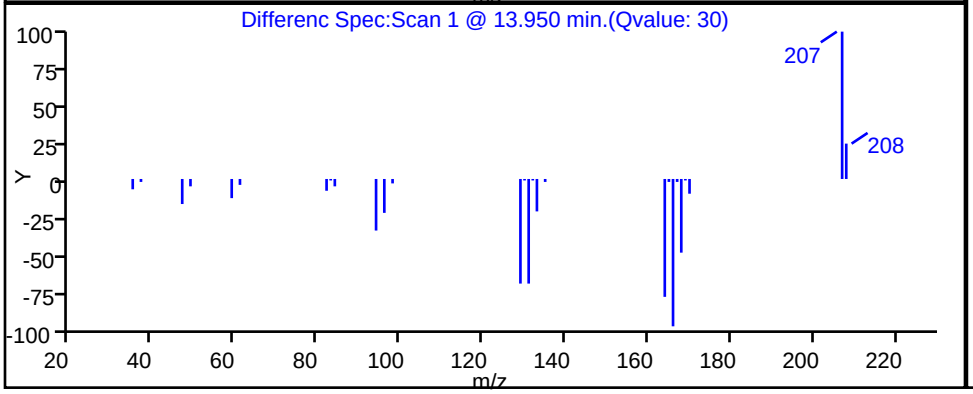








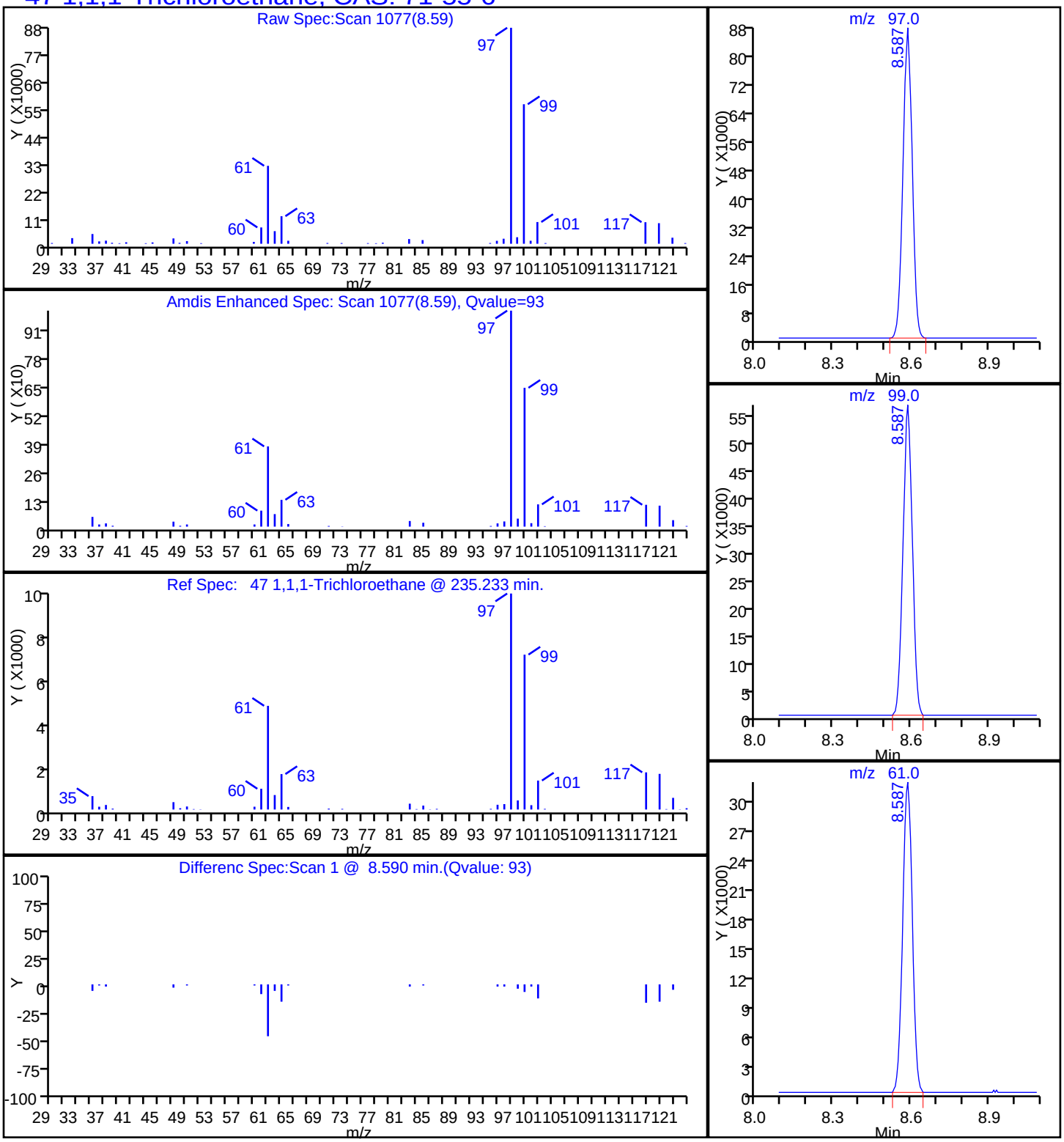




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D				
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5		
Client ID:	C-MID GAC				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

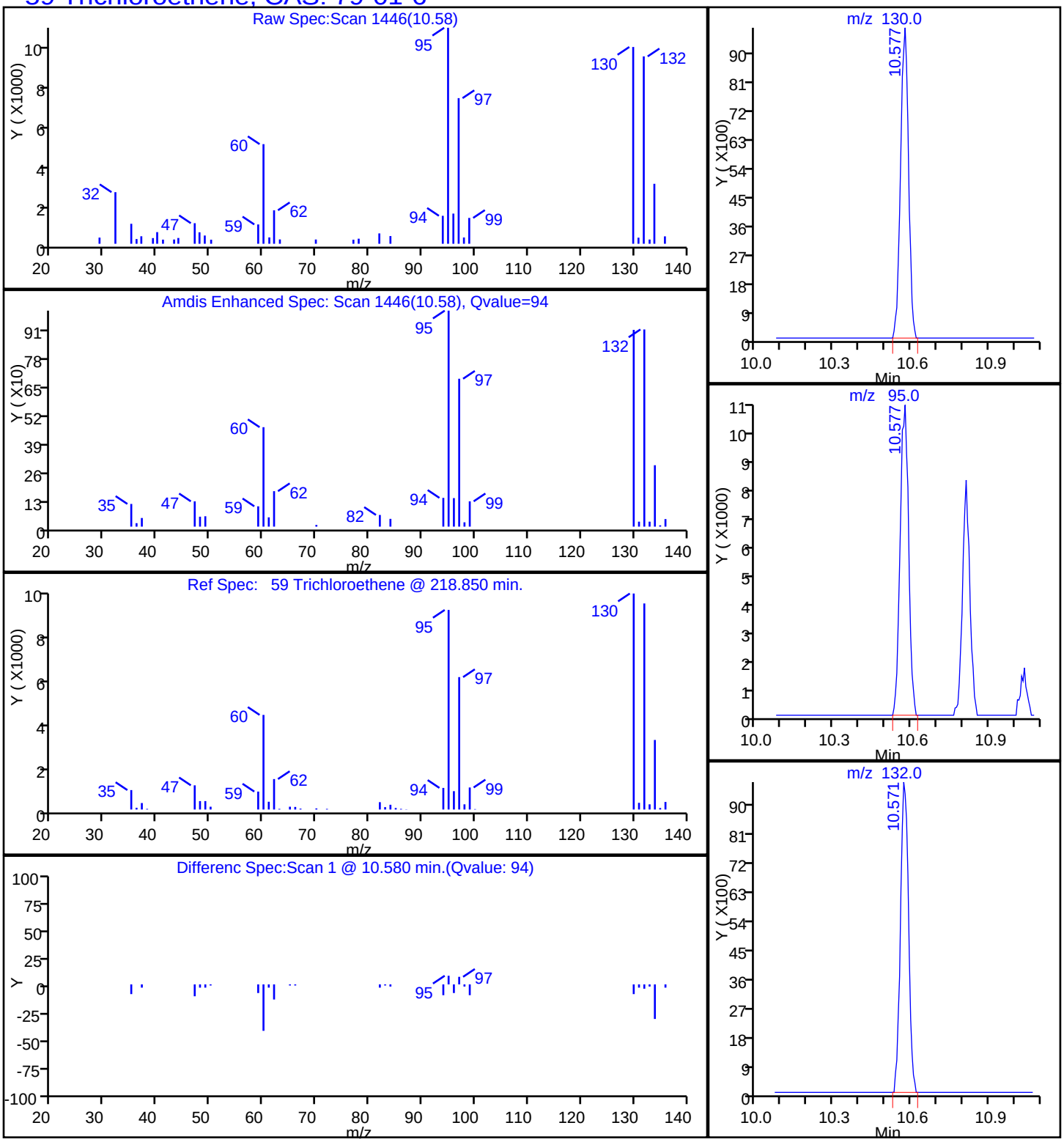
47 1,1,1-Trichloroethane, CAS: 71-55-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D				
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME		
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5		
Client ID:	C-MID GAC				
Operator ID:	403648	ALS Bottle#:	5	Worklist Smp#:	12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

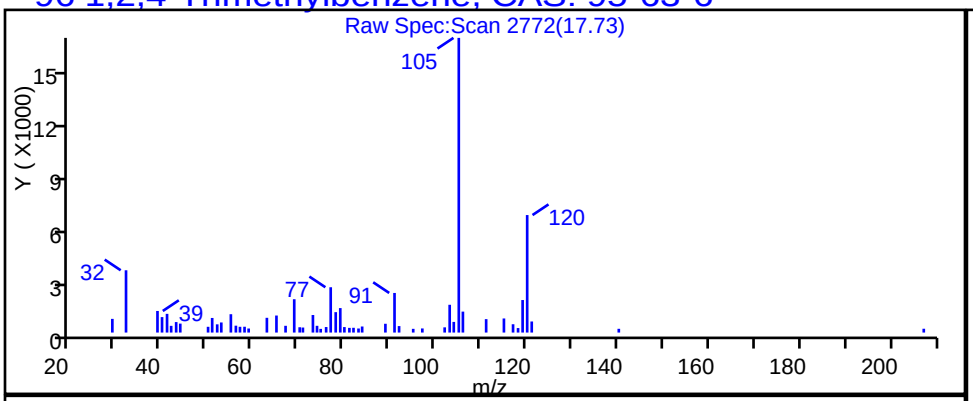
59 Trichloroethene, CAS: 79-01-6

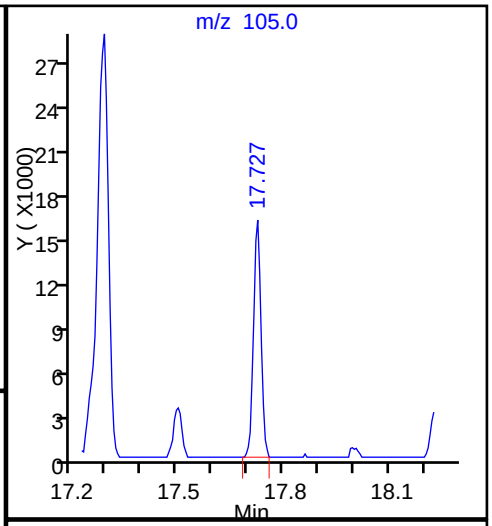


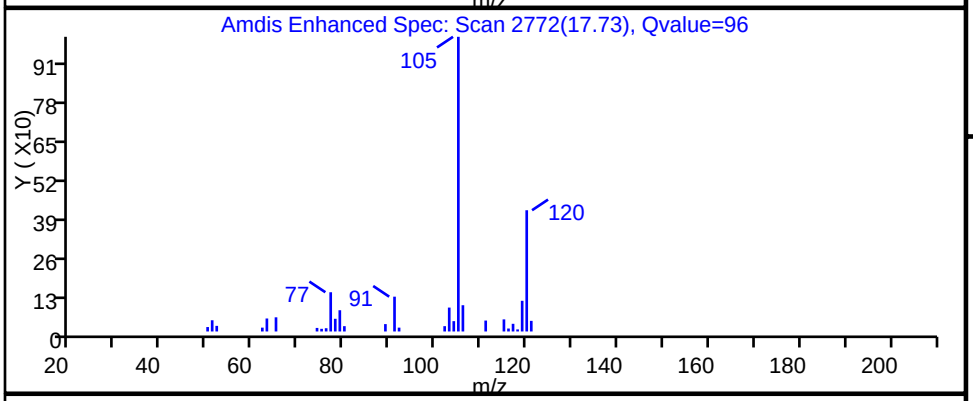
TestAmerica Knoxville

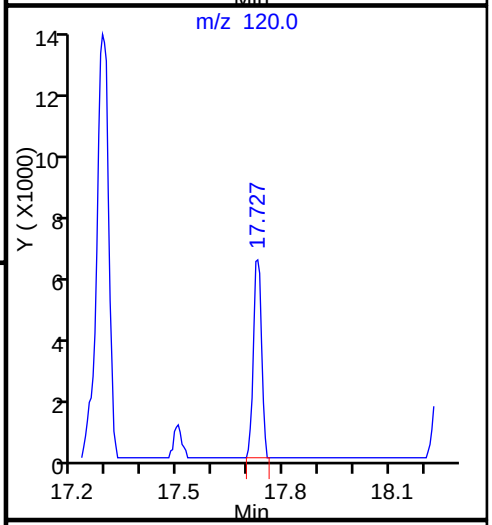
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p105.D		
Injection Date:	10-Sep-2016 21:19:30	Instrument ID:	ME
Lims ID:	140-5782-A-5	Lab Sample ID:	140-5782-5
Client ID:	C-MID GAC		
Operator ID:	403648	ALS Bottle#:	5 Worklist Smp#: 12
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

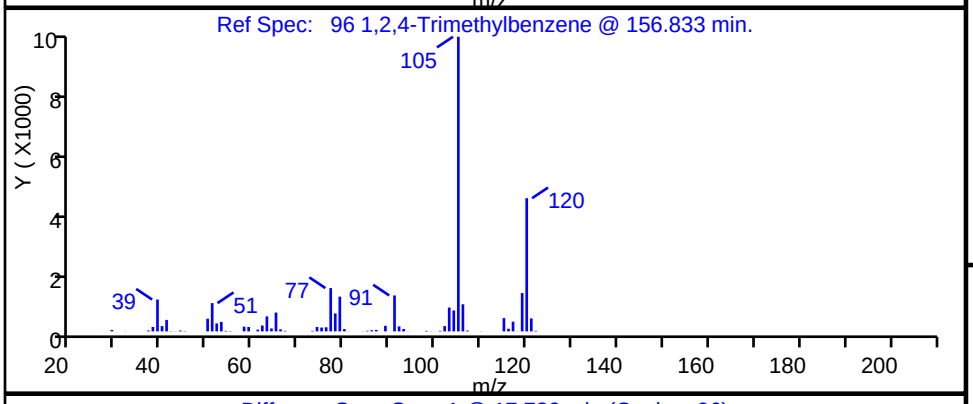
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

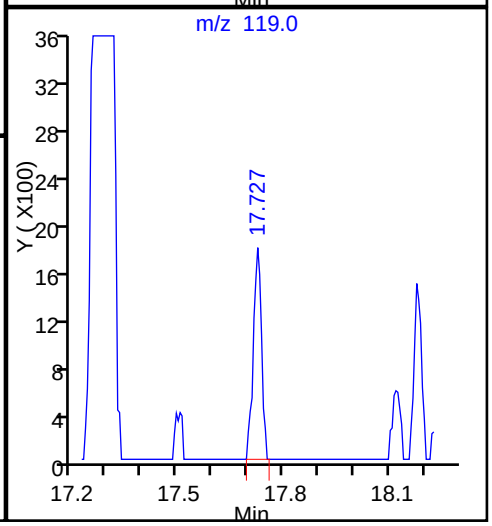


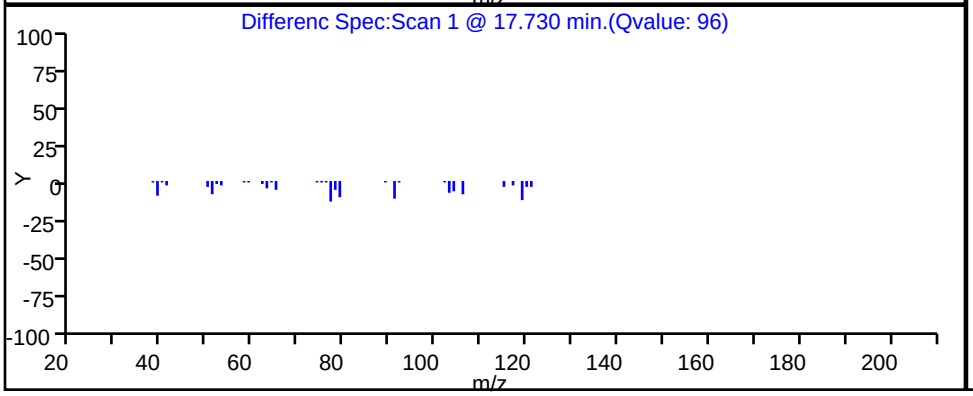












FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: C-EFFLUENT Lab Sample ID: 140-5782-6

Matrix: Air Lab File ID: EI10p106.D

Analysis Method: TO 15 LL Date Collected: 09/07/2016 10:20

Sample wt/vol: 100(mL) Date Analyzed: 09/10/2016 22:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.3		0.40	0.12
56-23-5	Carbon tetrachloride	153.81	ND		0.40	0.075
75-45-6	Chlorodifluoromethane	86.47	0.99		0.40	0.075
67-66-3	Chloroform	119.38	0.25	J	0.40	0.075
156-59-2	cis-1,2-Dichloroethene	96.94	0.59		0.40	0.12
75-71-8	Dichlorodifluoromethane	120.91	0.43		0.40	0.14
75-34-3	1,1-Dichloroethane	98.96	1.5		0.40	0.050
107-06-2	1,2-Dichloroethane	98.96	ND		0.40	0.095
75-35-4	1,1-Dichloroethene	96.94	0.62		0.40	0.070
100-41-4	Ethylbenzene	106.17	ND		0.40	0.14
75-09-2	Methylene Chloride	84.93	1.2		1.0	0.65
1634-04-4	Methyl tert-butyl ether	88.15	ND		2.0	0.34
91-20-3	Naphthalene	128.17	ND		0.20	0.20
127-18-4	Tetrachloroethene	165.83	ND		0.40	0.080
108-88-3	Toluene	92.14	0.71		0.60	0.60
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.40	0.10
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.40	0.20
71-55-6	1,1,1-Trichloroethane	133.41	2.4		0.40	0.060
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.40	0.11
79-01-6	Trichloroethene	131.39	1.3		0.20	0.070
526-73-8	1,2,3-Trimethylbenzene	120.19	0.24	J	0.40	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	0.95		0.40	0.13
108-67-8	1,3,5-Trimethylbenzene	120.20	0.37	J	0.40	0.13
75-01-4	Vinyl chloride	62.50	ND		0.20	0.15
1330-20-7	Xylenes, Total	106.17	ND		0.80	0.12

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: C-EFFLUENT | Lab Sample ID: 140-5782-6

Matrix: Air | Lab File ID: EI10p106.D

Analysis Method: TO 15 LL | Date Collected: 09/07/2016 10:20

Sample wt/vol: 100(mL) | Date Analyzed: 09/10/2016 22:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6539 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	7.5		1.3	0.37
56-23-5	Carbon tetrachloride	153.81	ND		2.5	0.47
75-45-6	Chlorodifluoromethane	86.47	3.5		1.4	0.27
67-66-3	Chloroform	119.38	1.2	J	2.0	0.37
156-59-2	cis-1,2-Dichloroethene	96.94	2.3		1.6	0.48
75-71-8	Dichlorodifluoromethane	120.91	2.1		2.0	0.67
75-34-3	1,1-Dichloroethane	98.96	6.1		1.6	0.20
107-06-2	1,2-Dichloroethane	98.96	ND		1.6	0.38
75-35-4	1,1-Dichloroethene	96.94	2.5		1.6	0.28
100-41-4	Ethylbenzene	106.17	ND		1.7	0.59
75-09-2	Methylene Chloride	84.93	4.3		3.5	2.3
1634-04-4	Methyl tert-butyl ether	88.15	ND		7.2	1.2
91-20-3	Naphthalene	128.17	ND		1.0	1.0
127-18-4	Tetrachloroethene	165.83	ND		2.7	0.54
108-88-3	Toluene	92.14	2.7		2.3	2.3
156-60-5	trans-1,2-Dichloroethene	96.94	ND		1.6	0.40
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		3.0	1.4
71-55-6	1,1,1-Trichloroethane	133.41	13		2.2	0.33
79-00-5	1,1,2-Trichloroethane	133.41	ND		2.2	0.57
79-01-6	Trichloroethene	131.39	6.9		1.1	0.38
526-73-8	1,2,3-Trimethylbenzene	120.19	1.2	J	2.0	0.84
95-63-6	1,2,4-Trimethylbenzene	120.20	4.7		2.0	0.61
108-67-8	1,3,5-Trimethylbenzene	120.20	1.8	J	2.0	0.64
75-01-4	Vinyl chloride	62.50	ND		0.51	0.37
1330-20-7	Xylenes, Total	106.17	ND		3.5	0.52

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	101		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Lims ID:	140-5782-A-6				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 22:04:30	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-013				
Misc. Info.:	140-5782-a-6				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				
First Level Reviewer: barlozhetskayaa		Date:	12-Sep-2016 10:08:19		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.568	7.568	0.000	74	390166	4.00	
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	94	1902675	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	88	1788947	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	88	1472591	4.02	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	94	9122	0.1971	
8 Dichlorodifluoromethane	85	2.946	2.952	-0.006	99	34913	0.0851	
27 1,1-Dichloroethene	96	4.774	4.780	-0.006	98	14810	0.1245	
31 Methylene Chloride	84	5.109	5.103	0.006	80	30433	0.2487	
37 1,1-Dichloroethane	63	6.279	6.279	0.000	99	65295	0.3010	
42 cis-1,2-Dichloroethene	96	7.239	7.239	0.000	92	15353	0.1176	
44 Chloroform	83	7.584	7.584	0.000	87	15966	0.0491	
47 1,1,1-Trichloroethane	97	8.587	8.592	-0.005	94	177702	0.4874	
51 Benzene	78	9.196	9.196	0.000	93	182494	0.4680	
59 Trichloroethene	130	10.577	10.582	-0.005	92	43482	0.2551	
68 Toluene	91	12.771	12.777	-0.006	95	60555	0.1411	
92 1,3,5-Trimethylbenzene	120	17.252	17.258	-0.006	91	20322	0.0744	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	98	95941	0.1897	
102 1,2,3-Trimethylbenzene	105	18.234	18.234	0.000	98	18248	0.0478	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

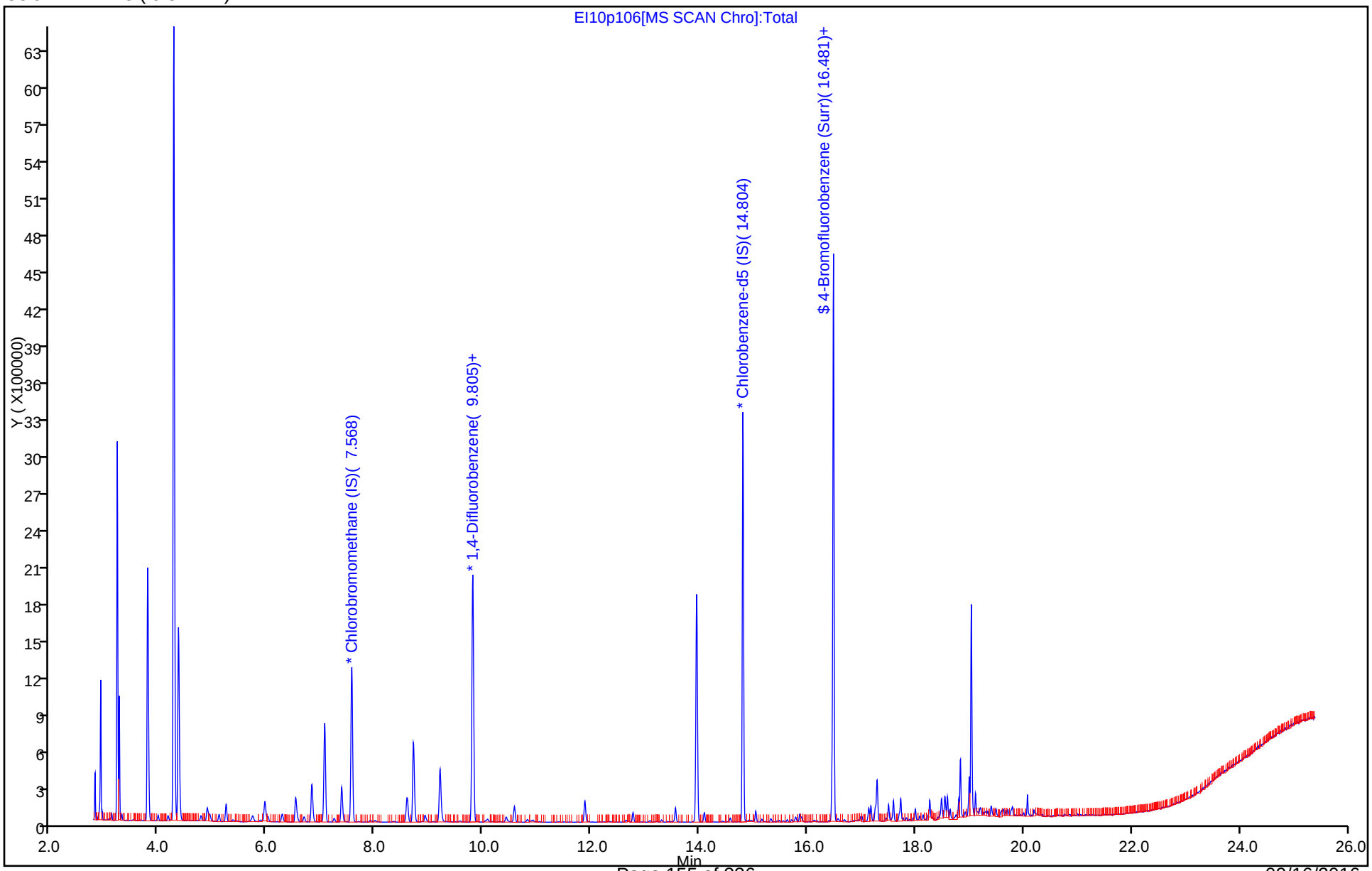
Report Date: 12-Sep-2016 11:34:11 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D

Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6	Worklist Smp#:	13
Client ID:	C-EFFLUENT				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Lims ID:	140-5782-A-6				
Client ID:	C-EFFLUENT				
Sample Type:	Client				
Inject. Date:	10-Sep-2016 22:04:30	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-013				
Misc. Info.:	140-5782-a-6				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:33:09	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

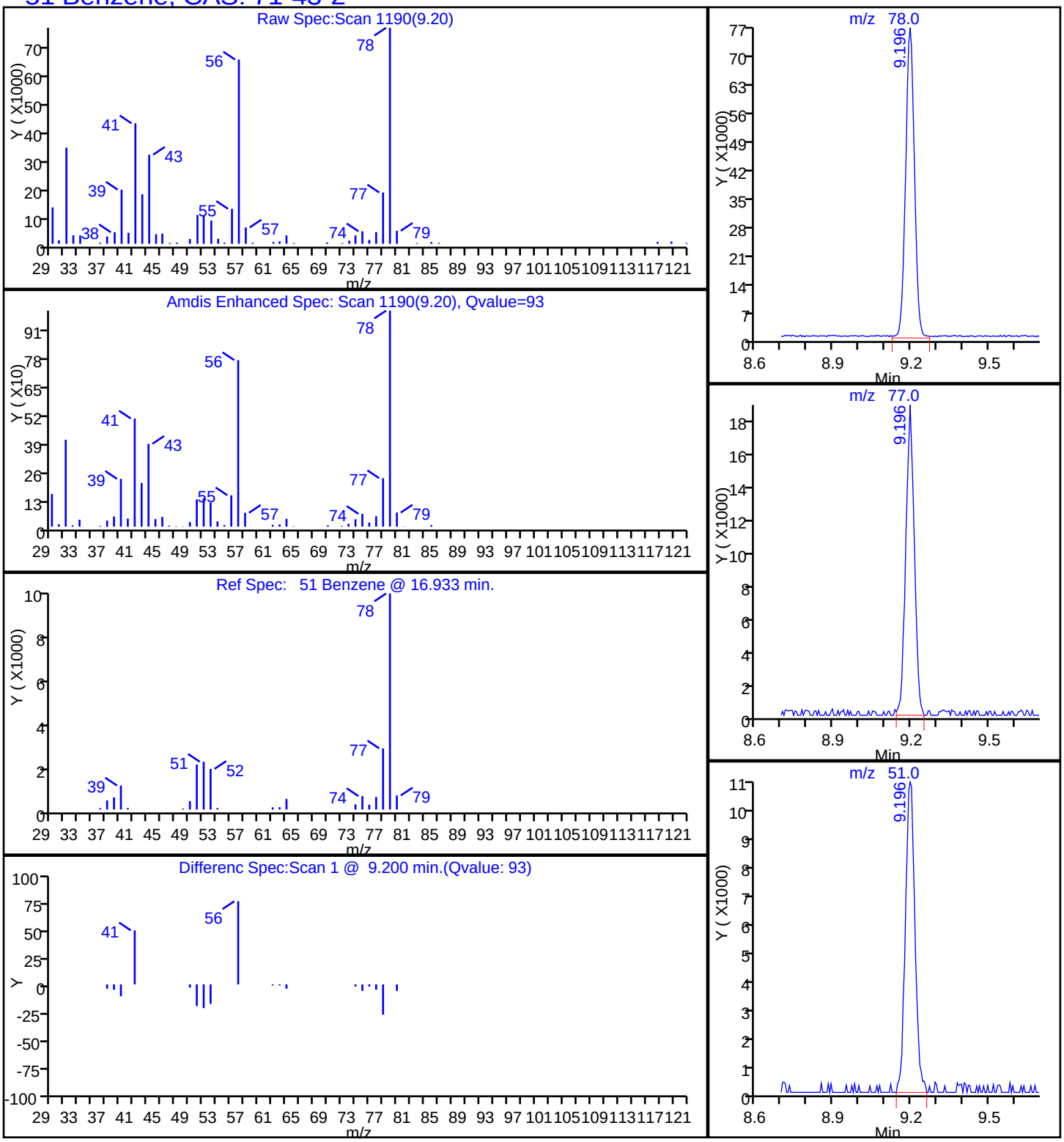
First Level Reviewer: barlozhetskayaa Date: 12-Sep-2016 10:08:19

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.02	100.57

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

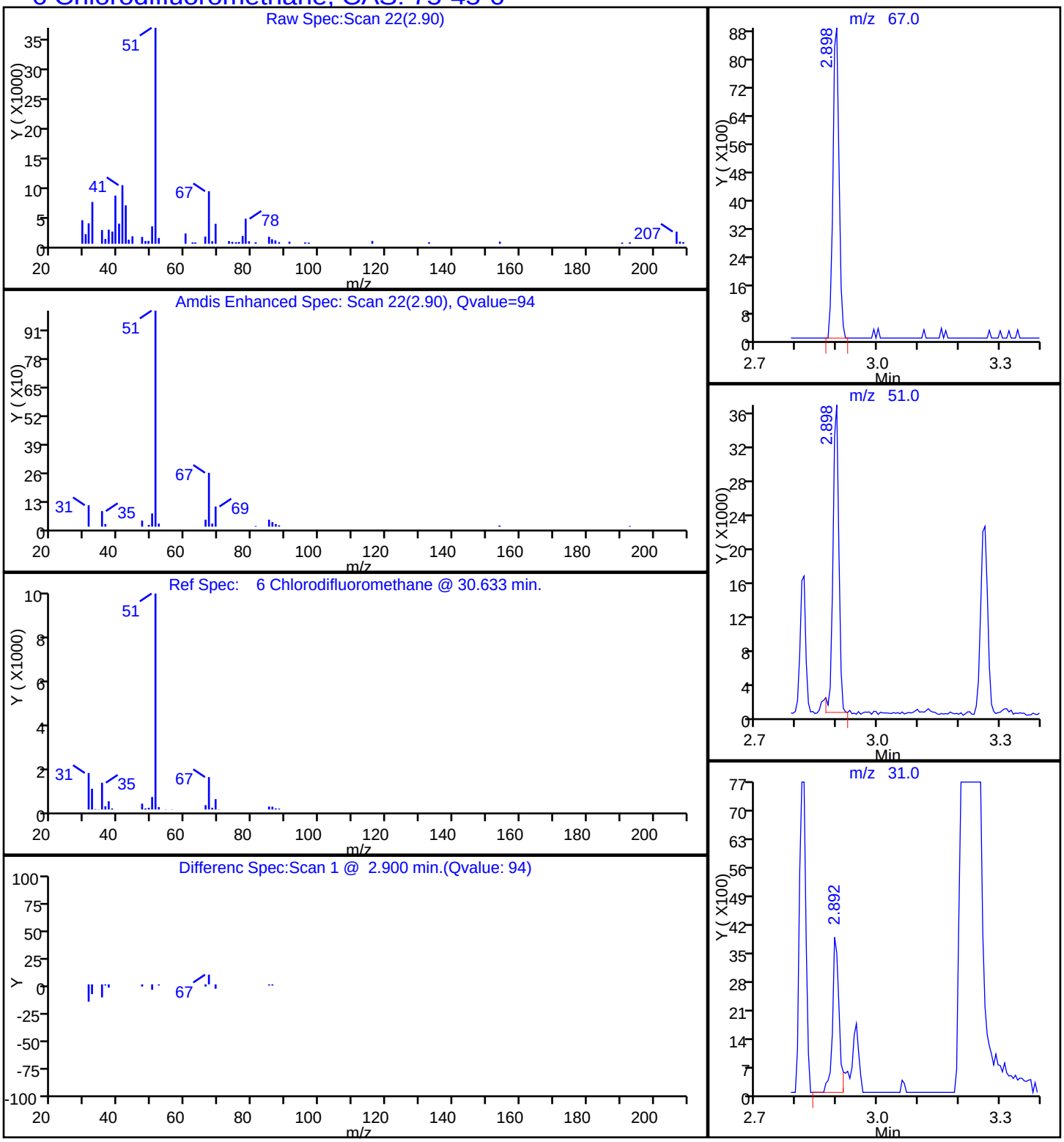
51 Benzene, CAS: 71-43-2



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

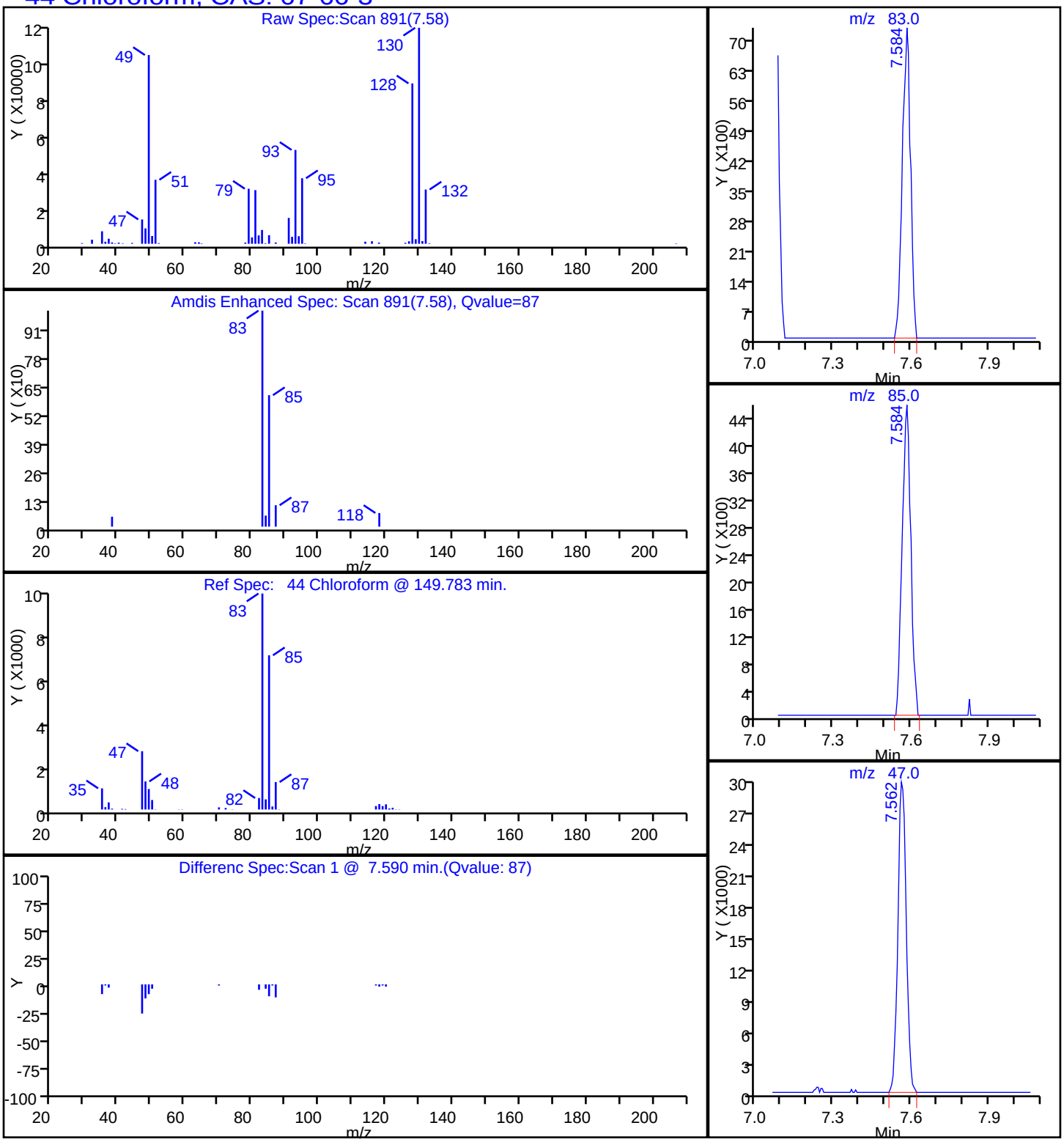
6 Chlorodifluoromethane, CAS: 75-45-6



TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

44 Chloroform, CAS: 67-66-3



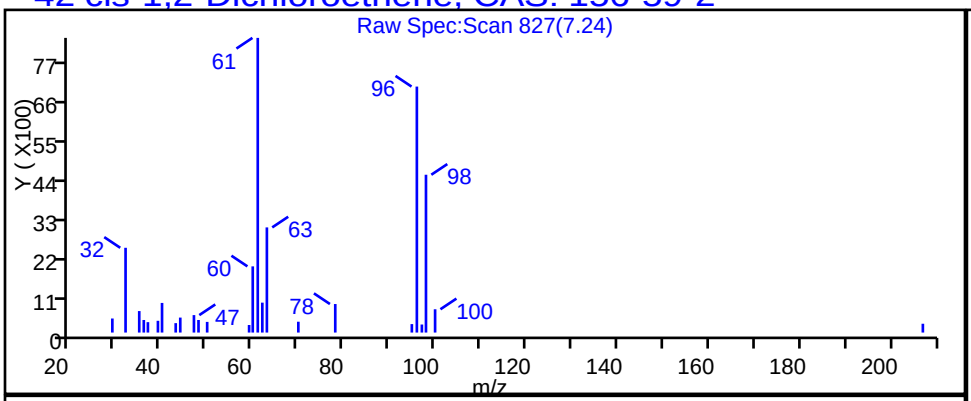
Report Date: 12-Sep-2016 11:34:12 Chrom Revision: 2.2 02-Sep-2016 12:39:46

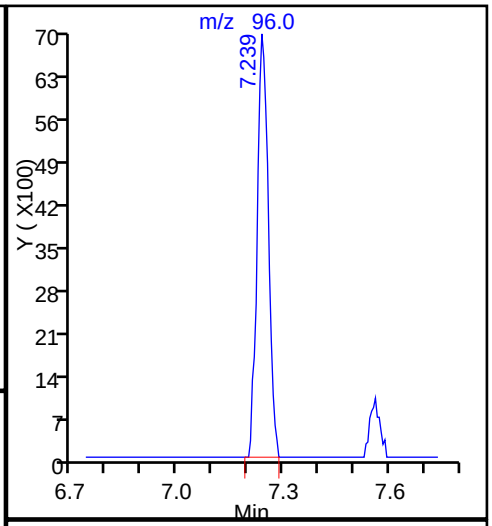
TestAmerica Knoxville

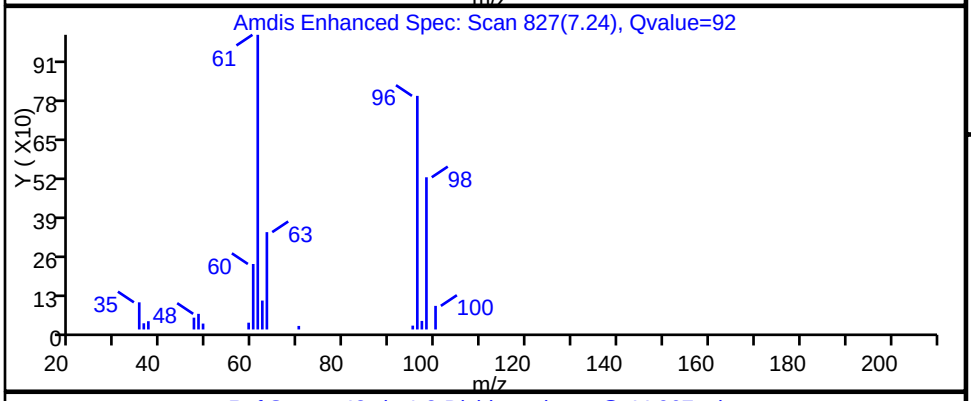
Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D

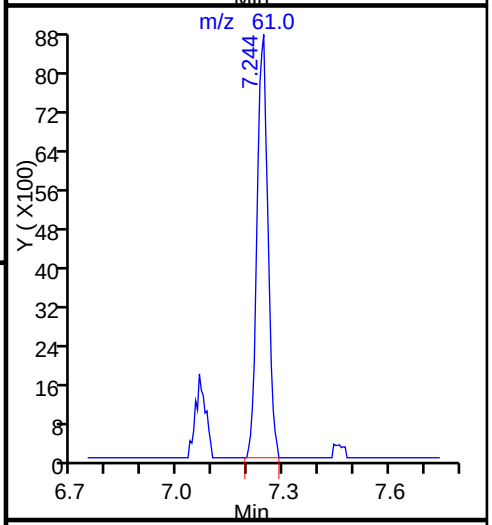
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

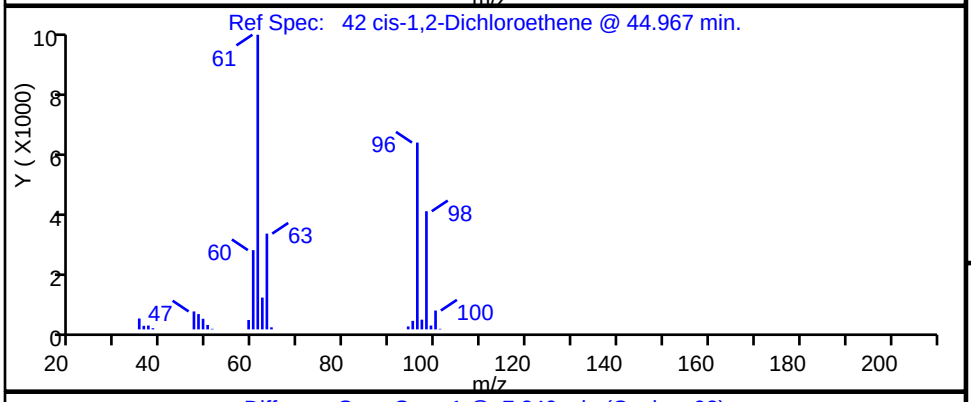
42 cis-1,2-Dichloroethene, CAS: 156-59-2

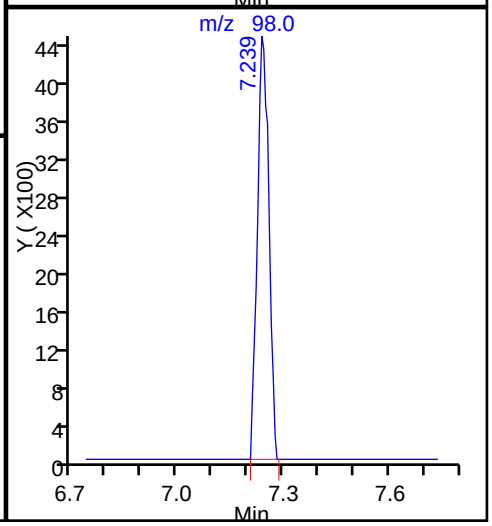


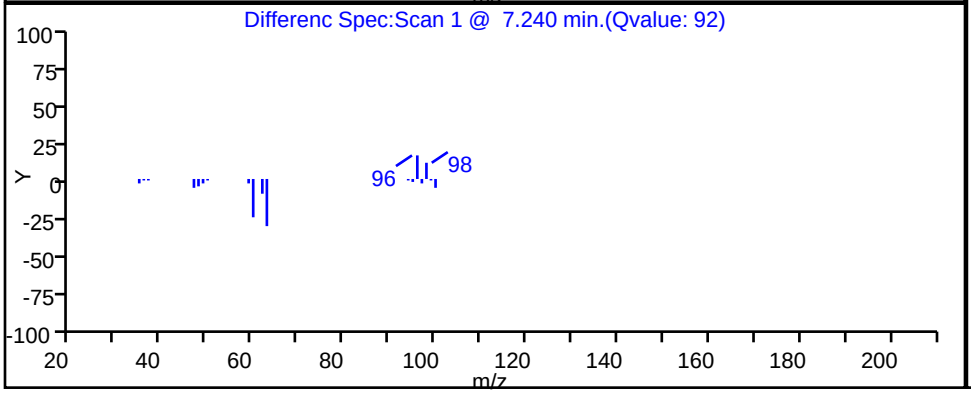








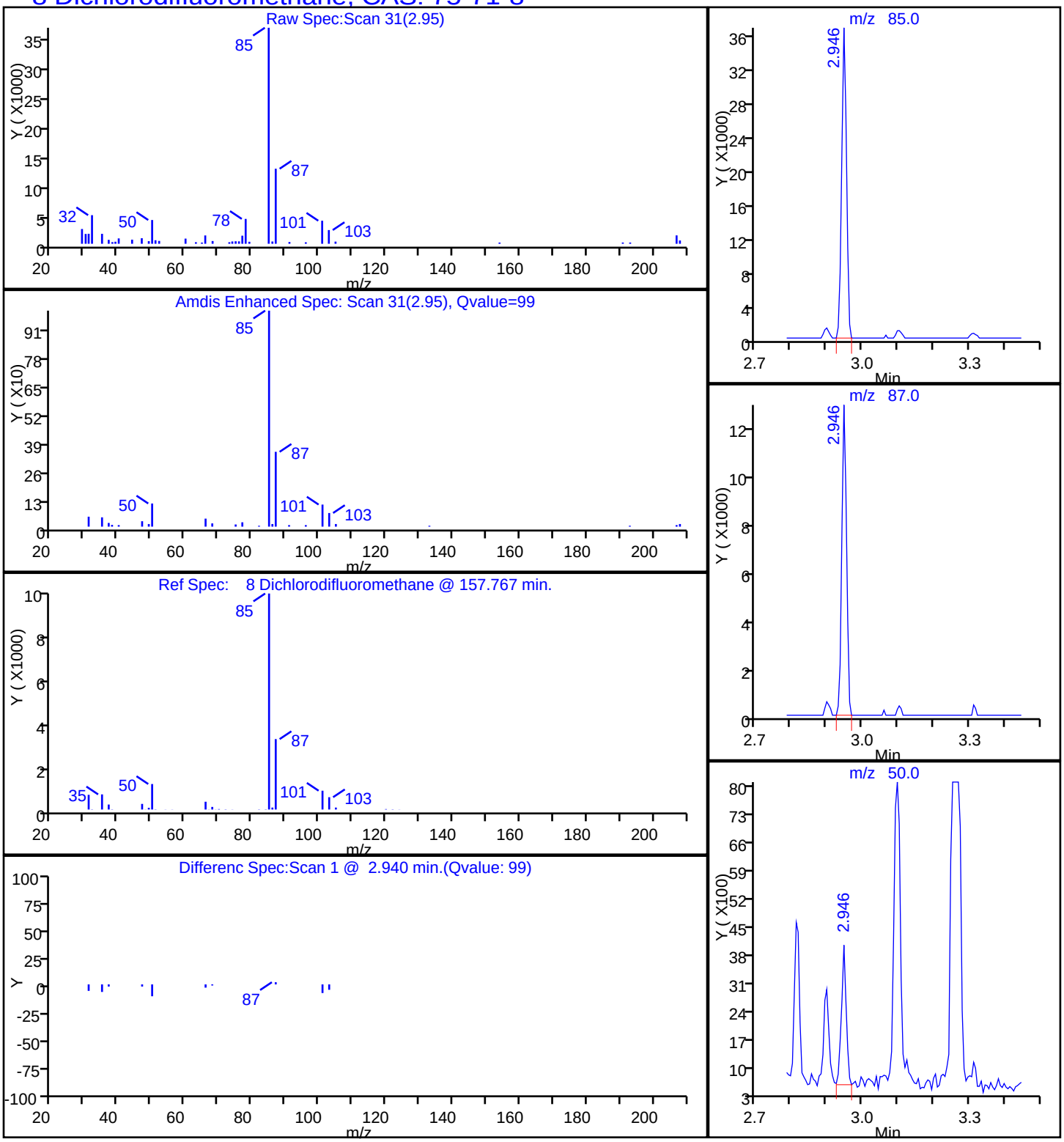




TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

8 Dichlorodifluoromethane, CAS: 75-71-8



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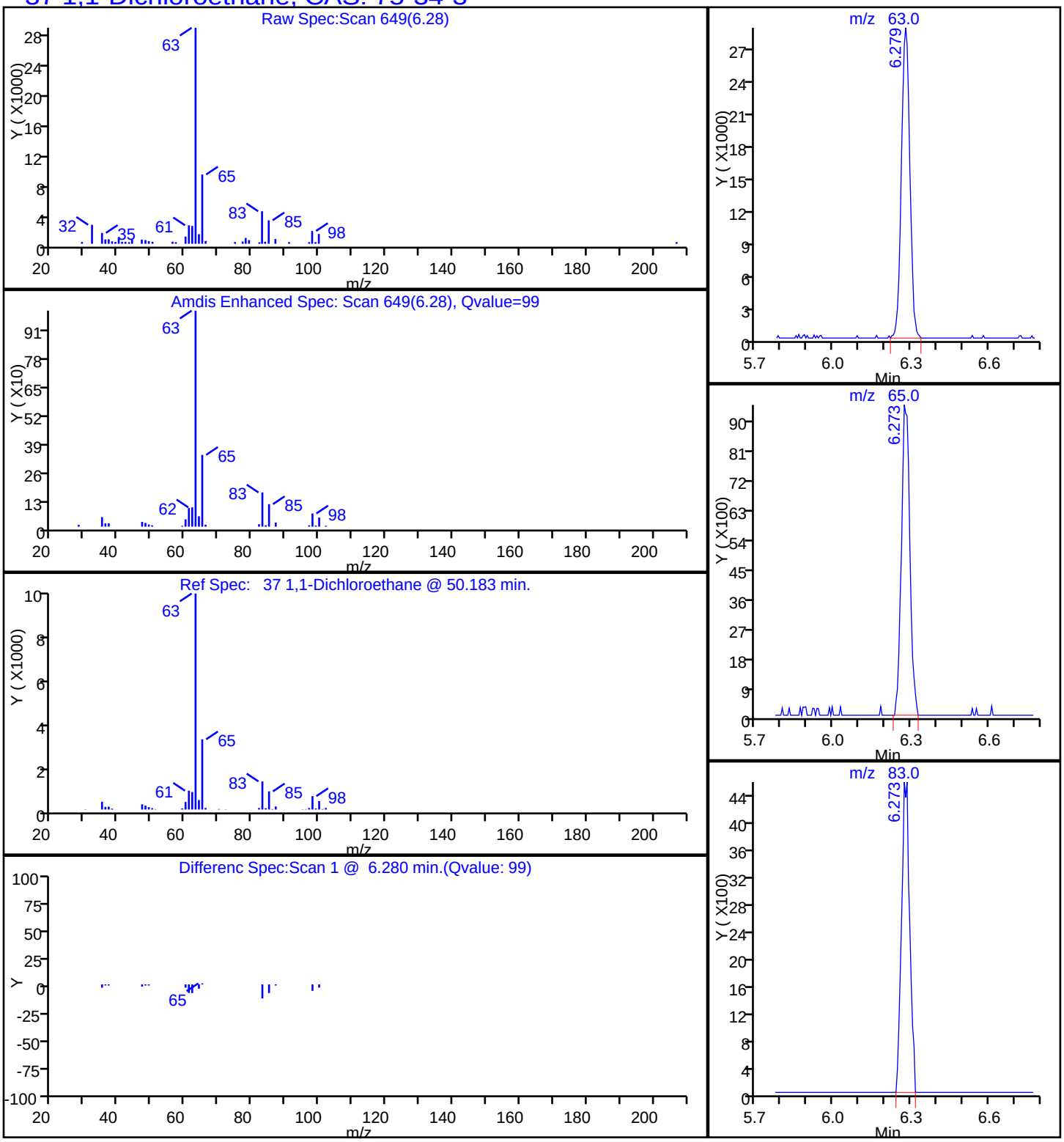
TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D

Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

37 1,1-Dichloroethane, CAS: 75-34-3



TestAmerica Knoxville

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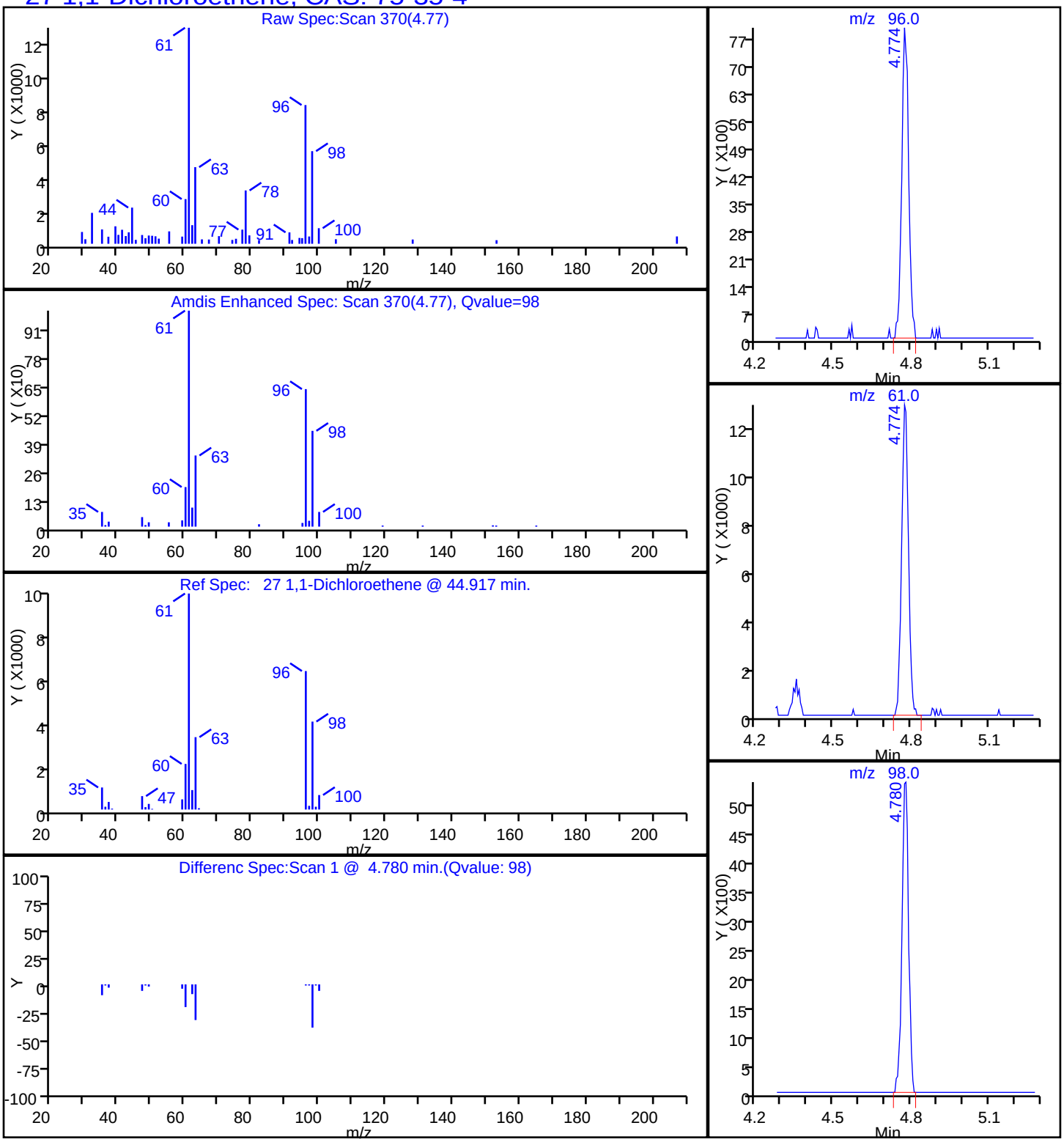
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6
Client ID:	C-EFFLUENT		
Operator ID:	403648	ALS Bottle#:	6 Worklist Smp#: 13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN

27 1,1-Dichloroethene, CAS: 75-35-4



TestAmerica Knoxville

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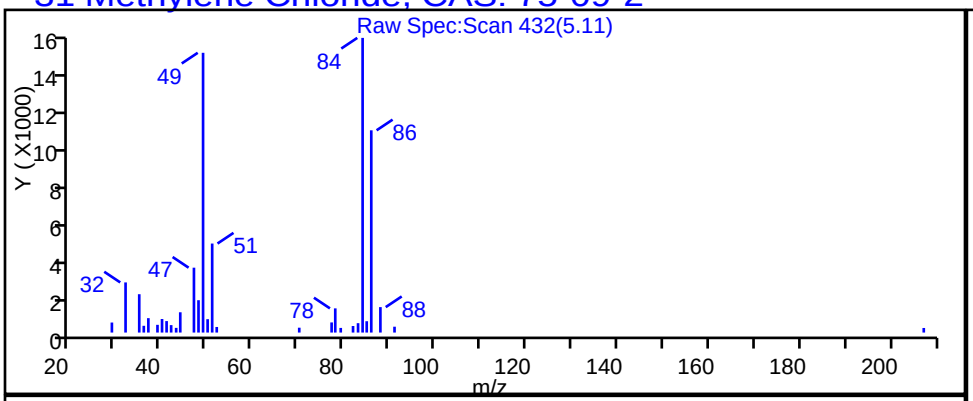
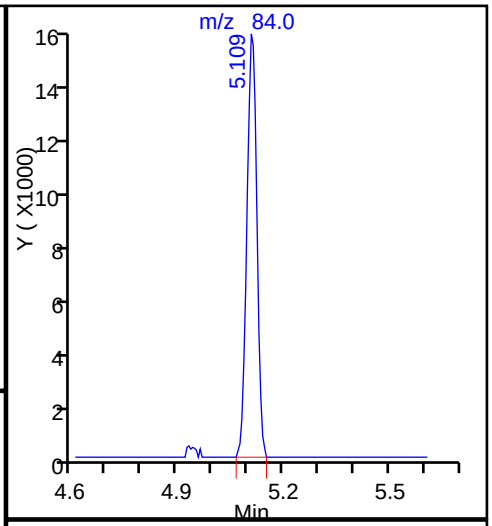
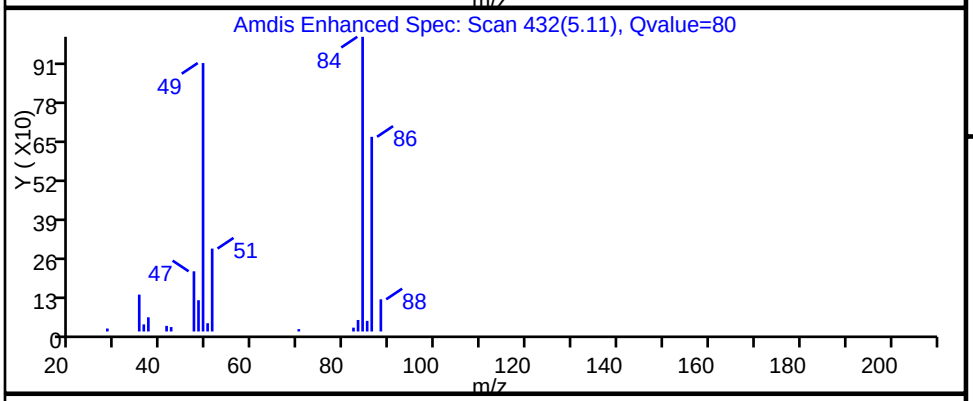
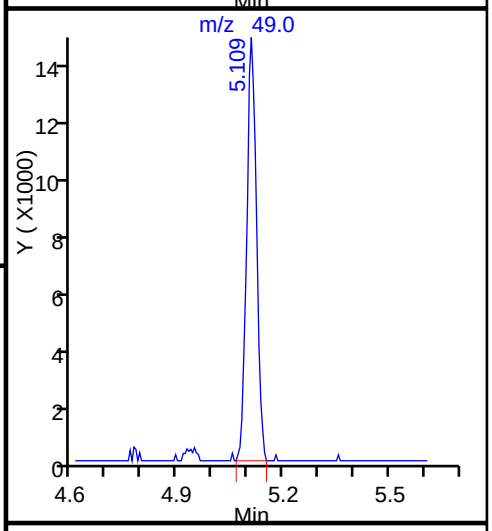
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

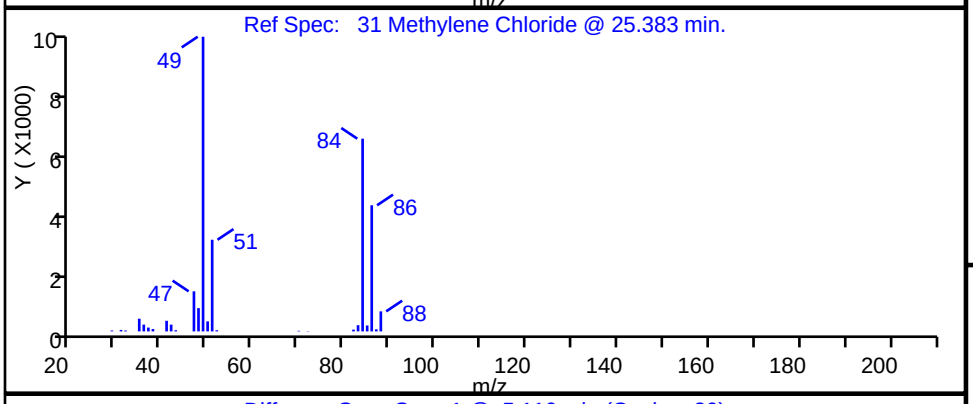
31 Methylene Chloride, CAS: 75-09-2

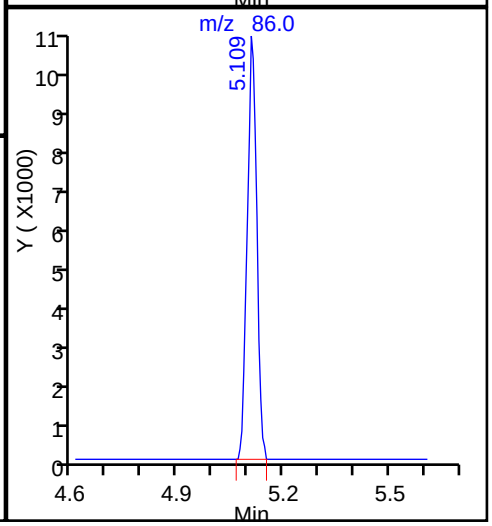


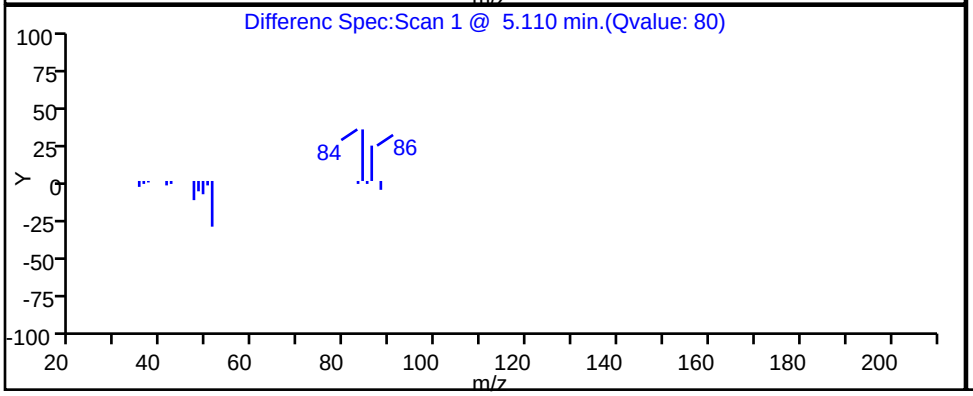








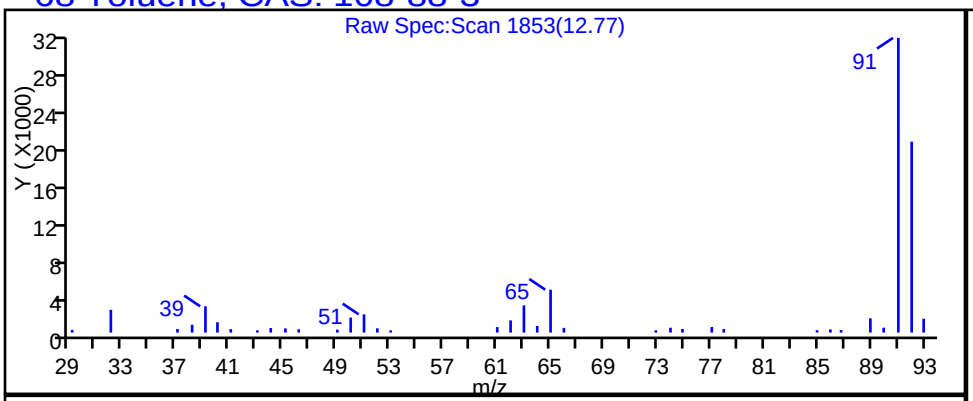


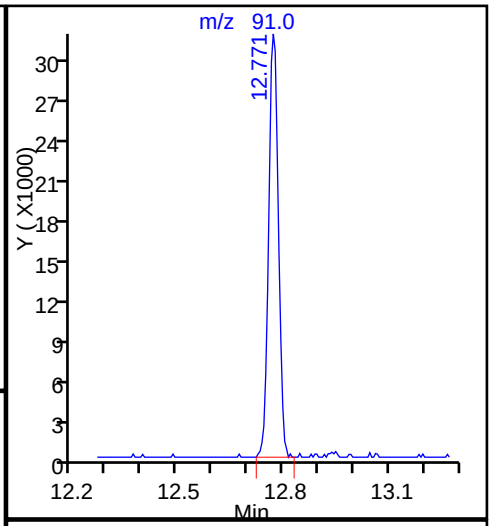


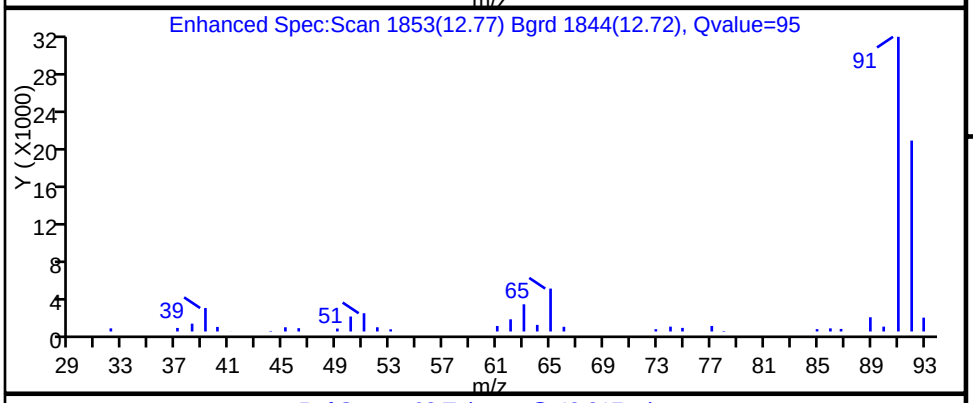
TestAmerica Knoxville

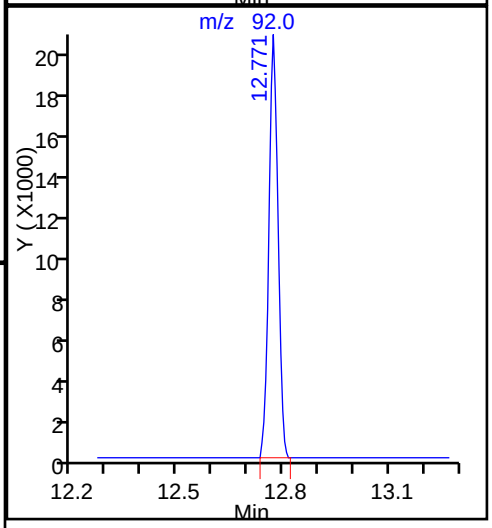
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

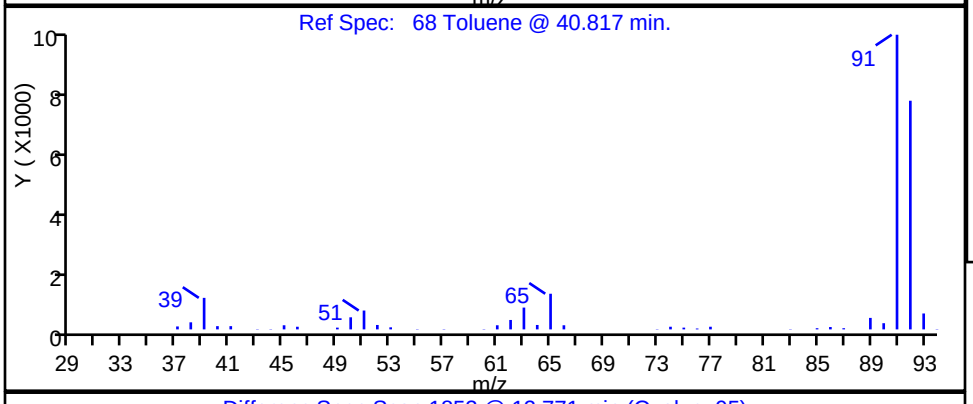
68 Toluene, CAS: 108-88-3

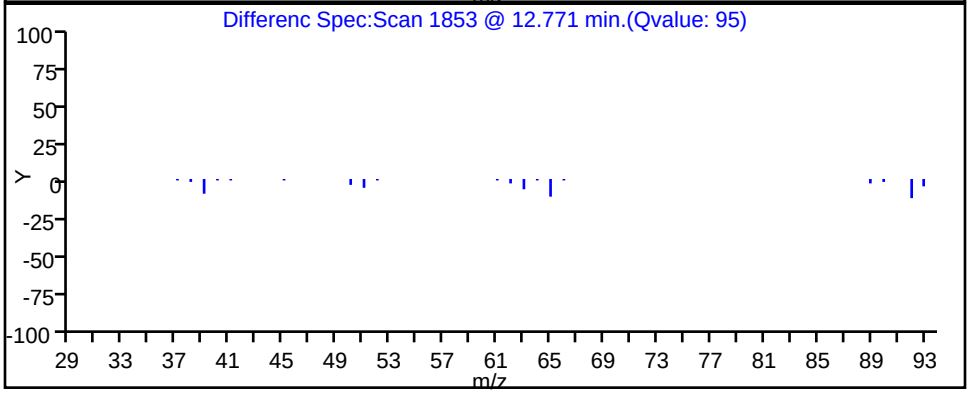






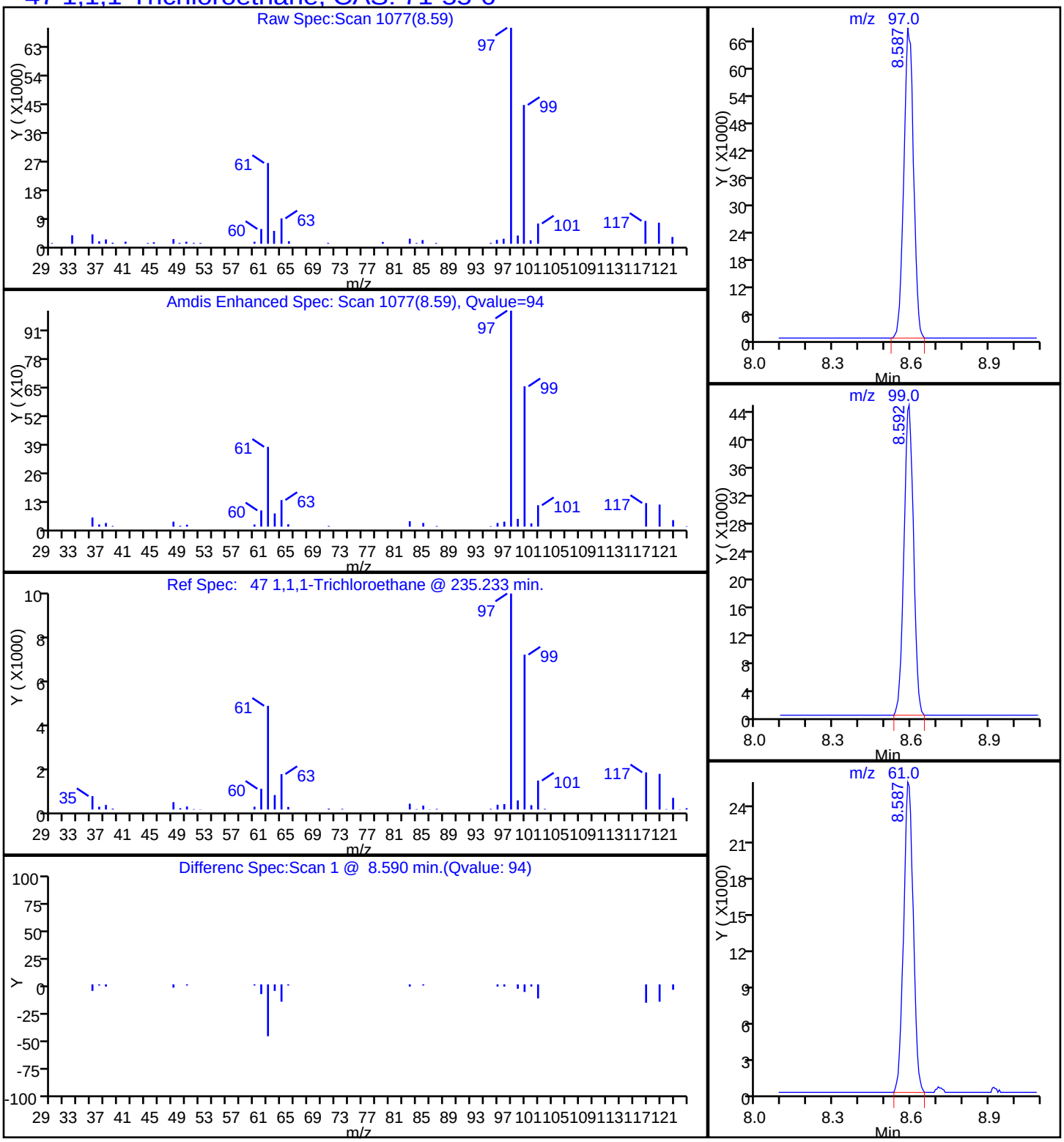






Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

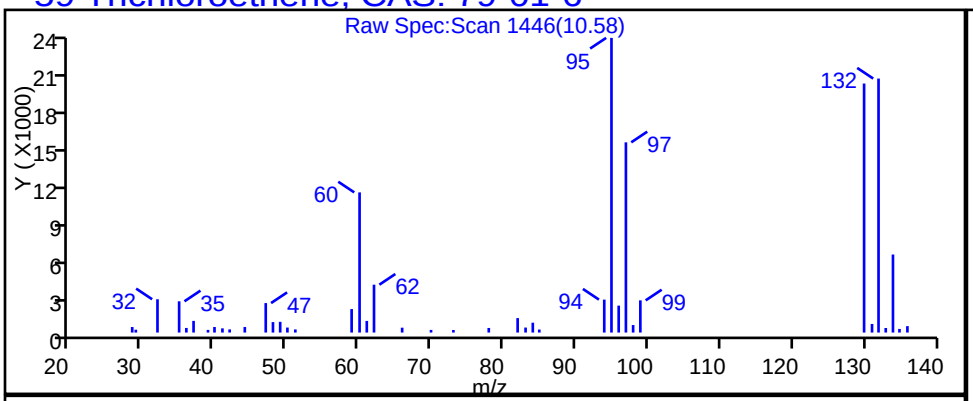
47 1,1,1-Trichloroethane, CAS: 71-55-6

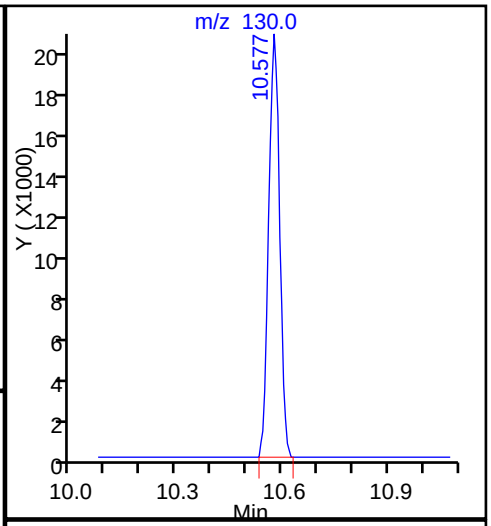


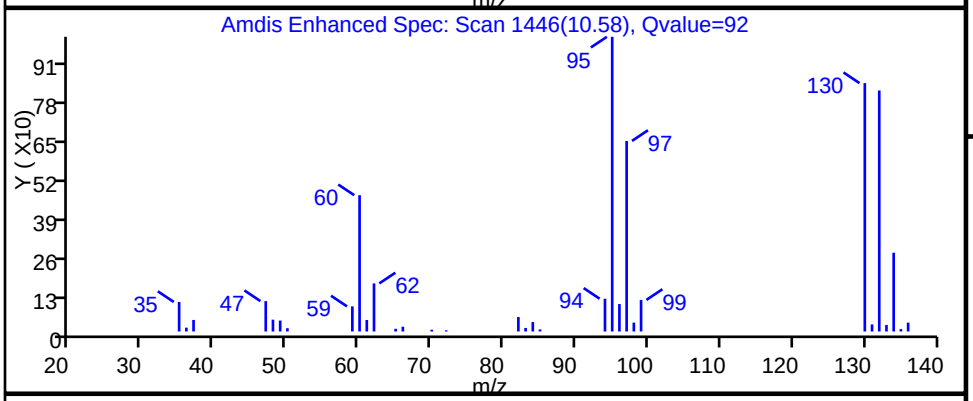
TestAmerica Knoxville

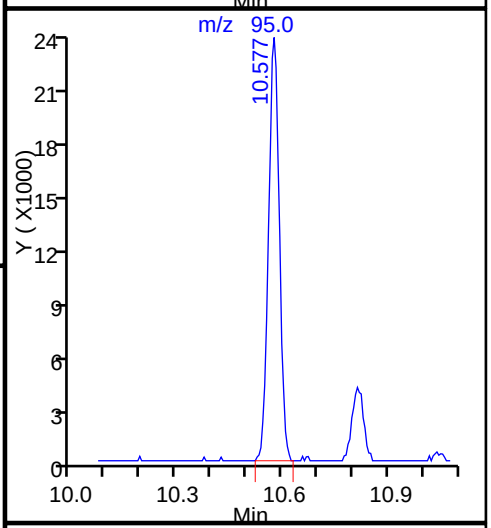
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

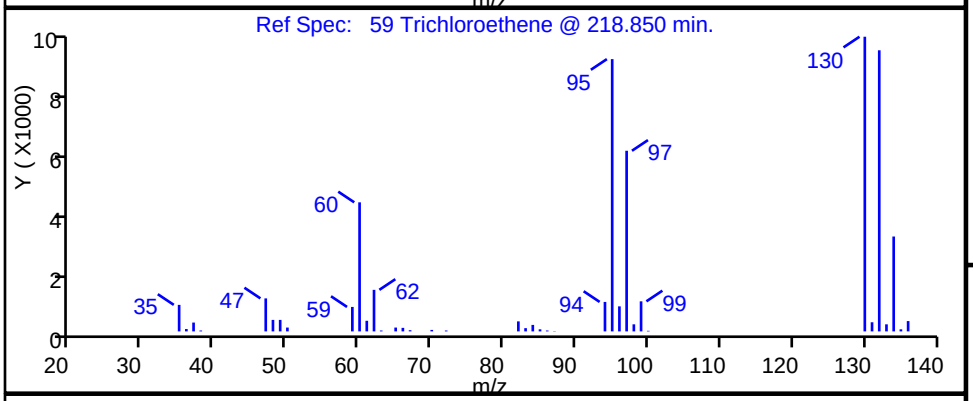
59 Trichloroethene, CAS: 79-01-6

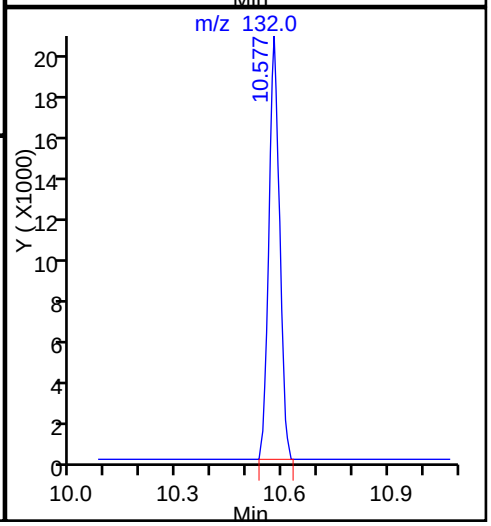


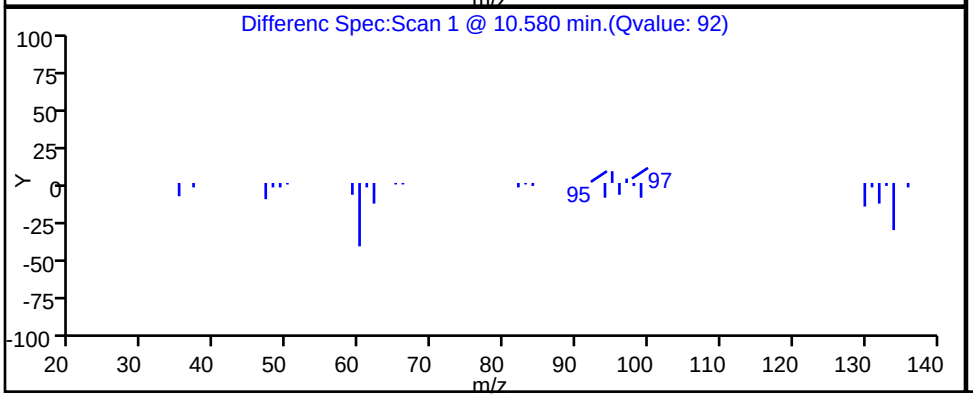












TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
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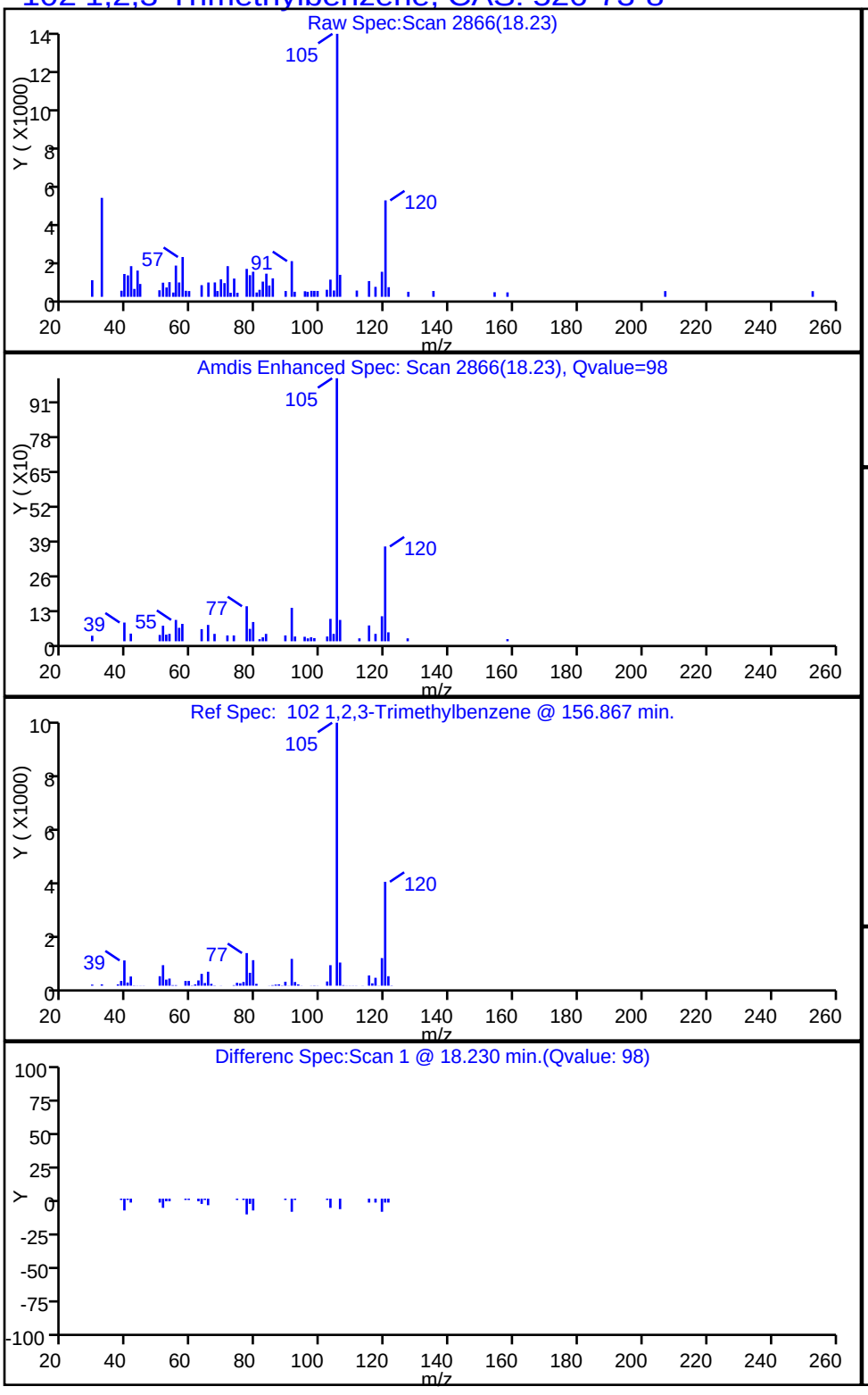
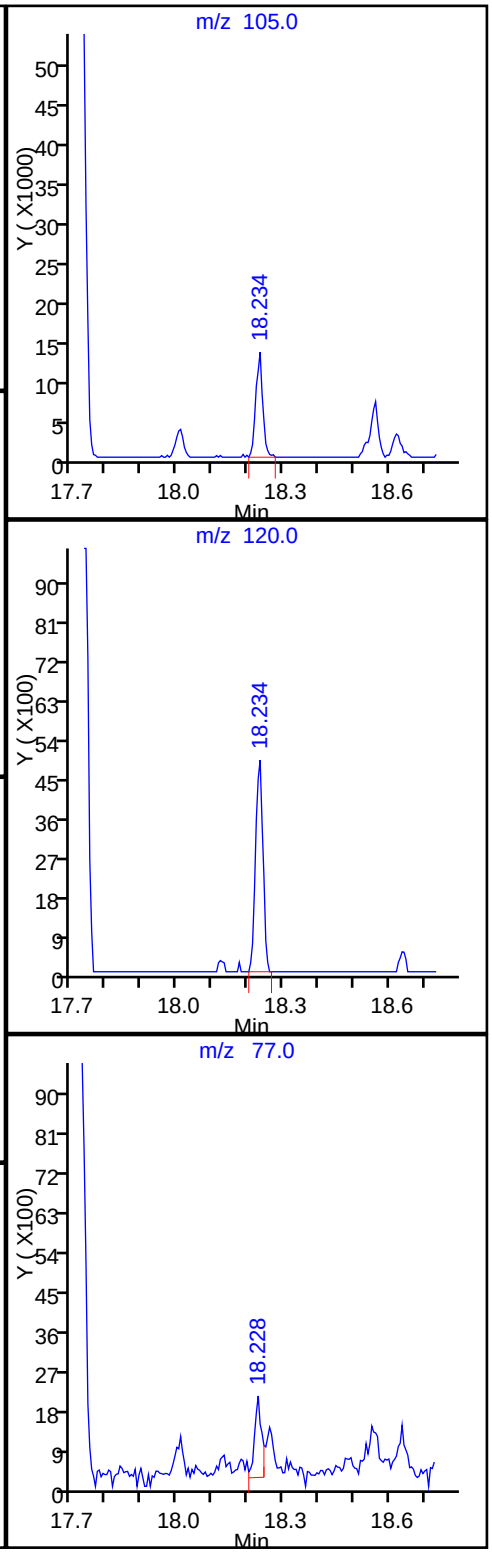
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

102 1,2,3-Trimethylbenzene, CAS: 526-73-8





TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
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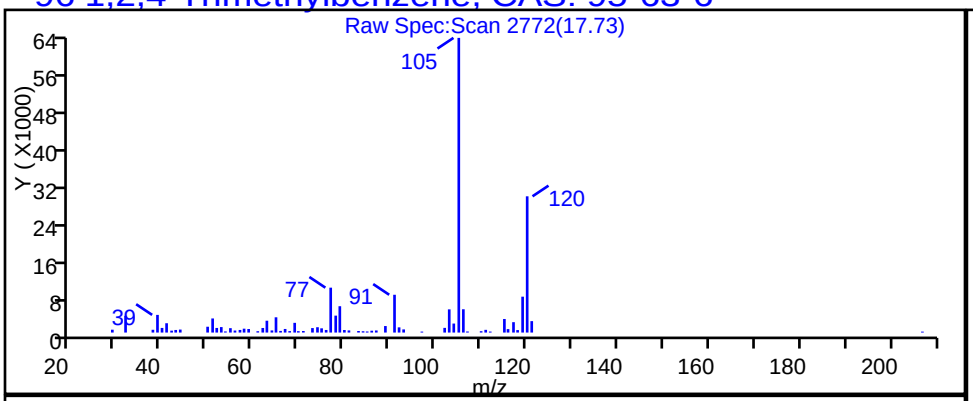
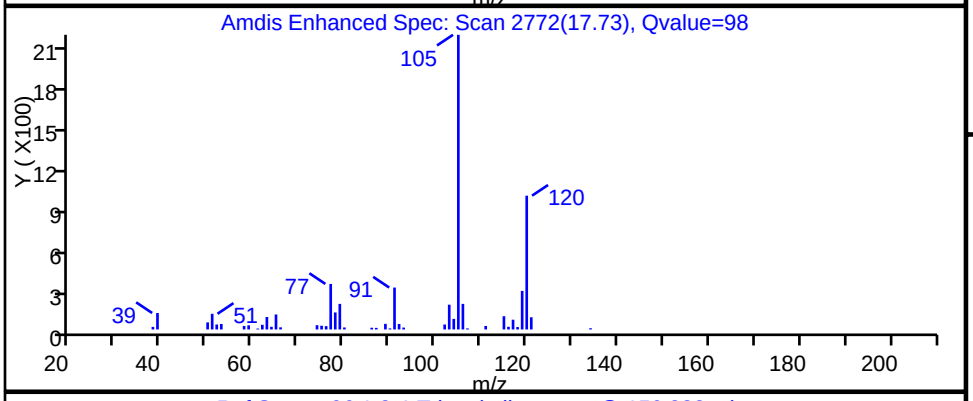
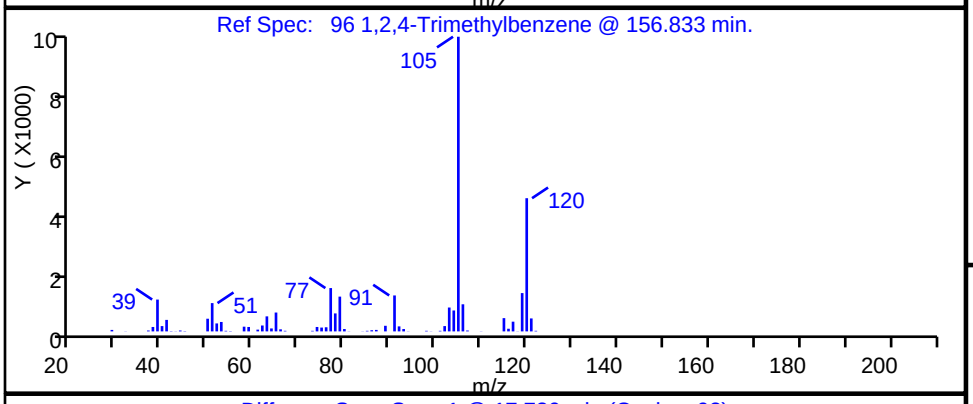
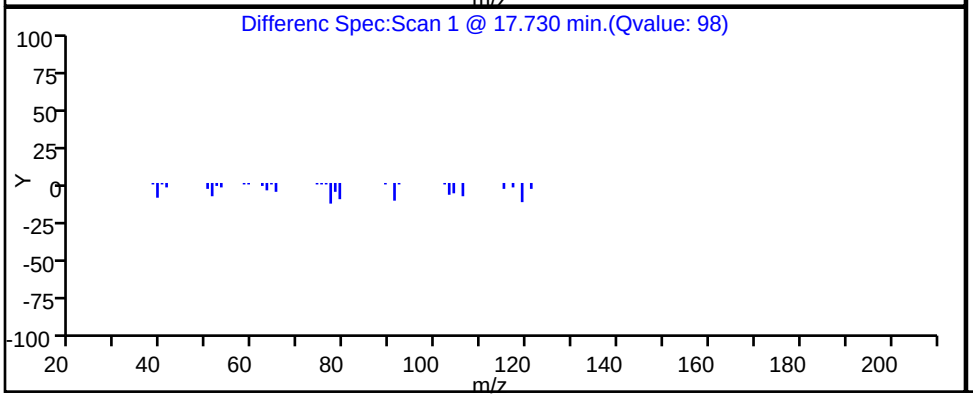
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

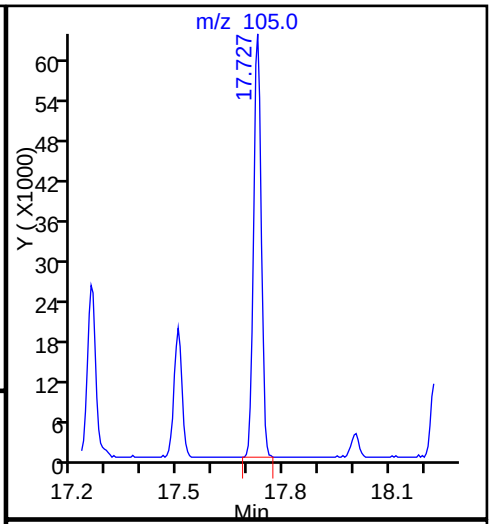
96 1,2,4-Trimethylbenzene, CAS: 95-63-6

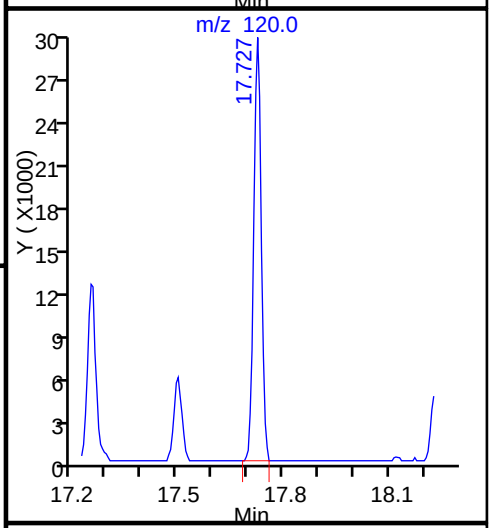


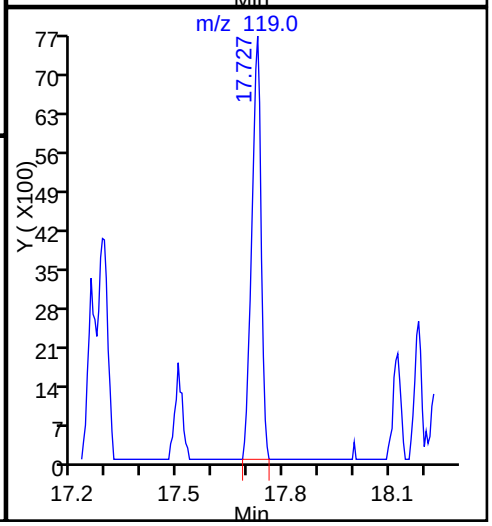








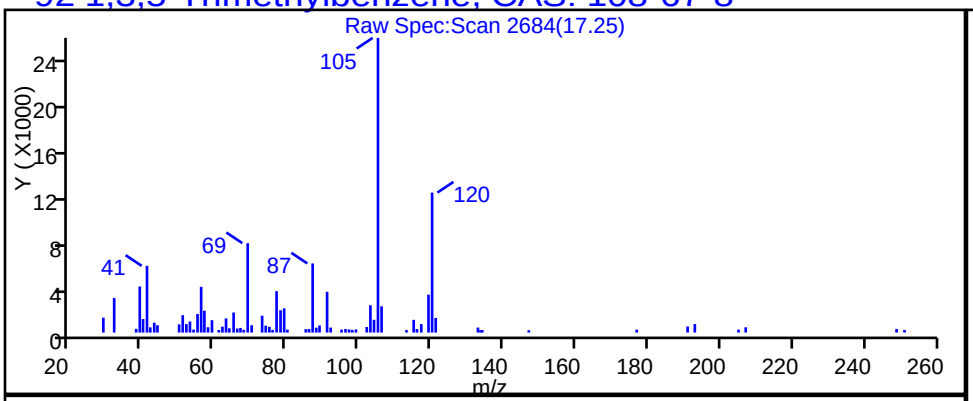


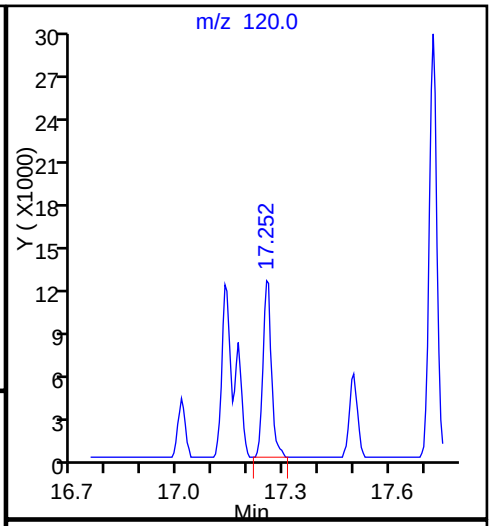


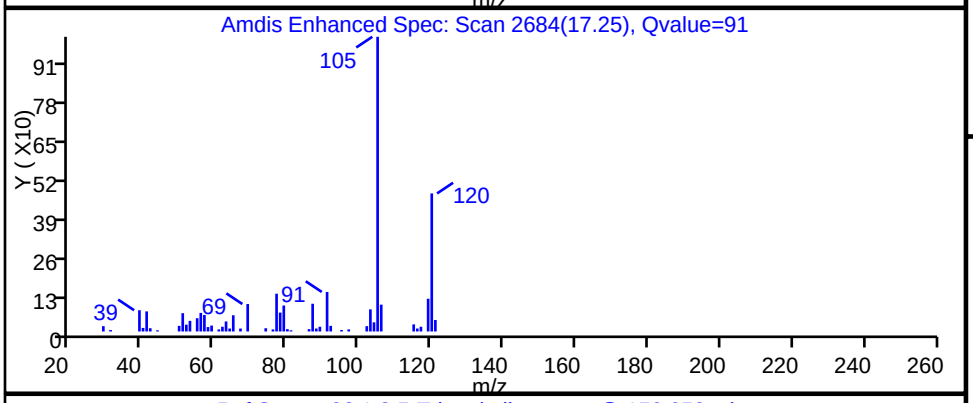
TestAmerica Knoxville

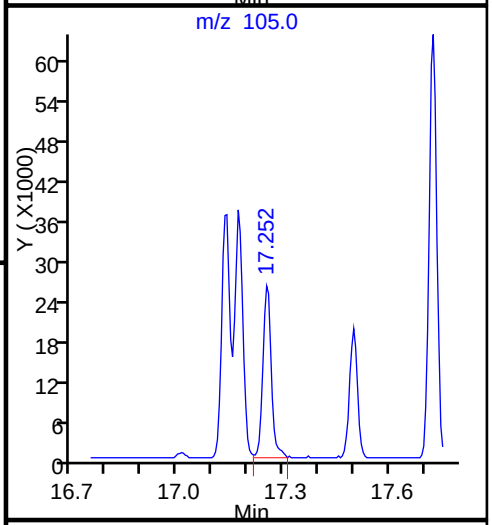
Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EI10p106.D				
Injection Date:	10-Sep-2016 22:04:30	Instrument ID:	ME		
Lims ID:	140-5782-A-6	Lab Sample ID:	140-5782-6		
Client ID:	C-EFFLUENT				
Operator ID:	403648	ALS Bottle#:	6	Worklist Smp#:	13
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

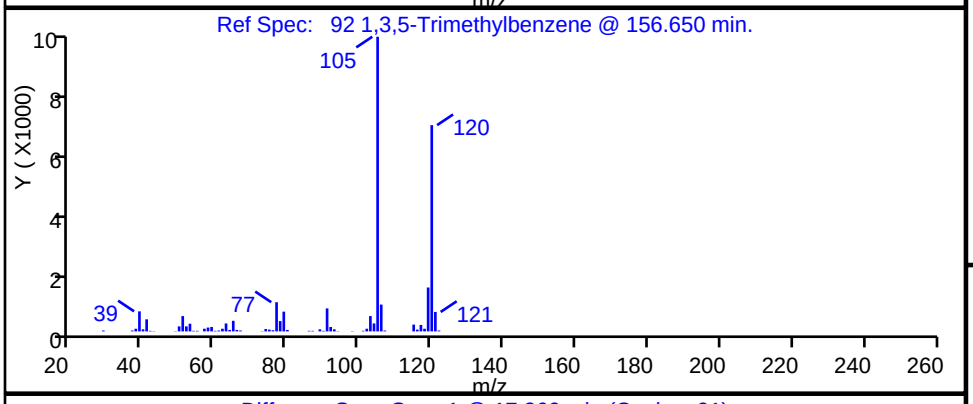
92 1,3,5-Trimethylbenzene, CAS: 108-67-8

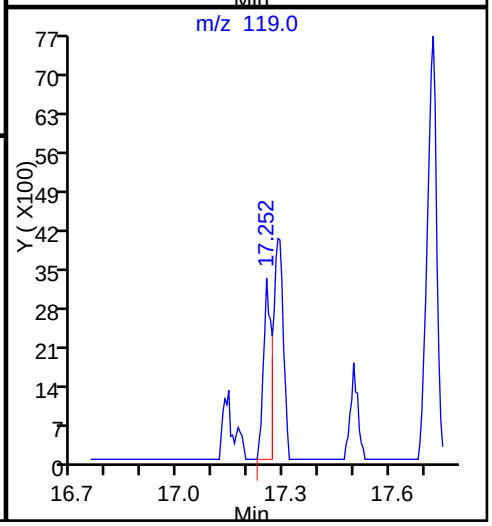


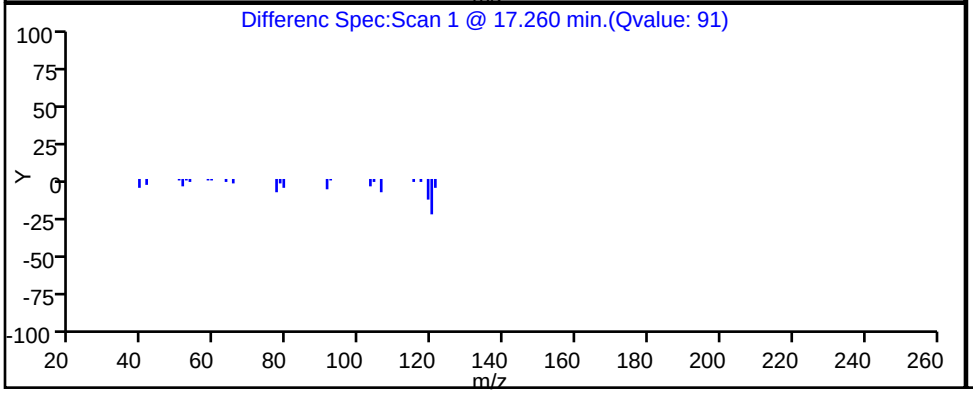












FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6379/3	EH23IC01A.D
Level 2	IC 140-6379/4	EH23IC02A.D
Level 3	IC 140-6379/5	EH23IC03A.D
Level 4	IC 140-6379/6	EH23IC04.D
Level 5	IC 140-6379/7	EH23IC05.D
Level 6	ICIS 140-6379/8	EH23IC06.D
Level 7	IC 140-6379/9	EH23IC07.D
Level 8	IC 140-6379/10	EH23IC08.D
Level 9	IC 140-6379/11	EH23IC09.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	+++++ 0.4591	0.5657 0.4612	0.4705 0.4677	0.4594 0.4369	0.4759	Ave		0.4745				8.1		30.0			
Propene	+++++ 0.6245	0.6890 0.6168	0.7232 0.6449	0.6694 0.6037	0.6479	Ave		0.6524				6.1		30.0			
Dichlorodifluoromethane	4.8118 4.2351	4.4782 4.0016	4.2723 3.9991	4.2868 3.4845	4.2878	Ave		4.2063				8.7		30.0			
Chloromethane	0.3136 0.2329	0.3661 0.2325	0.3162 0.2365	0.2575 0.2236	0.2518	Ave		0.2701				18.4		30.0			
1,2-Dichloro-1,1,2,2-tetrafluoroethane	2.5118 2.2402	2.3828 2.0142	2.2476 2.1779	2.3122 1.9666	2.2719	Ave		2.2361				7.6		30.0			
Acetaldehyde	+++++ 0.2386	+++++ 0.2241	+++++ 0.2327	0.3118 0.2285	0.3079	Ave		0.2573				16.0		30.0			
Vinyl chloride	1.2287 1.0444	1.0759 1.0541	1.0747 1.1009	1.0314 1.0210	1.0718	Ave		1.0781				5.7		30.0			
Butane	1.4284 1.1074	1.2361 1.1179	1.1431 1.1642	1.1373 1.1112	1.1398	Ave		1.1762				8.7		30.0			
1,3-Butadiene	0.7630 0.6447	0.7460 0.6550	0.6478 0.6912	0.6570 0.6615	0.6738	Ave		0.6822				6.4		30.0			
Bromomethane	+++++ 1.1648	1.4162 1.1882	1.1868 1.2305	1.1895 1.1726	1.2143	Ave		1.2203				6.7		30.0			
Chloroethane	0.7026 0.5433	0.6001 0.5424	0.5513 0.5690	0.5520 0.5437	0.5617	Ave		0.5740				9.0		30.0			
Ethanol	+++++ 0.2659	0.3453 0.2586	0.3124 0.2634	0.2894 0.2512	0.2828	Ave		0.2836				11.2		30.0			
Vinyl bromide	1.3578 1.1241	1.1181 1.1425	1.1195 1.1893	1.1506 1.1376	1.1580	Ave		1.1664				6.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.1479 0.8122	1.1326 0.8202	0.8514 0.8489	0.8256 0.8192	0.8315	Ave		0.8988				15.3		30.0			
Trichlorofluoromethane	4.4382 3.9435	4.3772 3.9496	4.0733 3.9971	4.1226 3.5905	4.1540	Ave		4.0718				6.2		30.0			
Acrolein	+++++ 0.2643	+++++ 0.2468	0.3610 0.2538	0.2366 0.2716	0.2288	Ave		0.2661				16.7		30.0			
Acetonitrile	+++++ 0.2356	+++++ 0.2349	0.2762 0.2454	0.2685 0.2794	0.2723	Ave		0.2589				7.6		30.0			
Acetone	+++++ 0.3646	+++++ 0.3287	+++++ 0.3345	0.4727 0.3418	0.4469	Ave		0.3815				16.3		30.0			
Isopropyl alcohol	1.1610 0.9811	1.0954 0.9425	1.0467 0.9643	0.9990 0.9181	1.0150	Ave		1.0137				7.6		30.0			
Pentane	+++++ 0.2087	0.1947 0.2205	0.1966 0.2241	0.2268 0.2201	0.2240	Ave		0.2144				6.0		30.0			
Ethyl ether	0.7120 0.6470	0.7237 0.6150	0.6091 0.6466	0.6651 0.6652	0.6645	Ave		0.6609				5.8		30.0			
1,1-Dichloroethene	1.6061 1.1212	1.2769 1.1476	1.1494 1.1932	1.1788 1.1441	1.1601	Ave		1.2197				12.4		30.0			
tert-Butyl alcohol	+++++ 1.6444	1.7865 1.6019	1.6234 1.6901	1.6338 1.6296	1.6406	Ave		1.6563				3.5		30.0			
Acrylonitrile	+++++ 0.4731	0.6551 0.4435	0.5849 0.4756	0.5141 0.4865	0.4913	Ave		0.5155				13.6		30.0			
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8362 2.5588	2.7583 2.5224	2.5712 2.6416	2.6400 2.4959	2.6421	Ave		2.6296				4.2		30.0			
Methylene Chloride	+++++ 1.1787	+++++ 1.1352	1.6026 1.1702	1.3596 1.1034	1.2331	Ave		1.2547				13.9		30.0			
3-Chloropropene	+++++ 0.9853	1.0738 0.9572	1.1596 0.9884	1.0242 0.9404	0.9989	Ave		1.0160				7.0		30.0			
Carbon disulfide	4.0949 3.7456	3.7914 3.7022	3.7035 3.7851	3.7242 3.5054	3.8383	Ave		3.7656				4.1		30.0			
trans-1,2-Dichloroethene	1.4029 1.3159	1.3275 1.2926	1.3062 1.3454	1.3208 1.2832	1.3423	Ave		1.3263				2.7		30.0			
2-Methylpentane	1.9831 1.5725	1.7392 1.5299	1.5822 1.5962	1.5781 1.5302	1.6459	Ave		1.6397				8.8		30.0			
Methyl tert-butyl ether	3.9575 3.8947	4.0383 3.5493	3.7738 3.6697	3.9043 3.7137	4.0120	Ave		3.8348				4.4		30.0			
1,1-Dichloroethane	2.4626 2.1811	2.3851 2.1242	2.1417 2.1824	2.1832 2.1017	2.2548	Ave		2.2241				5.5		30.0			
Vinyl acetate	2.0000 2.0555	2.0649 1.9392	1.8523 2.0741	1.8591 2.1479	2.0915	Ave		2.0094				5.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone (MEK)	+++++ 0.5655	+++++ 0.5049	0.7022 0.5266	0.6402 0.5452	0.5958	Ave		0.5829				11.9		30.0			
Hexane	0.8524 0.7487	0.8308 0.7406	0.7976 0.7626	0.7759 0.7362	0.7868	Ave		0.7813				5.1		30.0			
Isopropyl ether	2.3616 2.4628	2.5671 2.2243	2.3769 2.3238	2.4258 2.4064	2.4910	Ave		2.4044				4.1		30.0			
cis-1,2-Dichloroethene	1.4318 1.3372	1.3207 1.3087	1.2569 1.3782	1.3154 1.3411	1.3596	Ave		1.3388				3.7		30.0			
Ethyl acetate	1.4964 1.6289	1.5908 1.4485	1.5017 1.5390	1.5917 1.6321	1.6484	Ave		1.5642				4.5		30.0			
Chloroform	3.7153 3.2837	3.5111 3.1771	3.3054 3.2572	3.2932 3.1269	3.3412	Ave		3.3346				5.4		30.0			
Tert-butyl ethyl ether	3.0048 3.1040	3.0366 2.8288	2.9609 2.9640	3.0771 3.0370	3.1616	Ave		3.0194				3.2		30.0			
Tetrahydrofuran	0.9102 0.7561	0.8126 0.6985	0.8088 0.7360	0.7531 0.7763	0.7975	Ave		0.7832				7.7		30.0			
1,1,1-Trichloroethane	4.0243 3.7355	3.7611 3.6180	3.6874 3.7256	3.7126 3.5564	3.8164	Ave		3.7375				3.5		30.0			
1,2-Dichloroethane	0.4790 0.4483	0.4856 0.4339	0.4457 0.4601	0.4409 0.4358	0.4576	Ave		0.4541				4.0		30.0			
Cyclohexane	0.1515 0.1306	0.1453 0.1318	0.1287 0.1378	0.1325 0.1271	0.1346	Ave		0.1355				6.0		30.0			
Thiophene	0.5461 0.4864	0.5192 0.4819	0.4777 0.5096	0.4762 0.4678	0.4961	Ave		0.4957				5.1		30.0			
Benzene	0.8970 0.7911	0.9200 0.7676	0.8384 0.8048	0.8008 0.7455	0.8132	Ave		0.8198				7.0		30.0			
1-Butanol	+++++ 0.0466	+++++ 0.0516	0.0443 0.0581	0.0444 0.0548	0.0447	Ave		0.0492				11.4		30.0			
Carbon tetrachloride	0.8657 0.7919	0.7822 0.7866	0.7695 0.8222	0.7583 0.7416	0.8059	Ave		0.7915				4.7		30.0			
2,3-Dimethylpentane	0.2273 0.1833	0.1968 0.1838	0.1789 0.1962	0.1799 0.1845	0.1880	Ave		0.1910				7.9		30.0			
Tert-amyl methyl ether	+++++ 0.8337	0.8523 0.7732	0.7836 0.7890	0.8141 0.7903	0.8349	Ave		0.8089				3.6		30.0			
2,2,4-Trimethylpentane	1.0554 0.9279	1.0026 0.9273	0.9262 0.9709	0.9194 0.9004	0.9451	Ave		0.9528				5.1		30.0			
Heptane	0.3172 0.2819	0.3138 0.2831	0.2758 0.3010	0.2790 0.2847	0.2875	Ave		0.2915				5.3		30.0			
1,2-Dichloropropane	0.2486 0.2434	0.2426 0.2406	0.2354 0.2524	0.2465 0.2458	0.2497	Ave		0.2450				2.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.3831 0.3496	0.3612 0.3524	0.3506 0.3716	0.3507 0.3526	0.3534	Ave		0.3584				3.2		30.0			
Dibromomethane	0.3895 0.3488	0.3548 0.3502	0.3437 0.3760	0.3493 0.3515	0.3537	Ave		0.3575				4.2		30.0			
Bromodichloromethane	0.6876 0.7092	0.6820 0.7181	0.6338 0.7599	0.6565 0.7102	0.7003	Ave		0.6953				5.2		30.0			
1,4-Dioxane	0.1134 0.1167	0.1165 0.1135	0.1068 0.1182	0.1121 0.1128	0.1124	Ave		0.1136				2.9		30.0			
Methyl methacrylate	0.2349 0.2258	0.2152 0.2091	0.1911 0.2310	0.2016 0.2387	0.2192	Ave		0.2185				7.3		30.0			
Methylcyclohexane	0.6839 0.6057	0.6462 0.6082	0.6222 0.6398	0.6089 0.5919	0.6149	Ave		0.6246				4.5		30.0			
4-Methyl-2-pentanone (MIBK)	0.3053 0.3355	0.3361 0.3148	0.3293 0.3281	0.3077 0.3265	0.3094	Ave		0.3214				3.8		30.0			
cis-1,3-Dichloropropene	0.4998 0.5003	0.5023 0.4903	0.4561 0.5342	0.4739 0.5081	0.4988	Ave		0.4960				4.4		30.0			
trans-1,3-Dichloropropene	0.4914 0.5214	0.4748 0.5218	0.4611 0.5383	0.4890 0.5321	0.5226	Ave		0.5058				5.4		30.0			
Toluene	0.9766 0.9594	1.0176 0.9449	0.9476 0.9460	0.9583 0.9034	0.9806	Ave		0.9594				3.3		30.0			
Toluene Range	+++++ 2.1610	+++++ 2.1067	+++++ 2.2258	2.1476 2.1474	2.1929	Ave		2.1636				1.9		30.0			
1,1,2-Trichloroethane	0.3300 0.2929	0.2767 0.2924	0.2838 0.2957	0.2910 0.2893	0.2994	Ave		0.2946				5.0		30.0			
2-Methylthiophene	0.7657 0.8226	0.8196 0.8088	0.7388 0.8146	0.8029 0.7812	0.8212	Ave		0.7973				3.7		30.0			
3-Methylthiophene	0.8030 0.8012	0.7780 0.7876	0.7275 0.7914	0.7862 0.7560	0.8049	Ave		0.7817				3.2		30.0			
2-Hexanone	0.1595 0.2019	0.1745 0.1941	0.1753 0.2038	0.1822 0.2005	0.1889	Ave		0.1867				8.1		30.0			
C8 Range	+++++ 2.1384	+++++ 2.1481	+++++ 2.3006	2.1075 2.1399	2.1652	Ave		2.1666				3.2		30.0			
Octane	0.3310 0.3331	0.3114 0.3369	0.3283 0.3417	0.3189 0.3245	0.3362	Ave		0.3291				2.9		30.0			
Dibromochloromethane	0.5712 0.6639	0.5458 0.6857	0.5338 0.6997	0.5697 0.6658	0.6418	Ave		0.6197				10.4		30.0			
1,2-Dibromoethane (EDB)	0.4965 0.5469	0.5070 0.5479	0.4793 0.5615	0.5003 0.5495	0.5463	Ave		0.5261				5.7		30.0			
Tetrachloroethene	0.4066 0.3677	0.3888 0.3723	0.3618 0.3736	0.3587 0.3543	0.3750	Ave		0.3732				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7425 0.7407	0.7927 0.7373	0.7231 0.7391	0.7336 0.7067	0.7596	Ave		0.7417				3.2		30.0			
2,3-Dimethylheptane	0.5774 0.5018	0.5129 0.5040	0.4885 0.5084	0.4991 0.4810	0.5194	Ave		0.5103				5.4		30.0			
Ethylbenzene	1.3116 1.3250	1.3170 1.2797	1.2522 1.2689	1.3026 1.1715	1.3582	Ave		1.2874				4.2		30.0			
2-Ethylthiophene	0.9508 1.0642	0.9800 1.0263	0.9670 1.0320	1.0183 0.9646	1.0585	Ave		1.0069				4.2		30.0			
m-Xylene & p-Xylene	1.0091 1.0449	1.0514 0.9898	1.0051 0.9652	1.0380 0.8619	1.0698	Ave		1.0039				6.2		30.0			
Bromoform	0.4665 0.6788	0.4714 0.7141	0.4848 0.7355	0.5142 0.7301	0.6370	Ave		0.6036				19.5		30.0			
Nonane	0.4068 0.4453	0.4304 0.4404	0.4208 0.4413	0.4243 0.4148	0.4520	Ave		0.4307				3.5		30.0			
Styrene	0.4854 0.7309	0.5335 0.7249	0.5540 0.7396	0.6151 0.7240	0.7148	Ave		0.6469				15.5		30.0			
o-Xylene	1.0306 1.0916	1.0733 1.0454	1.0439 1.0464	1.0590 0.9731	1.1194	Ave		1.0536				3.9		30.0			
1,1,2,2-Tetrachloroethane	0.6519 0.7180	0.6386 0.6827	0.6053 0.6939	0.6589 0.6749	0.7077	Ave		0.6702				5.3		30.0			
1,2,3-Trichloropropane	0.2218 0.2486	0.2596 0.2363	0.2181 0.2415	0.2397 0.2413	0.2537	Ave		0.2401				5.7		30.0			
Isopropylbenzene	1.4950 1.4420	1.4520 1.3678	1.3821 1.3616	1.4265 1.2520	1.4743	Ave		1.4059				5.3		30.0			
Propylbenzene	0.3065 0.3848	0.3515 0.3661	0.3446 0.3759	0.3623 0.3736	0.3887	Ave		0.3616				7.0		30.0			
2-Chlorotoluene	0.3072 0.3377	0.3097 0.3299	0.3272 0.3344	0.3303 0.3276	0.3444	Ave		0.3276				3.7		30.0			
4-Ethyltoluene	1.1452 1.4354	1.2792 1.3460	1.2293 1.3430	1.3293 1.2537	1.4459	Ave		1.3119				7.4		30.0			
1,3,5-Trimethylbenzene	0.5768 0.6460	0.5753 0.6150	0.5787 0.6238	0.6121 0.6151	0.6540	Ave		0.6108				4.8		30.0			
Alpha Methyl Styrene	+++++ 0.5448	0.3553 0.5477	0.3574 0.5690	0.4266 0.5700	0.5167	Ave		0.4859				18.9		30.0			
Decane	0.4300 0.5407	0.4763 0.5184	0.4677 0.5202	0.5089 0.4981	0.5574	Ave		0.5020				7.8		30.0			
tert-Butylbenzene	1.1600 1.2851	1.1830 1.1915	1.1778 1.1803	1.2476 1.1142	1.3025	Ave		1.2047				5.1		30.0			
1,2,4-Trimethylbenzene	0.9850 1.2251	1.1579 1.1445	1.0835 1.1296	1.1416 1.0623	1.2477	Ave		1.1308				7.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.4708 1.6845	1.5862 1.5600	1.5420 1.5232	1.6267 1.3697	1.7222	Ave		1.5650				6.9		30.0			
1,3-Dichlorobenzene	0.5770 0.7433	0.6505 0.7187	0.6301 0.7363	0.6674 0.7185	0.7372	Ave		0.6866				8.5		30.0			
Benzyl chloride	0.6683 1.0445	0.7827 1.0301	0.7315 1.0696	0.8636 1.0280	1.0045	Ave		0.9136				16.8		30.0			
1,4-Dichlorobenzene	0.5250 0.7290	0.6241 0.7118	0.6114 0.7308	0.6428 0.7191	0.7114	Ave		0.6673				10.6		30.0			
4-Isopropyltoluene	1.0670 1.4358	1.2691 1.3250	1.2331 1.2955	1.3495 1.2050	1.4510	Ave		1.2923				9.2		30.0			
1,2,3-Trimethylbenzene	0.7475 0.9204	0.8258 0.8631	0.8282 0.8563	0.8773 0.8263	0.9400	Ave		0.8539				6.7		30.0			
Butylcyclohexane	0.8296 0.8902	0.8670 0.8538	0.8446 0.8366	0.8763 0.7831	0.9198	Ave		0.8557				4.6		30.0			
1,2-Dichlorobenzene	0.5702 0.7217	0.6701 0.6913	0.6138 0.6966	0.6636 0.6824	0.7165	Ave		0.6696				7.3		30.0			
Indane	0.8612 1.0321	0.9219 0.9803	0.9010 0.9727	0.9535 0.9178	1.0432	Ave		0.9538				6.3		30.0			
Indene	+++++ 0.7757	+++++ 0.7471	0.5856 0.7641	0.6381 0.7513	0.7518	Ave		0.7162				10.3		30.0			
Butylbenzene	0.9198 1.3753	1.1072 1.2509	1.0880 1.2201	1.2074 1.1300	1.3864	Ave		1.1872				12.3		30.0			
Undecane	+++++ 0.5664	+++++ 0.5328	0.3653 0.5287	0.4303 0.5173	0.5506	Ave		0.4988				14.7		30.0			
1,2-Dimethyl-4-Ethylbenzene	+++++ 1.0200	0.7967 0.9342	0.8237 0.9271	0.8688 0.8894	1.0244	Ave		0.9105				9.1		30.0			
1,2-Dibromo-3-Chloropropane	0.1841 0.3242	0.2059 0.3179	0.1915 0.3279	0.2272 0.3525	0.2887	Ave		0.2689				24.7		30.0			
1,2,4,5-Tetramethylbenzene	+++++ 1.1981	0.8890 1.1084	0.8822 1.0701	0.9402 1.0184	1.1658	Ave		1.0340				11.8		30.0			
1,2,3,5-Tetramethylbenzene	+++++ 0.7335	0.5072 0.6849	0.5426 0.6639	0.5773 0.6590	0.7030	Ave		0.6339				12.8		30.0			
1,2,3,4-Tetramethylbenzene	+++++ 0.9474	0.6115 0.9034	0.6526 0.8692	0.6782 0.8355	0.8860	Ave		0.7980				16.3		30.0			
Dodecane	+++++ 0.2974	+++++ 0.3690	0.2437 0.3623	0.1858 0.3793	0.2608	Ave		0.2998				24.6		30.0			
1,2,4-Trichlorobenzene	0.3611 0.5045	0.3568 0.5742	0.3453 0.5814	0.3051 0.5964	0.4153	Ave		0.4489				25.7		30.0			
Naphthalene	0.6056 0.9630	0.6781 1.1134	0.5939 1.1208	0.5435 1.0727	0.7703	Ave		0.8290				28.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	0.3999 0.4398	0.4206 0.5731	0.3275 0.5950	0.2908 0.5982	0.3678	Ave		0.4459				26.1		30.0			
Hexachlorobutadiene	0.5442 0.7246	0.5863 0.6982	0.6210 0.6596	0.5728 0.6511	0.7133	Ave		0.6412				10.1		30.0			
1,2,3-Trichlorobenzene	0.3237 0.3674	0.3270 0.4807	0.3039 0.4929	0.2348 0.4849	0.3122	Ave		0.3697				25.4		30.0			
2-Methylnaphthalene	0.1687 0.1736	0.1906 0.2142	0.1910 0.2092	0.0971 0.1277	0.1610	Ave		0.1703				22.3		50.0			
1-Methylnaphthalene	0.1531 0.1471	0.1587 0.1786	0.1700 0.1721	0.0735 0.0995	0.1416	Ave		0.1438				24.5		50.0			
4-Bromofluorobenzene (Surr)	0.8114 0.8239	0.8130 0.8129	0.8120 0.8309	0.8304 0.8100	0.8219	Ave		0.8185				1.0		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-6379/3	EH23IC01A.D
Level 2	IC 140-6379/4	EH23IC02A.D
Level 3	IC 140-6379/5	EH23IC03A.D
Level 4	IC 140-6379/6	EH23IC04.D
Level 5	IC 140-6379/7	EH23IC05.D
Level 6	ICIS 140-6379/8	EH23IC06.D
Level 7	IC 140-6379/9	EH23IC07.D
Level 8	IC 140-6379/10	EH23IC08.D
Level 9	IC 140-6379/11	EH23IC09.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	+++++ 61822	2928 122753	4908 242433	12124 469686	31671	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	+++++ 84095	3566 164168	7544 334314	17666 649043	43114	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	12814 570285	23179 1065086	44567 2073013	113130 3746080	285347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	835 31364	1895 61884	3298 122595	6795 240332	16758	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloro-1,1,2,2-tetrafluoroethane	CBM	Ave	6689 301658	12333 536115	23446 1128953	61020 2114275	151194	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 160626	+++++ 298221	+++++ 603191	41149 1228060	102442	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 80.0	5.01
Vinyl chloride	CBM	Ave	3272 140638	5569 280576	11211 570655	27219 1097667	71324	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	3804 149120	6398 297557	11924 603481	30014 1194649	75855	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	2032 86814	3861 174350	6758 358281	17338 711110	44842	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	+++++ 156847	7330 316269	12380 637838	31392 1260571	80807	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	1871 73166	3106 144362	5751 294933	14567 584496	37379	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 179028	8936 344174	16292 682822	38188 1350335	94084	+++++ 9.99	0.392 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	3616 151363	5787 304097	11678 616492	30365 1222946	77061	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	3057 109370	5862 218301	8881 440024	21789 880719	55332	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Trichlorofluoromethane	CBM	Ave	11819 531022	22656 1051244	42491 2071990	108799 3859984	276442	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrolein	CBM	Ave	+++++ 35585	+++++ 65676	3766 131570	6243 291990	15226	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 31720	+++++ 62514	2881 127213	7085 300347	18124	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 147307	+++++ 262456	+++++ 520254	37431 1102505	89220	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	9276 396373	17011 752605	32758 1499717	79096 2961253	202651	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	+++++ 28100	1008 58677	2051 116174	5985 236638	14910	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	1896 87130	3746 163685	6354 335199	17552 715101	44219	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4277 150972	6609 305462	11990 618548	31108 1230023	77206	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butyl alcohol	CBM	Ave	+++++ 221435	9247 426365	16935 876118	43118 1751968	109176	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	+++++ 63707	3391 118033	6101 246559	13567 523026	32693	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloro-1,2,2-trifluoroethane	CBM	Ave	7553 344561	14277 671371	26822 1369350	69670 2683210	175826	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 158716	+++++ 302156	16718 606626	35881 1186247	82064	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	+++++ 132672	5558 254777	12096 512353	27029 1010942	66473	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	10905 504376	19624 985401	38633 1962117	98285 3768546	255435	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	3736 177199	6871 344048	13626 697415	34857 1379488	89328	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	5281 211749	9002 407193	16505 827410	41648 1645031	109529	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	10539 524448	20902 944686	39367 1902290	103036 3992522	266995	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	6558 293707	12345 565390	22341 1131279	57616 2259461	150055	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	5326 276789	10688 516154	19323 1075172	49063 2309147	139184	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone (MEK)	CBM	Ave	+++++ 76143	+++++ 134374	7325 272986	16894 586143	39647	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	2270 100815	4300 197120	8320 395291	20477 791459	52363	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	6289 331632	13287 592024	24795 1204622	64018 2587020	165774	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	3813 180059	6836 348332	13111 714434	34713 1441790	90478	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	3985 219344	8234 385530	15665 797761	42005 1754653	109695	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	9894 442178	18173 845620	34481 1688433	86910 3361601	222354	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	8002 417978	15717 752929	30887 1536459	81207 3265007	210400	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	2424 101819	4206 185923	8437 381534	19875 834578	53071	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	10717 503011	19467 962972	38466 1931274	97977 3823404	253978	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	5982 288122	11809 537769	21847 1083476	55807 2199272	145593	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	1892 83943	3534 163307	6309 324420	16775 641188	42831	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	6819 312594	12627 597290	23414 1200122	60273 2360523	157834	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	11202 508450	22374 951416	41095 1895126	101363 3761648	258726	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 29976	+++++ 63903	2173 136710	5619 276402	14208	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	10810 508933	19024 974957	37717 1936171	95982 3741835	256403	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	2838 117785	4787 227817	8770 461939	22772 931179	59803	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	CBZd5	Ave	+++++ 504302	19478 895818	36281 1820156	96249 3872410	248836	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	13180 596371	24385 1149309	45400 2286361	116372 4543372	300690	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Heptane	DFBZ	Ave	3961 181150	7633 350840	13516 708768	35307 1436461	91476	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	3104 156418	5901 298142	11537 594381	31204 1240155	79431	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	4784 224706	8785 436756	17186 875136	44392 1779192	112424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	4864 224186	8628 434049	16846 885348	44214 1773527	112531	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	8587 455767	16586 890002	31068 1789431	83097 3583453	222787	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1416 75001	2833 140622	5236 278394	14190 569065	35770	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	2933 145099	5235 259190	9366 543935	25512 1204588	69730	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	8540 389263	15716 753857	30495 1506790	77063 2986759	195638	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Ave	3813 215605	8173 390128	16142 772677	38946 1647426	98443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6241 321547	12216 607644	22355 1257896	59979 2563611	158688	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	5692 315429	10851 604586	21349 1241706	57807 2606992	155761	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	11312 580354	23255 1094823	43873 2182437	113294 4426217	292256	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 1388876	+++++ 2611091	+++++ 5241600	271821 10835824	697680	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	3822 177178	6323 338754	13139 682266	34398 1417572	89240	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	8869 497602	18731 937085	34204 1879129	94924 3827830	244758	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	9301 484667	17780 912530	33682 1825649	92948 3704338	239879	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	1847 122120	3989 224945	8116 470040	21539 982468	56286	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 1374344	+++++ 2662409	+++++ 5417670	266745 10797608	688848	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Octane	CBZd 5	Ave	3834 201515	7117 390371	15198 788319	37708 1590022	100195	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	6616 401579	12474 794467	24716 1614046	67349 3262185	191276	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane (EDB)	CBZd 5	Ave	5751 330814	11586 634861	22191 1295383	59149 2692354	162823	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	4710 222437	8885 431359	16751 861861	42406 1736176	111764	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	8601 448078	18115 854251	33481 1705133	86732 3462502	226397	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	6688 303525	11722 583942	22617 1172837	59008 2356966	154795	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	15193 801501	30099 1482682	57978 2927336	154002 5740123	404807	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	11013 643748	22396 1189105	44774 2380715	120392 4726350	315480	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m-Xylene & p-Xylene	CBZd 5	Ave	23377 1264106	48055 2293730	93076 4453513	245430 8445950	637658	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	5404 410628	10774 827421	22445 1696654	60792 3577134	189843	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Nonane	CBZd 5	Ave	4712 269364	9836 510303	19483 1018016	50166 2032588	134711	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	5622 442128	12193 839948	25652 1706172	72725 3547238	213035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	11938 660323	24528 1211234	48334 2413900	125205 4767807	333631	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	7551 434322	14594 791030	28026 1600723	77899 3306686	210910	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	2569 150393	5933 273751	10099 557217	28342 1182507	75599	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Isopropylbenzene	CBZd 5	Ave	17317 872303	33182 1584733	63990 3141082	168653 6134373	439412	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propylbenzene	CBZd 5	Ave	3550 232788	8033 424172	15956 867100	42831 1830699	115851	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	3558 204257	7078 382213	15148 771336	39045 1605221	102641	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	13265 868312	29234 1559536	56915 3098109	157161 6142846	430948	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	6681 390767	13148 712511	26795 1439108	72362 3013892	194923	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	+++++ 329584	8119 634614	16546 1312588	50440 2792870	153984	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Decane	CBZd 5	Ave	4981 327049	10886 600636	21656 1200057	60168 2440593	166121	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	13437 777364	27036 1380562	54531 2722919	147503 5459193	388192	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	11410 741071	26463 1326106	50168 2605971	134962 5205042	371867	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	17037 1018995	36249 1807431	71394 3513808	192323 6710905	513295	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	6684 449629	14866 832738	29174 1698531	78900 3520402	219701	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	7741 631803	17888 1193451	33870 2467506	102099 5037033	299387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	6081 440987	14262 824733	28310 1686002	76000 3523407	212012	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Isopropyltoluene	CBZd 5	Ave	12359 868508	29003 1535240	57090 2988630	159549 5904118	432443	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	8659 556747	18872 999985	38345 1975362	103719 4048474	280160	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	9610 538465	19815 989255	39107 1929931	103599 3837052	274151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	6605 436557	15315 800951	28420 1607098	78457 3343640	213558	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	9976 624298	21069 1135862	41715 2244014	112724 4497011	310919	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	+++++ 469235	+++++ 865612	27114 1762740	75444 3680888	224053	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Butylbenzene	CBZd 5	Ave	10654 831941	25304 1449313	50373 2814718	142744 5536359	413197	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Undecane	CBZd 5	Ave	+++++ 342623	+++++ 617284	16912 1219733	50871 2534545	164093	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	+++++ 616989	18208 1082391	38137 2138720	102719 4357916	305314	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2132 196098	4706 368272	8867 756511	26856 1727184	86056	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 724740	20317 1284194	40848 2468612	111155 4989637	347469	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	+++++ 443730	11592 793534	25123 1531519	68246 3228944	209526	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	+++++ 573073	13974 1046682	30214 2005252	80186 4093587	264067	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dodecane	CBZd 5	Ave	+++++ 179885	+++++ 427564	11284 835790	21967 1858569	77719	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	4183 305159	8155 665315	15989 1341362	36073 2922266	123778	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Naphthalene	CBZd 5	Ave	7015 582551	15496 1290008	27498 2585522	64256 5255646	229592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	4632 266068	9611 663992	15165 1372667	34379 2930895	109620	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	6304 438302	13399 808993	28753 1521596	67724 3190142	212592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	3749 222221	7473 556933	14072 1137089	27762 2375998	93044	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	6105 328115	13609 775394	27638 1508159	35887 1955688	149931	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	5543 277982	11330 646523	24598 1240578	27147 1523739	131902	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	959094 998139	947995 941828	947828 958423	981774 992236	978264	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1 Analy Batch No.: 6379

SDG No.:

Instrument ID: ME GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 08/23/2016 17:03 Calibration End Date: 08/23/2016 23:02 Calibration ID: 750

Curve Type Legend:
Ave = Average ISTD

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC01A.D
Lims ID: IC L1
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 23-Aug-2016 17:03:30 ALS Bottle#: 7 Worklist Smp#: 3
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052175
Misc. Info.: 140-0003339-002
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:22 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 13:24:10

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.568	7.576	-0.008	71	271739	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.811	9.819	-0.008	94	1274248	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1181962	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.487	16.492	-0.005	89	959094	4.00	3.97	
6 Chlorodifluoromethane	67	2.898	2.900	-0.002	94	1666	0.0392	0.0517	
7 Propene	41	2.903	2.909	-0.006	68	2999	0.0392	0.0677	
8 Dichlorodifluoromethane	85	2.946	2.952	-0.006	98	12814	0.0392	0.0448	
9 Chloromethane	52	3.097	3.102	-0.005	48	835	0.0392	0.0455	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.110	-0.002	94	6689	0.0392	0.0440	
11 Acetaldehyde	44	3.227	3.232	-0.005	88	7746	0.1960	0.4432	
12 Vinyl chloride	62	3.243	3.244	-0.001	97	3272	0.0392	0.0447	
13 Butane	43	3.313	3.317	-0.004	83	3804	0.0392	0.0476	
14 Butadiene	54	3.319	3.317	0.002	70	2032	0.0392	0.0438	
15 Bromomethane	94	3.577	3.583	-0.006	97	4370	0.0392	0.0527	
16 Chloroethane	64	3.696	3.700	-0.004	96	1871	0.0392	0.0480	
17 Ethanol	31	3.777	3.786	-0.009	97	5294	0.1960	0.2748	
18 Vinyl bromide	106	3.944	3.950	-0.006	96	3616	0.0392	0.0456	
19 2-Methylbutane	43	3.987	3.990	-0.003	83	3057	0.0392	0.0501	
20 Trichlorofluoromethane	101	4.165	4.173	-0.008	99	11819	0.0392	0.0427	
21 Acrolein	56	4.181	4.186	-0.005	26	3035	0.0392	0.1679	
23 Acetone	58	4.284	4.283	0.001	99	6401	0.1176	0.2470	
24 Isopropyl alcohol	45	4.359	4.361	-0.002	81	9276	0.1176	0.1347	
25 Pentane	72	4.359	4.362	-0.003	72	471	0.0392	0.0323	
26 Ethyl ether	31	4.510	4.510	0.000	86	1896	0.0392	0.0422	
27 1,1-Dichloroethene	96	4.785	4.790	-0.005	97	4277	0.0392	0.0516	
29 Acrylonitrile	53	4.882	4.891	-0.009	70	2934	0.0392	0.0838	
28 2-Methyl-2-propanol	59	4.899	4.892	0.007	89	4373	0.0392	0.0389	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.950	-0.003	93	7553	0.0392	0.0423	
31 Methylene Chloride	84	5.103	5.112	-0.009	76	8187	0.0392	0.0960	
32 3-Chloro-1-propene	39	5.120	5.126	-0.006	85	3582	0.0392	0.0519	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.244	5.255	-0.011	97	10905	0.0392	0.0426	
34 trans-1,2-Dichloroethene	96	5.869	5.877	-0.008	95	3736	0.0392	0.0415	
35 2-Methylpentane	43	5.891	5.895	-0.004	83	5281	0.0392	0.0474	
36 Methyl tert-butyl ether	73	6.020	6.013	0.007	93	10539	0.0392	0.0405	
37 1,1-Dichloroethane	63	6.279	6.286	-0.007	97	6558	0.0392	0.0434	
38 Vinyl acetate	43	6.398	6.401	-0.003	98	5326	0.0392	0.0390	
39 2-Butanone (MEK)	72	6.851	6.843	0.008	85	1962	0.0392	0.0495	
40 Hexane	56	6.851	6.852	-0.001	74	2270	0.0392	0.0428	
41 Isopropyl ether	45	7.034	7.025	0.009	86	6289	0.0392	0.0385	
42 cis-1,2-Dichloroethene	96	7.239	7.249	-0.010	88	3813	0.0392	0.0419	
43 Ethyl acetate	43	7.460	7.459	0.001	77	3985	0.0392	0.0375	
44 Chloroform	83	7.584	7.592	-0.008	88	9894	0.0392	0.0437	
45 Tert-butyl ethyl ether	59	7.708	7.698	0.010	91	8002	0.0392	0.0390	
46 Tetrahydrofuran	42	8.021	8.001	0.020	61	2424	0.0392	0.0456	
47 1,1,1-Trichloroethane	97	8.603	8.603	0.000	94	10717	0.0392	0.0422	
48 1,2-Dichloroethane	62	8.711	8.721	-0.010	97	5982	0.0392	0.0414	
50 Cyclohexane	69	9.196	9.202	-0.006	57	1892	0.0392	0.0438	
54 Thiophene	84	9.202	9.207	-0.005	51	6819	0.0392	0.0432	
51 Benzene	78	9.202	9.209	-0.007	95	11202	0.0392	0.0429	
52 Carbon tetrachloride	117	9.223	9.230	-0.007	96	10810	0.0392	0.0429	
53 2,3-Dimethylpentane	71	9.342	9.349	-0.007	82	2838	0.0392	0.0467	
55 Tert-amyl methyl ether	73	9.762	9.751	0.011	48	6702	0.0392	0.0280	
56 Isooctane	57	10.048	10.049	-0.001	96	13180	0.0392	0.0434	
57 n-Heptane	71	10.480	10.480	0.000	78	3961	0.0392	0.0426	
58 1,2-Dichloropropane	63	10.550	10.551	-0.001	81	3104	0.0392	0.0398	
59 Trichloroethene	130	10.582	10.590	-0.008	93	4784	0.0392	0.0419	
60 Dibromomethane	93	10.668	10.677	-0.009	94	4864	0.0392	0.0427	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	94	8587	0.0392	0.0388	
62 1,4-Dioxane	88	10.900	10.884	0.016	30	1416	0.0392	0.0391	
63 Methyl methacrylate	41	10.987	10.985	0.002	78	2933	0.0392	0.0421	
64 Methylcyclohexane	83	11.413	11.414	-0.001	90	8540	0.0392	0.0429	
65 4-Methyl-2-pentanone (MIBK	43	11.898	11.896	0.002	85	3813	0.0392	0.0372	
66 cis-1,3-Dichloropropene	75	11.930	11.934	-0.004	92	6241	0.0392	0.0395	
67 trans-1,3-Dichloropropene	75	12.669	12.676	-0.007	92	5692	0.0392	0.0381	
68 Toluene	91	12.777	12.783	-0.006	95	11312	0.0392	0.0399	
69 1,1,2-Trichloroethane	83	12.868	12.875	-0.007	97	3822	0.0392	0.0439	
70 2-Methylthiophene	97	12.939	12.942	-0.003	96	8869	0.0392	0.0376	
71 3-Methylthiophene	97	13.149	13.152	-0.003	96	9301	0.0392	0.0403	
72 2-Hexanone	58	13.311	13.303	0.008	94	1847	0.0392	0.0335	
73 n-Octane	85	13.532	13.533	-0.001	75	3834	0.0392	0.0394	
74 Chlorodibromomethane	129	13.586	13.589	-0.003	96	6616	0.0392	0.0361	
75 Ethylene Dibromide	107	13.888	13.888	0.000	99	5751	0.0392	0.0370	
76 Tetrachloroethene	129	13.969	13.966	0.002	76	4710	0.0392	0.0427	
77 Chlorobenzene	112	14.864	14.865	-0.001	87	8601	0.0392	0.0392	
78 2,3-Dimethylheptane	43	14.912	14.914	-0.002	78	6688	0.0392	0.0444	
79 Ethylbenzene	91	15.166	15.168	-0.002	98	15193	0.0392	0.0399	
80 2-Ethylthiophene	97	15.268	15.272	-0.004	97	11013	0.0392	0.0370	
81 m-Xylene & p-Xylene	91	15.338	15.337	0.001	98	23377	0.0784	0.0788	
83 Bromoform	173	15.775	15.776	-0.001	91	5404	0.0392	0.0303	
82 n-Nonane	57	15.786	15.790	-0.004	76	4712	0.0392	0.0370	
84 Styrene	104	15.802	15.807	-0.005	94	5622	0.0392	0.0294	
85 o-Xylene	91	15.861	15.867	-0.006	97	11938	0.0392	0.0383	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	97	7551	0.0392	0.0381	
87 1,2,3-Trichloropropane	110	16.363	16.362	0.001	96	2569	0.0392	0.0362	
88 Isopropylbenzene	105	16.465	16.466	-0.001	96	17317	0.0392	0.0417	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	3550	0.0392	0.0332	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	95	3558	0.0392	0.0368	
91 4-Ethyltoluene	105	17.177	17.181	-0.004	96	13265	0.0392	0.0342	
92 1,3,5-Trimethylbenzene	120	17.258	17.262	-0.004	92	6681	0.0392	0.0370	
93 Alpha Methyl Styrene	118	17.506	17.511	-0.005	84	3776	0.0392	0.0263	
94 n-Decane	57	17.598	17.599	-0.001	91	4981	0.0392	0.0336	
95 tert-Butylbenzene	119	17.722	17.721	0.001	89	13437	0.0392	0.0377	
96 1,2,4-Trimethylbenzene	105	17.732	17.735	-0.003	95	11410	0.0392	0.0341	
97 sec-Butylbenzene	105	18.013	18.013	0.000	97	17037	0.0392	0.0368	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	70	6684	0.0392	0.0329	
99 Benzyl chloride	91	18.099	18.104	-0.005	95	7741	0.0392	0.0287	
100 1,4-Dichlorobenzene	146	18.110	18.112	-0.002	86	6081	0.0392	0.0308	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	12359	0.0392	0.0324	
102 1,2,3-Trimethylbenzene	105	18.239	18.240	-0.001	98	8659	0.0392	0.0343	
103 Butylcyclohexane	83	18.304	18.305	-0.001	96	9610	0.0392	0.0380	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	78	6605	0.0392	0.0334	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	91	9976	0.0392	0.0354	
106 Indene	116	18.628	18.632	-0.004	90	5599	0.0392	0.0265	
107 n-Butylbenzene	91	18.649	18.652	-0.003	98	10654	0.0392	0.0304	
108 Undecane	57	19.000	19.000	0.000	81	3155	0.0392	0.0214	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	94	7116	0.0392	0.0264	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	93	2132	0.0392	0.0268	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	6732	0.0392	0.0220	
112 1,2,3,5-Tetramethylbenzene	119	19.501	19.498	0.003	93	4390	0.0392	0.0234	
113 1,2,3,4-Tetramethylbenzene	119	19.889	19.895	-0.006	94	5802	0.0392	0.0246	
114 Dodecane	57	20.078	20.078	0.000	87	2435	0.0392	0.0275	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	90	4183	0.0392	0.0315	
116 Naphthalene	128	20.353	20.357	-0.004	98	7015	0.0392	0.0286	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	98	4632	0.0392	0.0352	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	94	6304	0.0392	0.0333	
119 1,2,3-Trichlorobenzene	180	20.628	20.631	-0.003	90	3749	0.0392	0.0343	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	96	6105	0.1225	0.1213	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	95	5543	0.1225	0.1305	
A 124 Toluene Range	1	12.777	(12.747-12.807)		0	29309	0.0392	0.0425	
A 125 C8 Range	1	13.532	(13.502-13.562)		0	25359	0.0392	0.0367	
S 126 Xylenes, Total	100				0		0.1176	0.1171	
S 127 1,2-Dichloroethene, Total	1				0		0.0784	0.0834	

Reagents:

40L12DNP_00006	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

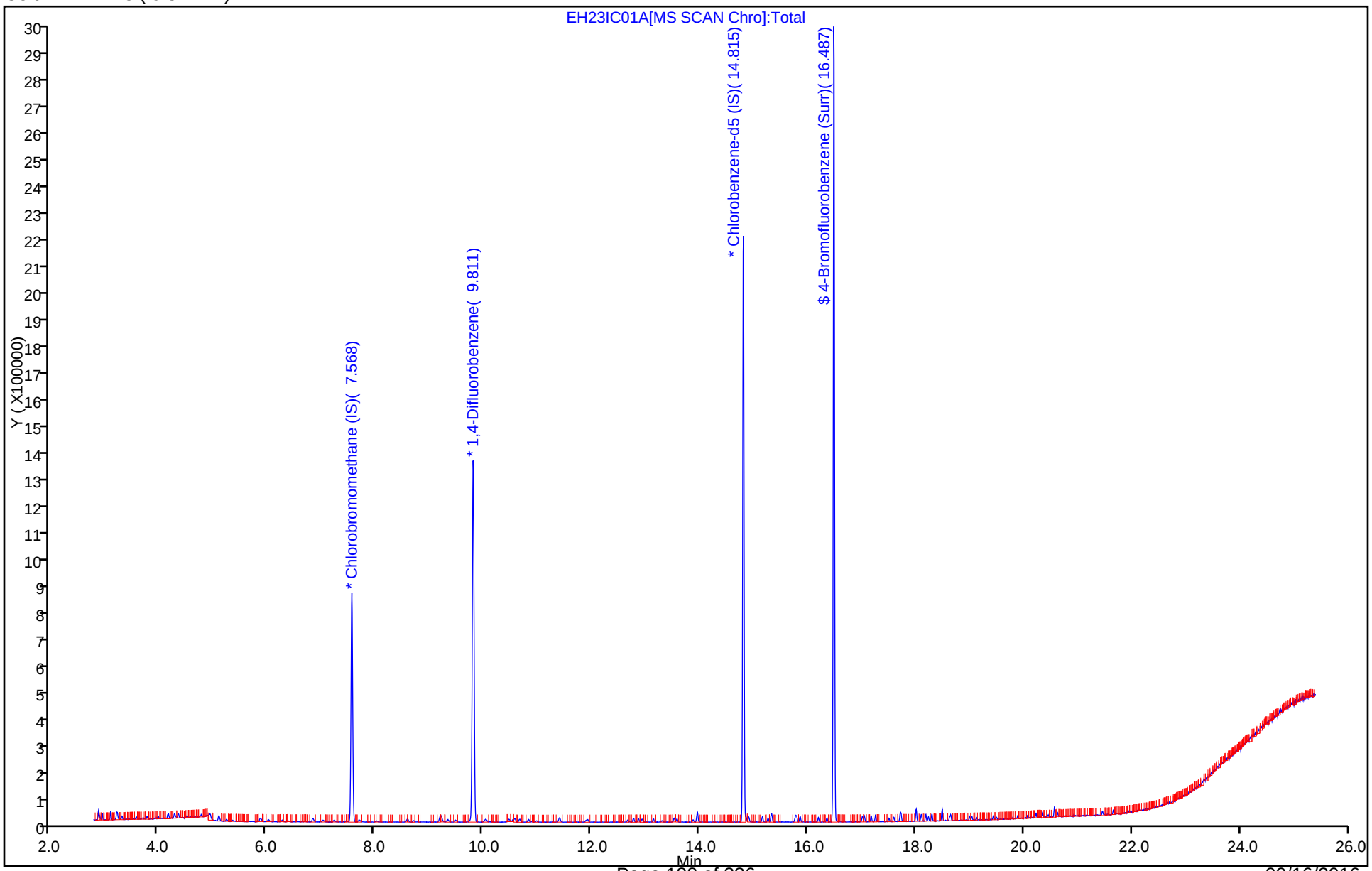
Report Date: 25-Aug-2016 12:59:23 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC01A.D

Injection Date:	23-Aug-2016 17:03:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L1			Worklist Smp#:	3
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

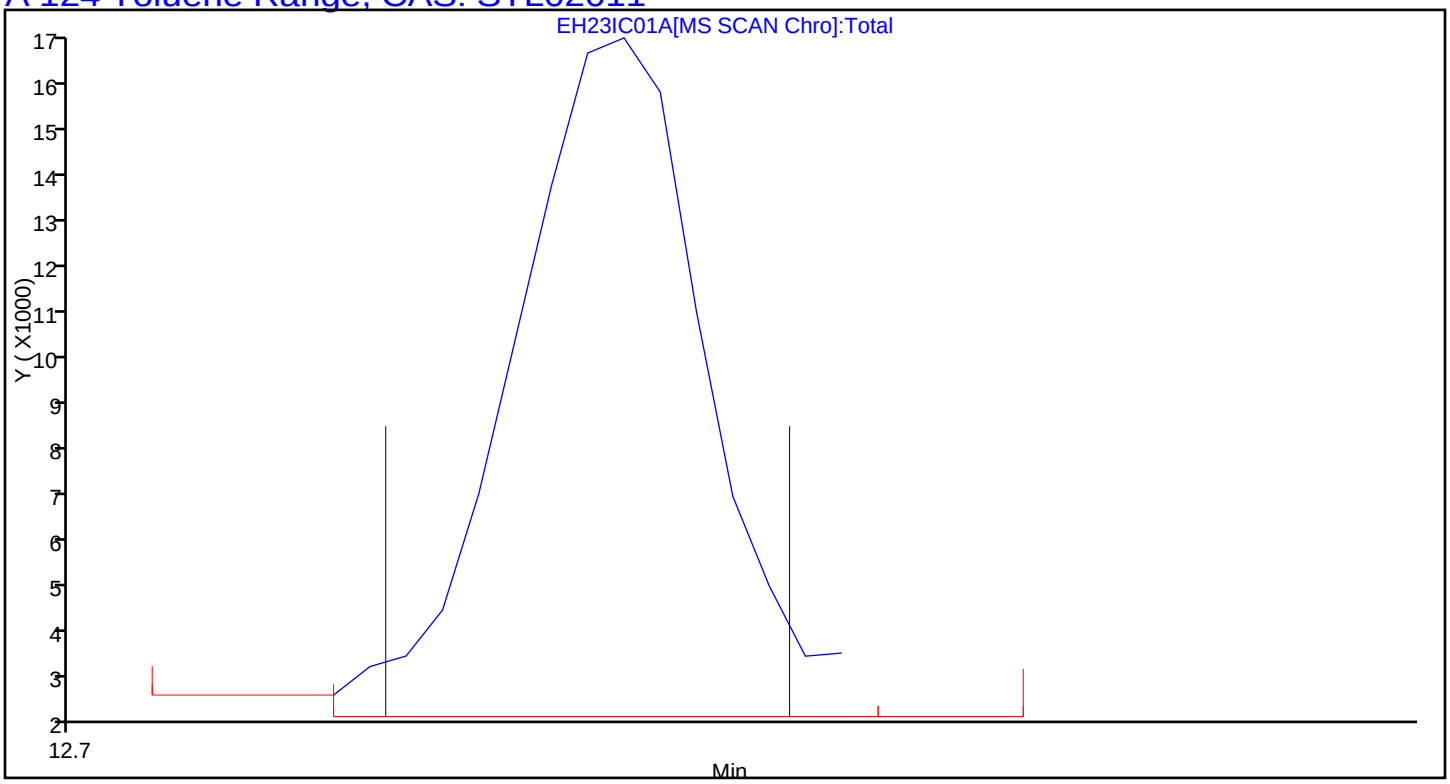


Report Date: 25-Aug-2016 12:59:23 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC01A.D				
Injection Date:	23-Aug-2016 17:03:30	Instrument ID:	ME		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

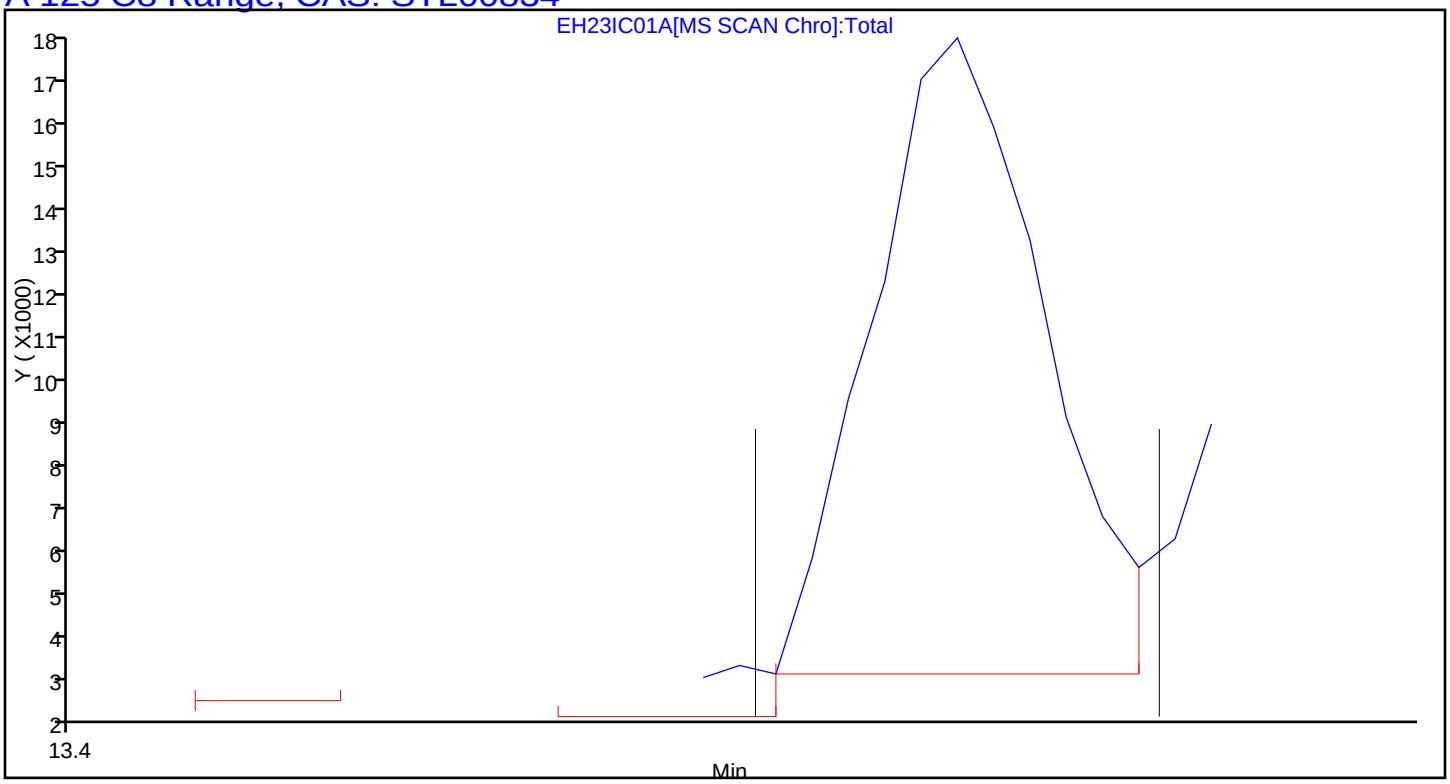


Report Date: 25-Aug-2016 12:59:23 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC01A.D				
Injection Date:	23-Aug-2016 17:03:30	Instrument ID:	ME		
Lims ID:	IC L1				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	3
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC02A.D
Lims ID: IC L2
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 23-Aug-2016 17:48:30 ALS Bottle#: 7 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052175
Misc. Info.: 140-0003339-004
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:26 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 13:25:52

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.568	7.576	-0.008	71	264078	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.817	9.819	-0.002	94	1240855	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1165990	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.487	16.492	-0.005	88	947995	4.00	3.97	
6 Chlorodifluoromethane	67	2.898	2.900	-0.002	95	2928	0.0784	0.0935	
7 Propene	41	2.909	2.909	0.000	92	3566	0.0784	0.0828	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	23179	0.0784	0.0835	
9 Chloromethane	52	3.098	3.102	-0.004	52	1895	0.0784	0.1063	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.109	3.110	-0.001	95	12333	0.0784	0.0835	
11 Acetaldehyde	44	3.227	3.232	-0.005	87	13875	0.3920	0.8169	
12 Vinyl chloride	62	3.243	3.244	-0.001	97	5569	0.0784	0.0782	
13 Butane	43	3.313	3.317	-0.004	79	6398	0.0784	0.0824	
14 Butadiene	54	3.313	3.317	-0.004	81	3861	0.0784	0.0857	
15 Bromomethane	94	3.583	3.583	0.000	97	7330	0.0784	0.0910	
16 Chloroethane	64	3.691	3.700	-0.009	96	3106	0.0784	0.0820	
17 Ethanol	31	3.777	3.786	-0.009	99	8936	0.3920	0.4772	
18 Vinyl bromide	106	3.944	3.950	-0.006	93	5787	0.0784	0.0752	
19 2-Methylbutane	43	3.988	3.990	-0.002	88	5862	0.0784	0.0988	
20 Trichlorofluoromethane	101	4.165	4.173	-0.008	99	22656	0.0784	0.0843	
21 Acrolein	56	4.187	4.186	0.001	97	2864	0.0784	0.1630	
22 Acetonitrile	40	4.236	4.243	-0.007	97	1696	0.0784	0.0992	
23 Acetone	58	4.284	4.283	0.001	99	12934	0.2352	0.5135	
24 Isopropyl alcohol	45	4.354	4.361	-0.007	87	17011	0.2352	0.2542	
25 Pentane	72	4.360	4.362	-0.002	70	1008	0.0784	0.0712	
26 Ethyl ether	31	4.516	4.510	0.006	77	3746	0.0784	0.0859	
27 1,1-Dichloroethene	96	4.791	4.790	0.001	98	6609	0.0784	0.0821	
29 Acrylonitrile	53	4.888	4.891	-0.003	75	3391	0.0784	0.0996	
28 2-Methyl-2-propanol	59	4.888	4.892	-0.004	90	9247	0.0784	0.0846	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.950	-0.003	95	14277	0.0784	0.0822	
31 Methylene Chloride	84	5.109	5.112	-0.003	80	10774	0.0784	0.1301	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.120	5.126	-0.006	84	5558	0.0784	0.0829	
33 Carbon disulfide	76	5.249	5.255	-0.006	98	19624	0.0784	0.0789	
34 trans-1,2-Dichloroethene	96	5.869	5.877	-0.008	95	6871	0.0784	0.0785	
35 2-Methylpentane	43	5.891	5.895	-0.004	85	9002	0.0784	0.0832	
36 Methyl tert-butyl ether	73	6.020	6.013	0.007	94	20902	0.0784	0.0826	
37 1,1-Dichloroethane	63	6.279	6.286	-0.007	98	12345	0.0784	0.0841	
38 Vinyl acetate	43	6.398	6.401	-0.003	98	10688	0.0784	0.0806	
39 2-Butanone (MEK)	72	6.851	6.843	0.008	86	4473	0.0784	0.1162	
40 Hexane	56	6.856	6.852	0.004	70	4300	0.0784	0.0834	
41 Isopropyl ether	45	7.029	7.025	0.004	88	13287	0.0784	0.0837	
42 cis-1,2-Dichloroethene	96	7.245	7.249	-0.004	92	6836	0.0784	0.0773	
43 Ethyl acetate	43	7.466	7.459	0.007	97	8234	0.0784	0.0797	
44 Chloroform	83	7.579	7.592	-0.013	93	18173	0.0784	0.0825	
45 Tert-butyl ethyl ether	59	7.703	7.698	0.005	90	15717	0.0784	0.0788	
46 Tetrahydrofuran	42	8.016	8.001	0.015	74	4206	0.0784	0.0813	
47 1,1,1-Trichloroethane	97	8.593	8.603	-0.010	96	19467	0.0784	0.0789	
48 1,2-Dichloroethane	62	8.711	8.721	-0.010	97	11809	0.0784	0.0838	
50 Cyclohexane	69	9.197	9.202	-0.005	61	3534	0.0784	0.0840	
54 Thiophene	84	9.207	9.207	0.000	53	12627	0.0784	0.0821	
51 Benzene	78	9.202	9.209	-0.007	95	22374	0.0784	0.0880	
49 n-Butanol	31	9.224	9.219	0.005	36	923	0.0784	0.0605	
52 Carbon tetrachloride	117	9.224	9.230	-0.006	96	19024	0.0784	0.0775	
53 2,3-Dimethylpentane	71	9.342	9.349	-0.007	84	4787	0.0784	0.0808	
55 Tert-amyl methyl ether	73	9.752	9.751	0.001	98	19478	0.0784	0.0826	
56 Isooctane	57	10.049	10.049	0.000	96	24385	0.0784	0.0825	
57 n-Heptane	71	10.475	10.480	-0.005	73	7633	0.0784	0.0844	
58 1,2-Dichloropropane	63	10.545	10.551	-0.006	82	5901	0.0784	0.0776	
59 Trichloroethene	130	10.588	10.590	-0.002	92	8785	0.0784	0.0790	
60 Dibromomethane	93	10.674	10.677	-0.003	94	8628	0.0784	0.0778	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	98	16586	0.0784	0.0769	
62 1,4-Dioxane	88	10.895	10.884	0.011	53	2833	0.0784	0.0804	
63 Methyl methacrylate	41	10.981	10.985	-0.004	75	5235	0.0784	0.0772	
64 Methylcyclohexane	83	11.413	11.414	-0.001	88	15716	0.0784	0.0811	
65 4-Methyl-2-pentanone (MIBK	43	11.898	11.896	0.002	88	8173	0.0784	0.0820	
66 cis-1,3-Dichloropropene	75	11.930	11.934	-0.004	90	12216	0.0784	0.0794	
67 trans-1,3-Dichloropropene	75	12.675	12.676	-0.001	93	10851	0.0784	0.0736	
68 Toluene	91	12.777	12.783	-0.006	92	23255	0.0784	0.0832	
69 1,1,2-Trichloroethane	83	12.874	12.875	-0.001	96	6323	0.0784	0.0736	
70 2-Methylthiophene	97	12.939	12.942	-0.003	96	18731	0.0784	0.0806	
71 3-Methylthiophene	97	13.149	13.152	-0.003	98	17780	0.0784	0.0780	
72 2-Hexanone	58	13.300	13.303	-0.003	95	3989	0.0784	0.0733	
73 n-Octane	85	13.532	13.533	-0.001	77	7117	0.0784	0.0742	
74 Chlorodibromomethane	129	13.586	13.589	-0.003	96	12474	0.0784	0.0691	
75 Ethylene Dibromide	107	13.883	13.888	-0.005	97	11586	0.0784	0.0755	
76 Tetrachloroethene	129	13.963	13.966	-0.003	92	8885	0.0784	0.0817	
77 Chlorobenzene	112	14.864	14.865	-0.001	94	18115	0.0784	0.0838	
78 2,3-Dimethylheptane	43	14.912	14.914	-0.002	73	11722	0.0784	0.0788	
79 Ethylbenzene	91	15.166	15.168	-0.002	99	30099	0.0784	0.0802	
80 2-Ethylthiophene	97	15.268	15.272	-0.004	97	22396	0.0784	0.0763	
81 m-Xylene & p-Xylene	91	15.333	15.337	-0.004	98	48055	0.1568	0.1642	
83 Bromoform	173	15.775	15.776	-0.001	92	10774	0.0784	0.0612	
82 n-Nonane	57	15.786	15.790	-0.004	78	9836	0.0784	0.0783	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.808	15.807	0.001	96	12193	0.0784	0.0647	
85 o-Xylene	91	15.867	15.867	0.000	98	24528	0.0784	0.0799	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	96	14594	0.0784	0.0747	
87 1,2,3-Trichloropropane	110	16.358	16.362	-0.004	97	5933	0.0784	0.0848	
88 Isopropylbenzene	105	16.465	16.466	-0.001	96	33182	0.0784	0.0810	
89 N-Propylbenzene	120	17.021	17.021	0.000	98	8033	0.0784	0.0762	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	95	7078	0.0784	0.0741	
91 4-Ethyltoluene	105	17.177	17.181	-0.004	97	29234	0.0784	0.0764	
92 1,3,5-Trimethylbenzene	120	17.258	17.262	-0.004	90	13148	0.0784	0.0739	
93 Alpha Methyl Styrene	118	17.506	17.511	-0.005	88	8119	0.0784	0.0573	
94 n-Decane	57	17.598	17.599	-0.001	93	10886	0.0784	0.0744	
95 tert-Butylbenzene	119	17.717	17.721	-0.005	90	27036	0.0784	0.0770	
96 1,2,4-Trimethylbenzene	105	17.733	17.735	-0.002	95	26463	0.0784	0.0803	
97 sec-Butylbenzene	105	18.008	18.013	-0.005	98	36249	0.0784	0.0795	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	94	14866	0.0784	0.0743	
99 Benzyl chloride	91	18.099	18.104	-0.005	96	17888	0.0784	0.0672	
100 1,4-Dichlorobenzene	146	18.110	18.112	-0.002	93	14262	0.0784	0.0733	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	29003	0.0784	0.0770	
102 1,2,3-Trimethylbenzene	105	18.240	18.240	0.000	98	18872	0.0784	0.0758	
103 Butylcyclohexane	83	18.304	18.305	-0.001	96	19815	0.0784	0.0794	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	90	15315	0.0784	0.0785	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	93	21069	0.0784	0.0758	
106 Indene	116	18.633	18.632	0.001	91	13232	0.0784	0.0634	
107 n-Butylbenzene	91	18.649	18.652	-0.003	98	25304	0.0784	0.0731	
108 Undecane	57	19.000	19.000	0.000	87	7943	0.0784	0.0546	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	18208	0.0784	0.0686	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	91	4706	0.0784	0.0600	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	20317	0.0784	0.0674	
112 1,2,3,5-Tetramethylbenzene	119	19.496	19.498	-0.002	93	11592	0.0784	0.0627	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	96	13974	0.0784	0.0601	
114 Dodecane	57	20.078	20.078	0.000	91	5164	0.0784	0.0591	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	90	8155	0.0784	0.0623	
116 Naphthalene	128	20.353	20.357	-0.004	98	15496	0.0784	0.0641	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	99	9611	0.0784	0.0740	
118 Hexachlorobutadiene	225	20.569	20.574	-0.005	94	13399	0.0784	0.0717	
119 1,2,3-Trichlorobenzene	180	20.628	20.631	-0.003	94	7473	0.0784	0.0693	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	97	13609	0.2450	0.2741	
121 1-Methylnaphthalene	142	21.664	21.664	0.000	97	11330	0.2450	0.2703	
A 124 Toluene Range	1	12.777	(12.747-12.807)		0	55553	0.0784	0.0828	
A 125 C8 Range	1	13.526	(13.502-13.562)		0	51769	0.0784	0.0770	
S 126 Xylenes, Total	100				0		0.2352	0.2441	
S 127 1,2-Dichloroethene, Total	1				0		0.1568	0.1558	

Reagents:

40L12DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

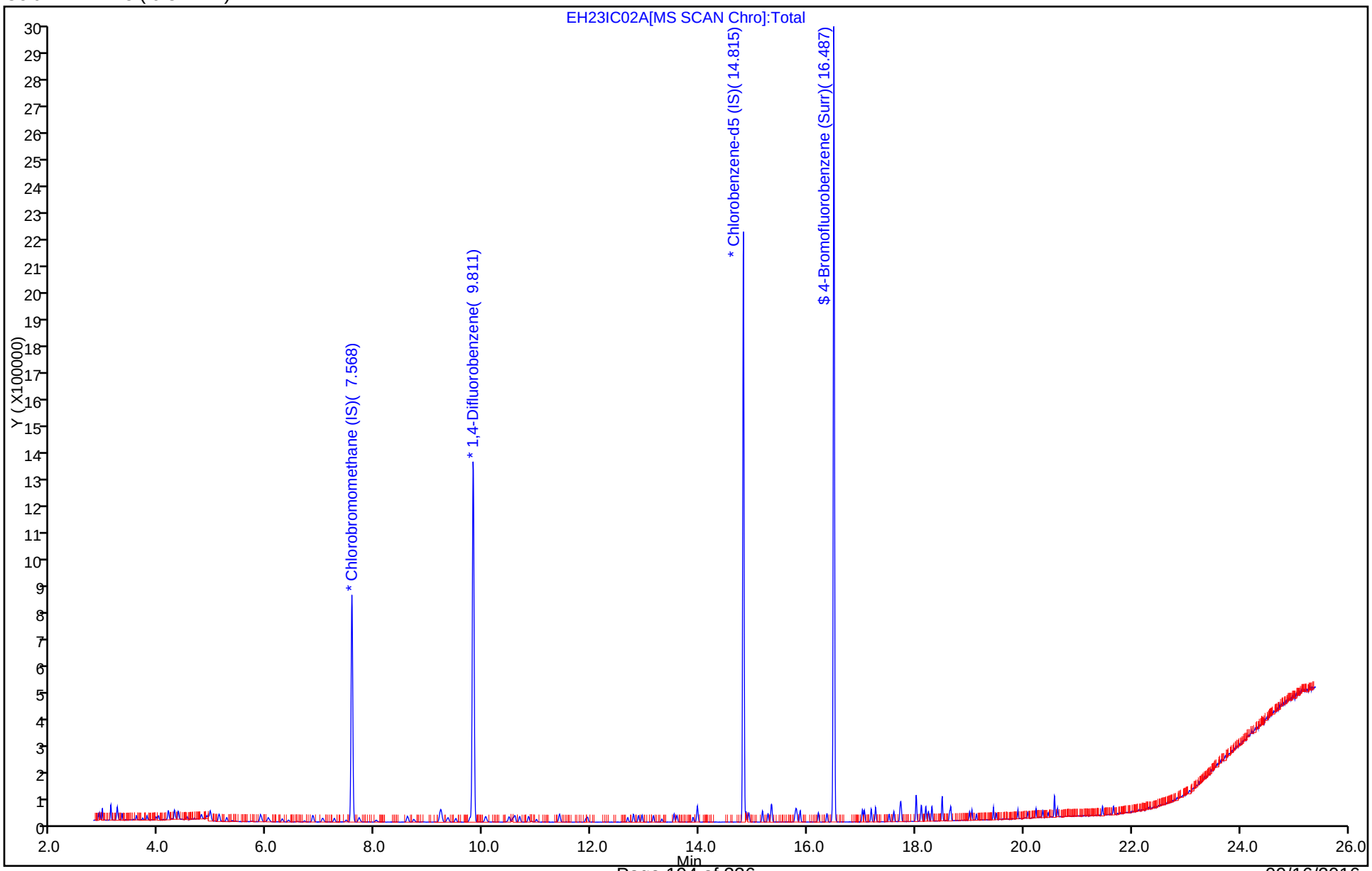
Report Date: 25-Aug-2016 12:59:27 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC02A.D

Injection Date:	23-Aug-2016 17:48:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L2			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	7
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

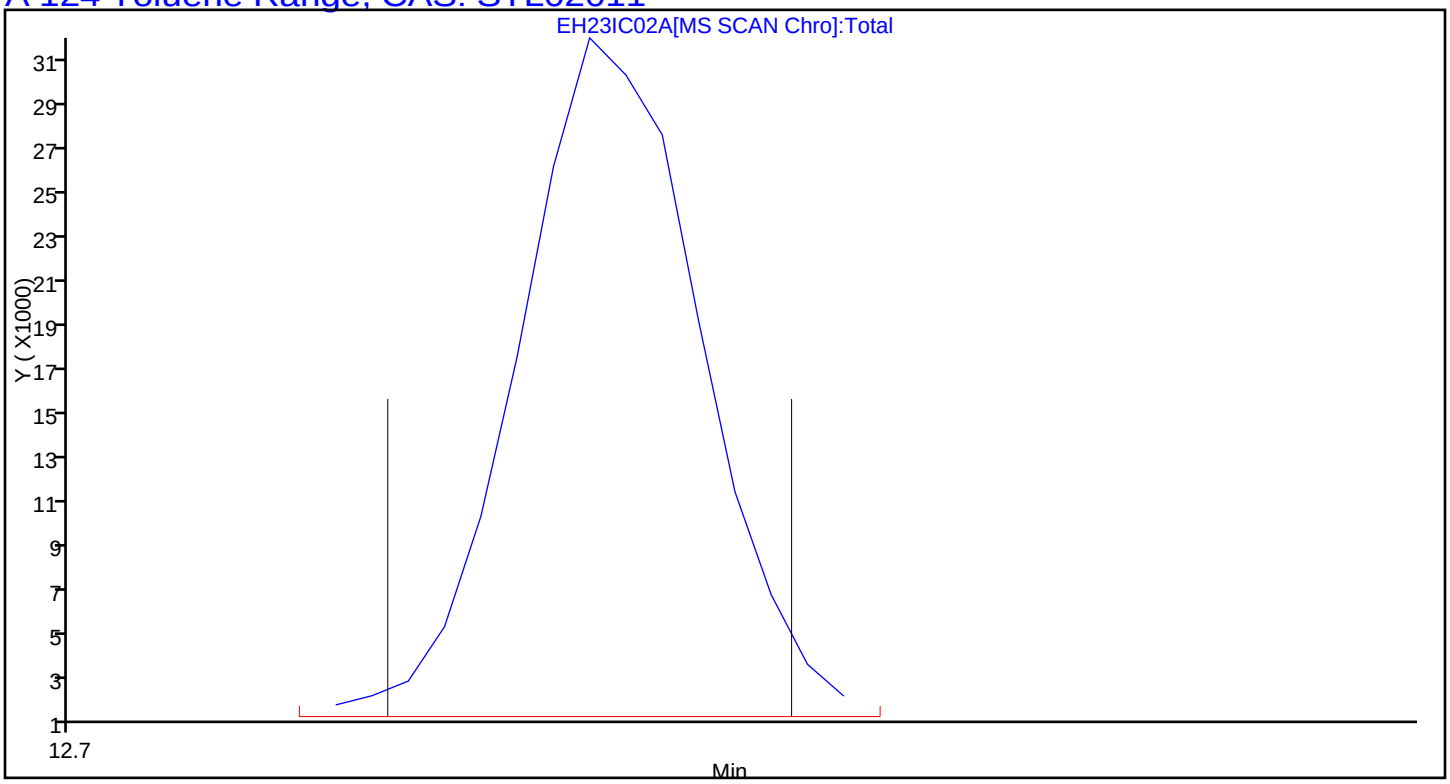


Report Date: 25-Aug-2016 12:59:27 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC02A.D				
Injection Date:	23-Aug-2016 17:48:30	Instrument ID:	ME		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

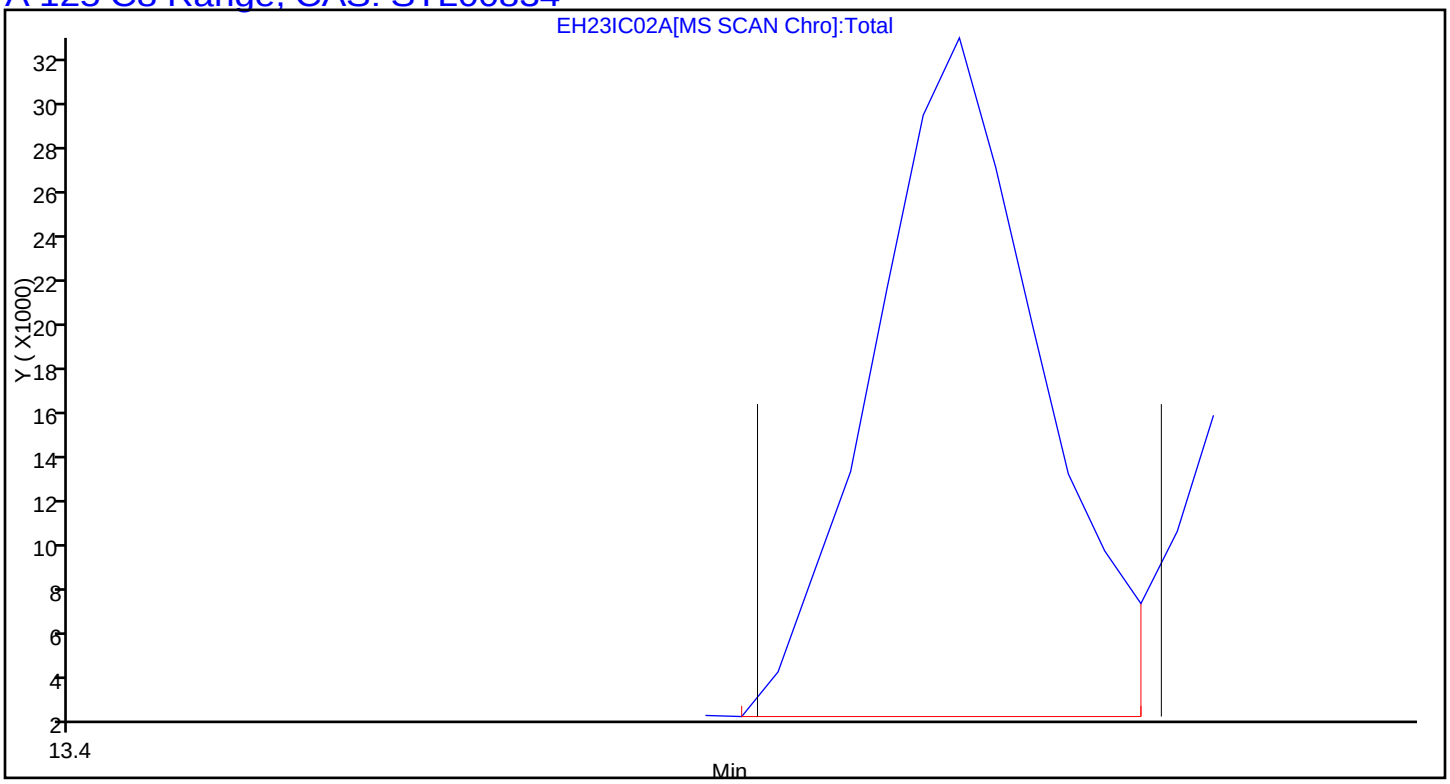


Report Date: 25-Aug-2016 12:59:27 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC02A.D				
Injection Date:	23-Aug-2016 17:48:30	Instrument ID:	ME		
Lims ID:	IC L2				
Client ID:					
Operator ID:	403648	ALS Bottle#:	7	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC03A.D
Lims ID: IC L3
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 23-Aug-2016 18:32:30 ALS Bottle#: 8 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052174
Misc. Info.: 140-0003339-005
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:31 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 10:36:45

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.579	7.576	0.003	72	262982	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.822	9.819	0.003	94	1235682	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1167222	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.492	16.492	0.000	90	947828	4.00	3.97	
6 Chlorodifluoromethane	67	2.909	2.900	0.009	94	4908	0.1587	0.1573	
7 Propene	41	2.914	2.909	0.005	95	7544	0.1587	0.1759	
8 Dichlorodifluoromethane	85	2.957	2.952	0.005	99	44567	0.1587	0.1612	
9 Chloromethane	52	3.108	3.102	0.006	56	3298	0.1587	0.1857	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.119	3.110	0.009	95	23446	0.1587	0.1595	
11 Acetaldehyde	44	3.238	3.232	0.006	89	24182	0.7933	1.43	
12 Vinyl chloride	62	3.249	3.244	0.004	98	11211	0.1587	0.1582	
13 Butane	43	3.324	3.317	0.007	82	11924	0.1587	0.1542	
14 Butadiene	54	3.324	3.317	0.007	73	6758	0.1587	0.1507	
15 Bromomethane	94	3.588	3.583	0.005	96	12380	0.1587	0.1543	
16 Chloroethane	64	3.707	3.700	0.007	96	5751	0.1587	0.1524	
17 Ethanol	31	3.793	3.786	0.007	99	16292	0.7933	0.8737	
18 Vinyl bromide	106	3.955	3.950	0.005	97	11678	0.1587	0.1523	
19 2-Methylbutane	43	3.993	3.990	0.003	87	8881	0.1587	0.1503	
20 Trichlorofluoromethane	101	4.181	4.173	0.008	99	42491	0.1587	0.1587	
21 Acrolein	56	4.192	4.186	0.006	26	3766	0.1587	0.2153	
22 Acetonitrile	40	4.246	4.243	0.003	96	2881	0.1587	0.1693	
23 Acetone	58	4.295	4.283	0.012	98	22263	0.4760	0.8875	
24 Isopropyl alcohol	45	4.370	4.361	0.009	85	32758	0.4760	0.4915	
25 Pentane	72	4.370	4.362	0.008	72	2051	0.1587	0.1455	
26 Ethyl ether	31	4.521	4.510	0.011	81	6354	0.1587	0.1462	
27 1,1-Dichloroethene	96	4.796	4.790	0.006	100	11990	0.1587	0.1495	
29 Acrylonitrile	53	4.899	4.891	0.008	57	6101	0.1587	0.1800	
28 2-Methyl-2-propanol	59	4.909	4.892	0.017	94	16935	0.1587	0.1555	
30 1,1,2-Trichloro-1,2,2-trif	101	4.952	4.950	0.002	95	26822	0.1587	0.1551	
31 Methylene Chloride	84	5.114	5.112	0.002	79	16718	0.1587	0.2027	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.130	5.126	0.004	88	12096	0.1587	0.1811	
33 Carbon disulfide	76	5.260	5.255	0.005	98	38633	0.1587	0.1560	
34 trans-1,2-Dichloroethene	96	5.880	5.877	0.003	96	13626	0.1587	0.1563	
35 2-Methylpentane	43	5.902	5.895	0.007	83	16505	0.1587	0.1531	
36 Methyl tert-butyl ether	73	6.031	6.013	0.018	93	39367	0.1587	0.1561	
37 1,1-Dichloroethane	63	6.290	6.286	0.004	98	22341	0.1587	0.1528	
38 Vinyl acetate	43	6.408	6.401	0.007	98	19323	0.1587	0.1463	
39 2-Butanone (MEK)	72	6.851	6.843	0.008	87	7325	0.1587	0.1911	
40 Hexane	56	6.856	6.852	0.004	72	8320	0.1587	0.1620	
41 Isopropyl ether	45	7.039	7.025	0.014	90	24795	0.1587	0.1569	
42 cis-1,2-Dichloroethene	96	7.250	7.249	0.001	92	13111	0.1587	0.1490	
43 Ethyl acetate	43	7.465	7.459	0.006	98	15665	0.1587	0.1523	
44 Chloroform	83	7.595	7.592	0.003	93	34481	0.1587	0.1573	
45 Tert-butyl ethyl ether	59	7.713	7.698	0.015	89	30887	0.1587	0.1556	M
46 Tetrahydrofuran	42	8.015	8.001	0.014	76	8437	0.1587	0.1638	
47 1,1,1-Trichloroethane	97	8.603	8.603	0.000	92	38466	0.1587	0.1565	
48 1,2-Dichloroethane	62	8.722	8.721	0.001	99	21847	0.1587	0.1557	
50 Cyclohexane	69	9.202	9.202	0.000	60	6309	0.1587	0.1507	
54 Thiophene	84	9.212	9.207	0.005	53	23414	0.1587	0.1529	
51 Benzene	78	9.212	9.209	0.003	95	41095	0.1587	0.1623	
49 n-Butanol	31	9.239	9.219	0.020	34	2173	0.1587	0.1430	
52 Carbon tetrachloride	117	9.234	9.230	0.004	97	37717	0.1587	0.1542	
53 2,3-Dimethylpentane	71	9.353	9.349	0.004	85	8770	0.1587	0.1487	
55 Tert-amyl methyl ether	73	9.762	9.751	0.011	98	36281	0.1587	0.1537	
56 Isooctane	57	10.054	10.049	0.005	97	45400	0.1587	0.1542	
57 n-Heptane	71	10.480	10.480	0.000	77	13516	0.1587	0.1501	
58 1,2-Dichloropropane	63	10.550	10.551	-0.001	83	11537	0.1587	0.1524	
59 Trichloroethene	130	10.593	10.590	0.003	92	17186	0.1587	0.1552	
60 Dibromomethane	93	10.674	10.677	-0.003	94	16846	0.1587	0.1525	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	97	31068	0.1587	0.1446	
62 1,4-Dioxane	88	10.895	10.884	0.011	85	5236	0.1587	0.1492	
63 Methyl methacrylate	41	10.987	10.985	0.002	78	9366	0.1587	0.1388	
64 Methylcyclohexane	83	11.418	11.414	0.004	89	30495	0.1587	0.1580	
65 4-Methyl-2-pentanone (MIBK	43	11.903	11.896	0.007	94	16142	0.1587	0.1626	
66 cis-1,3-Dichloropropene	75	11.936	11.934	0.002	88	22355	0.1587	0.1459	
67 trans-1,3-Dichloropropene	75	12.674	12.676	-0.002	93	21349	0.1587	0.1446	
68 Toluene	91	12.782	12.783	-0.001	94	43873	0.1587	0.1567	
69 1,1,2-Trichloroethane	83	12.874	12.875	-0.001	96	13139	0.1587	0.1529	
70 2-Methylthiophene	97	12.944	12.942	0.002	96	34204	0.1587	0.1470	
71 3-Methylthiophene	97	13.154	13.152	0.002	98	33682	0.1587	0.1477	
72 2-Hexanone	58	13.311	13.303	0.008	96	8116	0.1587	0.1489	
73 n-Octane	85	13.532	13.533	-0.001	77	15198	0.1587	0.1582	
74 Chlorodibromomethane	129	13.586	13.589	-0.003	97	24716	0.1587	0.1367	
75 Ethylene Dibromide	107	13.888	13.888	0.000	97	22191	0.1587	0.1445	
76 Tetrachloroethene	129	13.969	13.966	0.003	94	16751	0.1587	0.1538	
77 Chlorobenzene	112	14.864	14.865	-0.001	92	33481	0.1587	0.1547	
78 2,3-Dimethylheptane	43	14.918	14.914	0.004	73	22617	0.1587	0.1519	
79 Ethylbenzene	91	15.166	15.168	-0.002	98	57978	0.1587	0.1543	
80 2-Ethylthiophene	97	15.274	15.272	0.002	98	44774	0.1587	0.1524	
81 m-Xylene & p-Xylene	91	15.338	15.337	0.001	99	93076	0.3173	0.3177	
83 Bromoform	173	15.775	15.776	-0.001	95	22445	0.1587	0.1274	
82 n-Nonane	57	15.791	15.790	0.001	76	19483	0.1587	0.1550	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.807	15.807	0.000	95	25652	0.1587	0.1359	
85 o-Xylene	91	15.867	15.867	0.000	97	48334	0.1587	0.1572	
86 1,1,2,2-Tetrachloroethane	83	16.206	16.202	0.004	97	28026	0.1587	0.1433	
87 1,2,3-Trichloropropane	110	16.363	16.362	0.001	97	10099	0.1587	0.1442	
88 Isopropylbenzene	105	16.465	16.466	-0.001	97	63990	0.1587	0.1560	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	15956	0.1587	0.1512	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	97	15148	0.1587	0.1585	
91 4-Ethyltoluene	105	17.182	17.181	0.001	98	56915	0.1587	0.1487	
92 1,3,5-Trimethylbenzene	120	17.258	17.262	-0.004	91	26795	0.1587	0.1503	
93 Alpha Methyl Styrene	118	17.511	17.511	0.000	88	16546	0.1587	0.1167	
94 n-Decane	57	17.598	17.599	-0.001	94	21656	0.1587	0.1478	
95 tert-Butylbenzene	119	17.722	17.721	0.001	90	54531	0.1587	0.1551	
96 1,2,4-Trimethylbenzene	105	17.732	17.735	-0.003	94	50168	0.1587	0.1520	
97 sec-Butylbenzene	105	18.013	18.013	0.000	98	71394	0.1587	0.1563	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	97	29174	0.1587	0.1456	
99 Benzyl chloride	91	18.104	18.104	0.000	97	33870	0.1587	0.1270	
100 1,4-Dichlorobenzene	146	18.110	18.112	-0.002	90	28310	0.1587	0.1454	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	57090	0.1587	0.1514	
102 1,2,3-Trimethylbenzene	105	18.239	18.240	-0.001	98	38345	0.1587	0.1539	
103 Butylcyclohexane	83	18.304	18.305	-0.001	95	39107	0.1587	0.1566	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	91	28420	0.1587	0.1455	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	93	41715	0.1587	0.1499	
106 Indene	116	18.633	18.632	0.001	95	27114	0.1587	0.1297	
107 n-Butylbenzene	91	18.649	18.652	-0.003	98	50373	0.1587	0.1454	
108 Undecane	57	19.000	19.000	0.000	84	16912	0.1587	0.1162	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	38137	0.1587	0.1435	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	91	8867	0.1587	0.1130	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	40848	0.1587	0.1354	
112 1,2,3,5-Tetramethylbenzene	119	19.496	19.498	-0.002	93	25123	0.1587	0.1358	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	95	30214	0.1587	0.1298	
114 Dodecane	57	20.073	20.078	-0.005	92	11284	0.1587	0.1290	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	93	15989	0.1587	0.1221	
116 Naphthalene	128	20.359	20.357	0.001	98	27498	0.1587	0.1137	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	98	15165	0.1587	0.1166	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	95	28753	0.1587	0.1537	
119 1,2,3-Trichlorobenzene	180	20.634	20.631	0.003	93	14072	0.1587	0.1304	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	98	27638	0.4958	0.5560	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	99	24598	0.4958	0.5862	
A 124 Toluene Range	1	12.782	(12.752-12.812)		0	105445	0.1587	0.1578	
A 125 C8 Range	1	13.525	(13.502-13.562)		0	102859	0.1587	0.1537	
S 126 Xylenes, Total	100				0		0.4760	0.4749	
S 127 1,2-Dichloroethene, Total	1				0		0.3173	0.3052	

QC Flag Legend

Review Flags

M - Manually Integrated

Reagents:

40L3DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

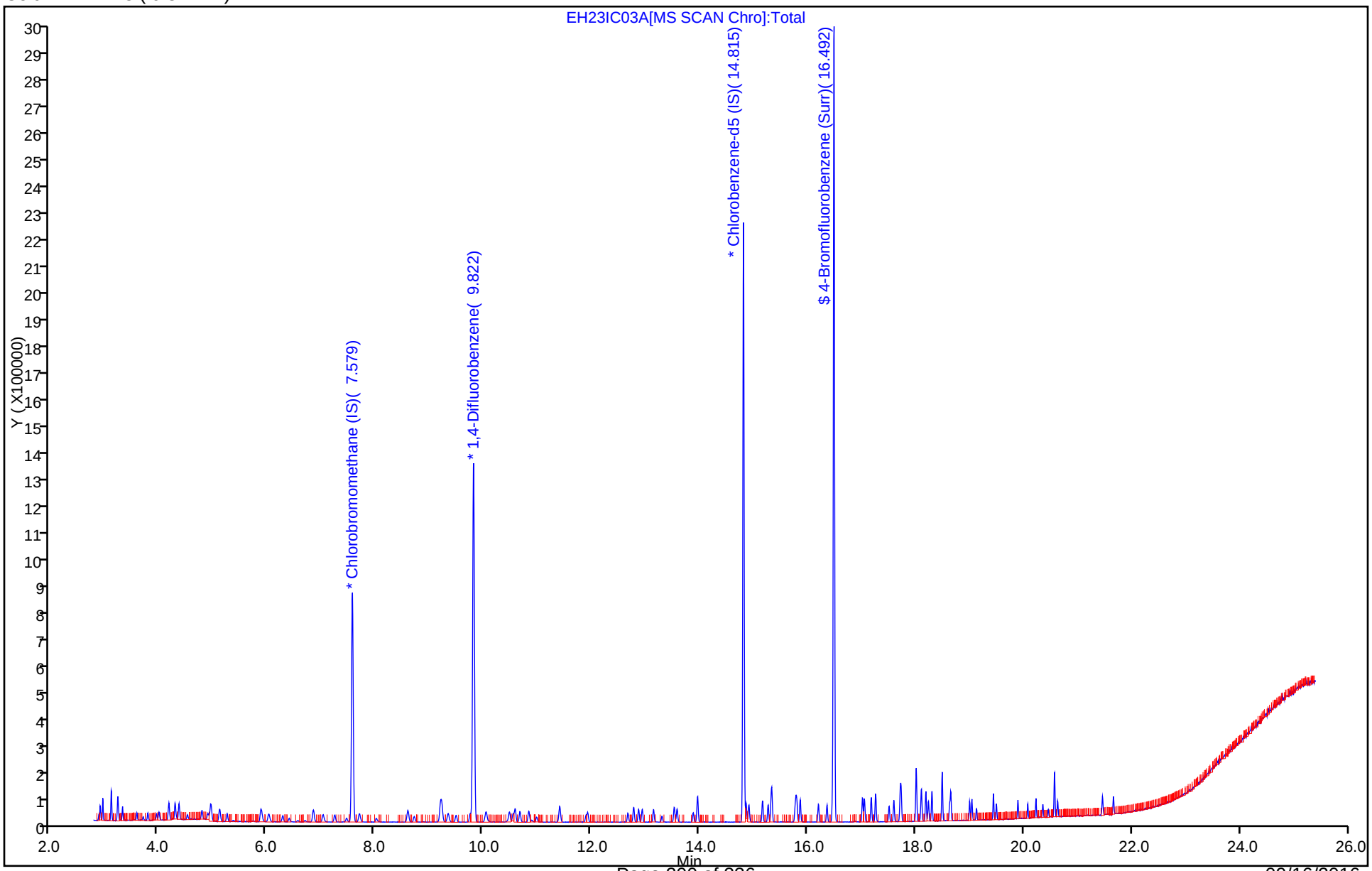
Report Date: 25-Aug-2016 12:59:32 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC03A.D

Injection Date:	23-Aug-2016 18:32:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L3			Worklist Smp#:	5
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	8
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

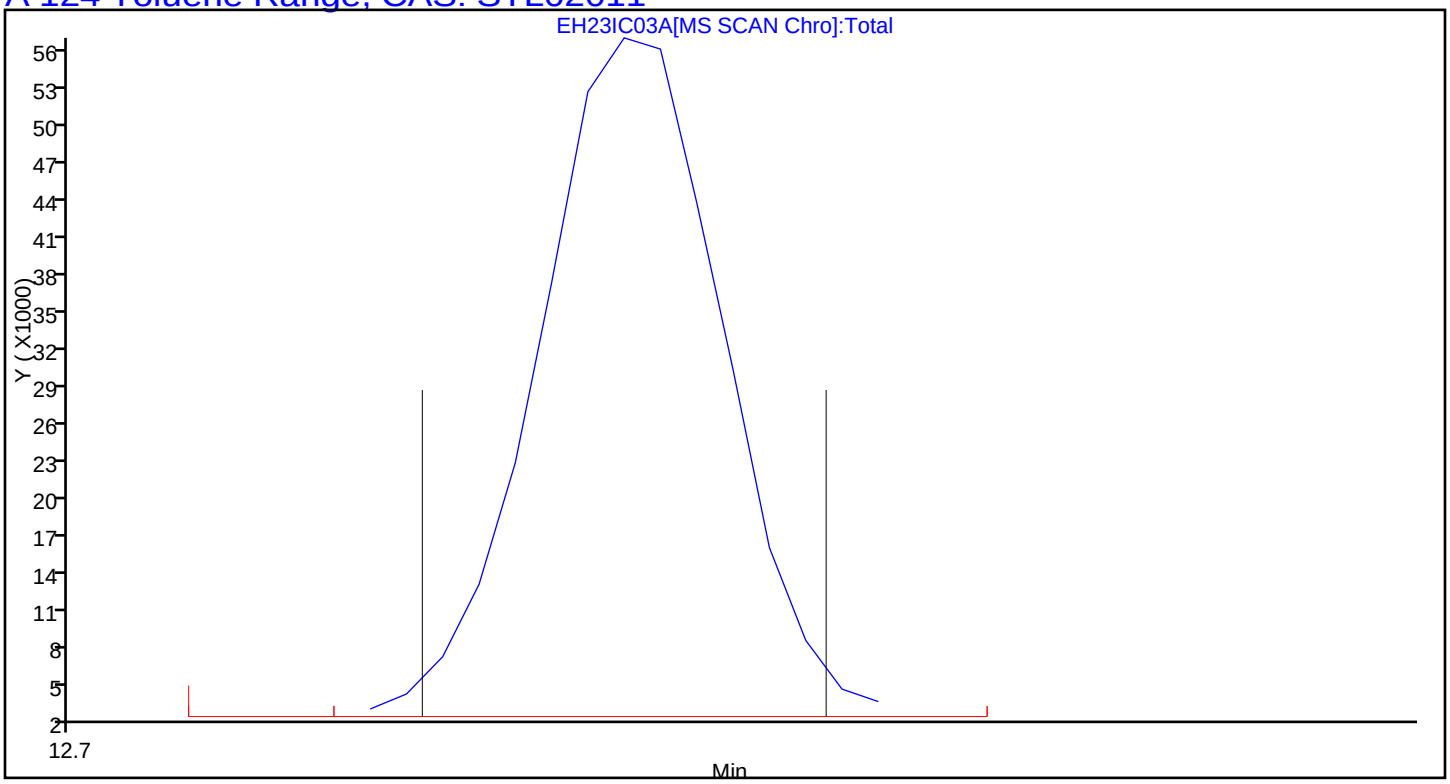


Report Date: 25-Aug-2016 12:59:32 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC03A.D				
Injection Date:	23-Aug-2016 18:32:30	Instrument ID:	ME		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

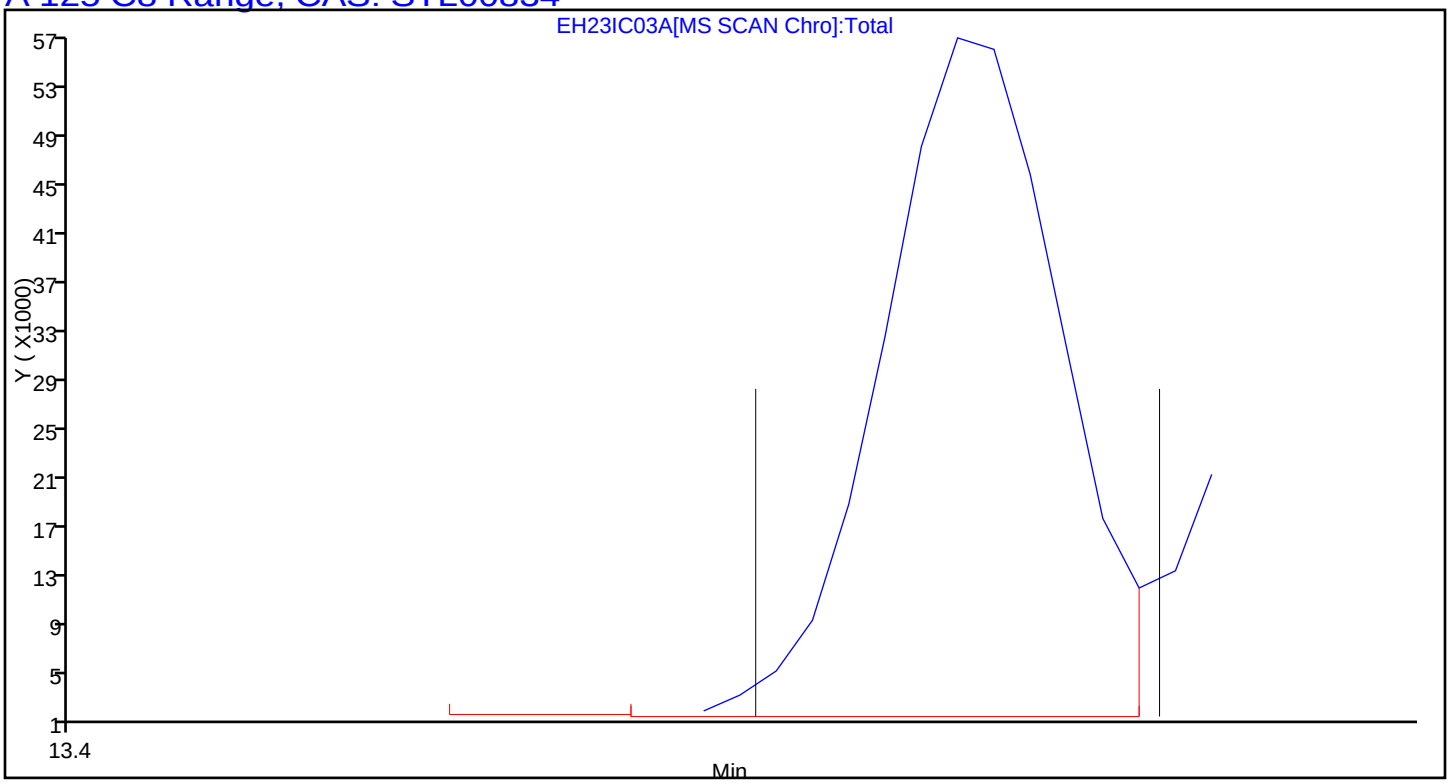


Report Date: 25-Aug-2016 12:59:32 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC03A.D				
Injection Date:	23-Aug-2016 18:32:30	Instrument ID:	ME		
Lims ID:	IC L3				
Client ID:					
Operator ID:	403648	ALS Bottle#:	8	Worklist Smp#:	5
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



Manual Integration/User Assign Peak Report

TestAmerica Knoxville

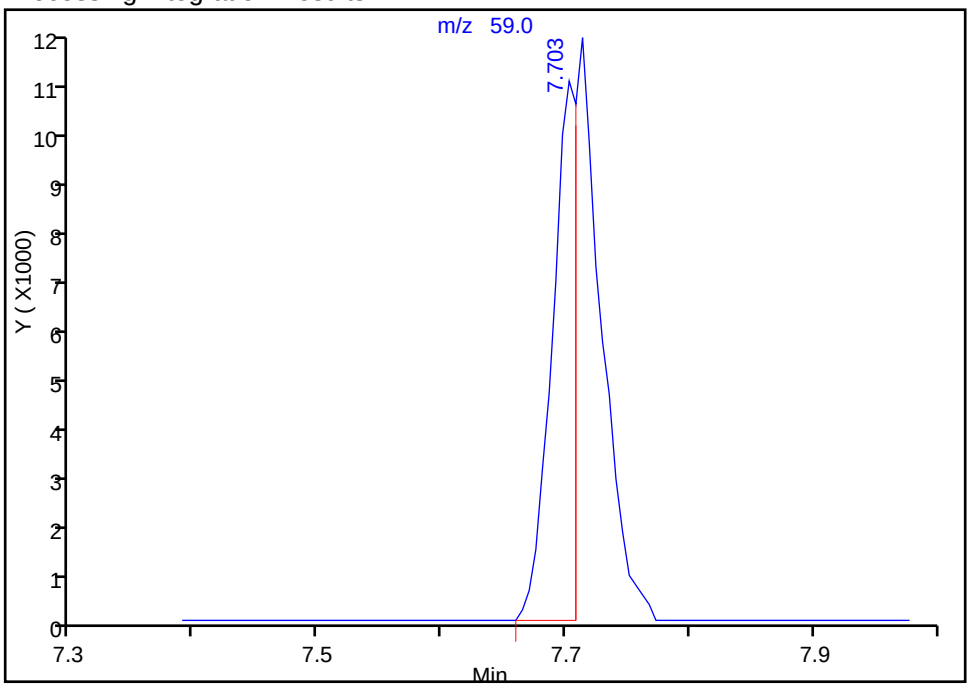
Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC03A.D
Injection Date: 23-Aug-2016 18:32:30 Instrument ID: ME
Lims ID: IC L3
Client ID:
Operator ID: 403648 ALS Bottle#: 8 Worklist Smp#: 5
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Column: RTX-5 (0.32 mm) Detector MS SCAN

45 Tert-butyl ethyl ether, CAS: 637-92-3

Signal: 1

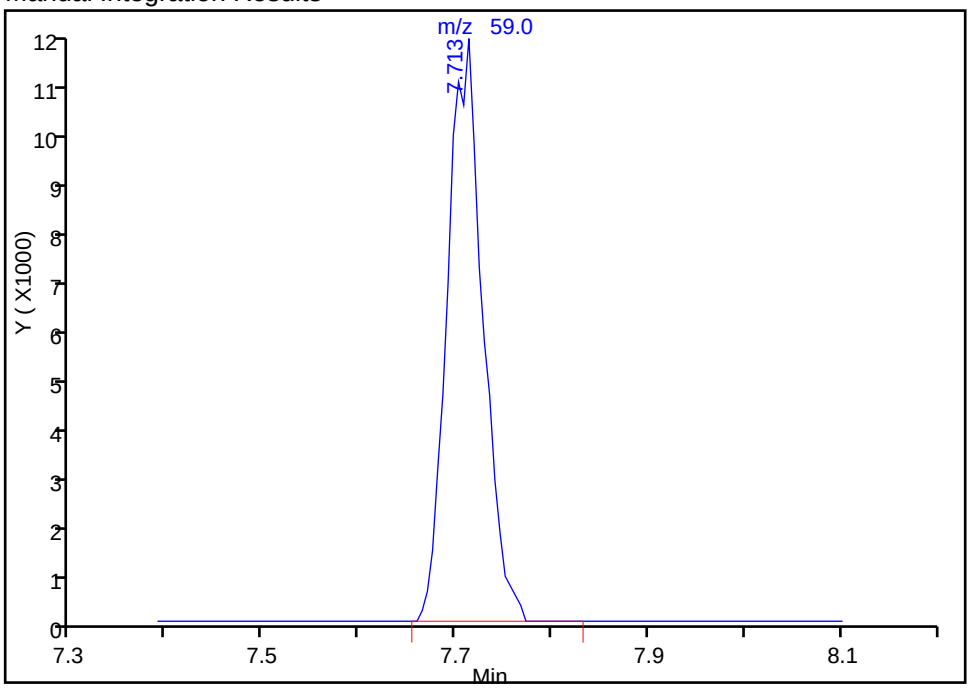
Processing Integration Results

RT: 7.70
Area: 15777
Amount: 0.083950
Amount Units: ppb v/v



Manual Integration Results

RT: 7.71
Area: 30887
Amount: 0.155591
Amount Units: ppb v/v



Reviewer: barlozhetskayaa, 24-Aug-2016 10:36:45
Audit Action: Manually Integrated Audit Reason: Split Peak

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC04.D
Lims ID: IC L4
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 23-Aug-2016 19:17:30 ALS Bottle#: 9 Worklist Smp#: 6
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052173
Misc. Info.: 140-0003339-006
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:35 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 10:38:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.573	7.576	-0.003	72	263906	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.819	-0.003	94	1265705	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1182255	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.492	16.492	0.000	90	981774	4.00	4.06	
6 Chlorodifluoromethane	67	2.903	2.900	0.003	95	12124	0.4000	0.3872	
7 Propene	41	2.909	2.909	0.000	94	17666	0.4000	0.4104	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	113130	0.4000	0.4076	
9 Chloromethane	52	3.103	3.102	0.001	99	6795	0.4000	0.3814	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.110	-0.002	95	61020	0.4000	0.4136	
11 Acetaldehyde	44	3.232	3.232	0.000	90	41149	2.00	2.42	
12 Vinyl chloride	62	3.243	3.244	-0.001	99	27219	0.4000	0.3827	
13 Butane	43	3.319	3.317	0.002	81	30014	0.4000	0.3868	
14 Butadiene	54	3.319	3.317	0.002	76	17338	0.4000	0.3852	
15 Bromomethane	94	3.583	3.583	0.000	97	31392	0.4000	0.3899	
16 Chloroethane	64	3.696	3.700	-0.004	98	14567	0.4000	0.3847	
17 Ethanol	31	3.777	3.786	-0.009	99	38188	2.00	2.04	
18 Vinyl bromide	106	3.950	3.950	0.000	98	30365	0.4000	0.3946	
19 2-Methylbutane	43	3.987	3.990	-0.003	88	21789	0.4000	0.3674	
20 Trichlorofluoromethane	101	4.171	4.173	-0.002	99	108799	0.4000	0.4050	
21 Acrolein	56	4.181	4.186	-0.005	26	6243	0.4000	0.3556	
22 Acetonitrile	40	4.241	4.243	-0.002	95	7085	0.4000	0.4148	
23 Acetone	58	4.278	4.283	-0.005	99	37431	1.20	1.49	
24 Isopropyl alcohol	45	4.354	4.361	-0.007	96	79096	1.20	1.18	
25 Pentane	72	4.359	4.362	-0.003	95	5985	0.4000	0.4230	
26 Ethyl ether	31	4.510	4.510	0.000	81	17552	0.4000	0.4025	
27 1,1-Dichloroethene	96	4.785	4.790	-0.005	98	31108	0.4000	0.3866	
29 Acrylonitrile	53	4.882	4.891	-0.009	52	13567	0.4000	0.3989	
28 2-Methyl-2-propanol	59	4.882	4.892	-0.010	92	43118	0.4000	0.3946	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.950	-0.003	95	69670	0.4000	0.4016	
31 Methylene Chloride	84	5.109	5.112	-0.003	79	35881	0.4000	0.4334	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.125	5.126	-0.001	88	27029	0.4000	0.4032	
33 Carbon disulfide	76	5.254	5.255	-0.001	98	98285	0.4000	0.3956	
34 trans-1,2-Dichloroethene	96	5.875	5.877	-0.002	96	34857	0.4000	0.3983	
35 2-Methylpentane	43	5.891	5.895	-0.004	84	41648	0.4000	0.3850	
36 Methyl tert-butyl ether	73	6.015	6.013	0.002	93	103036	0.4000	0.4072	
37 1,1-Dichloroethane	63	6.284	6.286	-0.002	99	57616	0.4000	0.3926	
38 Vinyl acetate	43	6.398	6.401	-0.003	99	49063	0.4000	0.3701	
39 2-Butanone (MEK)	72	6.840	6.843	-0.003	97	16894	0.4000	0.4393	
40 Hexane	56	6.851	6.852	-0.001	80	20477	0.4000	0.3973	
41 Isopropyl ether	45	7.018	7.025	-0.007	90	64018	0.4000	0.4036	
42 cis-1,2-Dichloroethene	96	7.244	7.249	-0.005	90	34713	0.4000	0.3930	
43 Ethyl acetate	43	7.455	7.459	-0.004	98	42005	0.4000	0.4070	
44 Chloroform	83	7.589	7.592	-0.003	95	86910	0.4000	0.3950	
45 Tert-butyl ethyl ether	59	7.692	7.698	-0.006	90	81207	0.4000	0.4076	
46 Tetrahydrofuran	42	7.999	8.001	-0.002	77	19875	0.4000	0.3846	
47 1,1,1-Trichloroethane	97	8.598	8.603	-0.005	94	97977	0.4000	0.3973	
48 1,2-Dichloroethane	62	8.722	8.721	0.001	98	55807	0.4000	0.3884	
50 Cyclohexane	69	9.207	9.202	0.005	63	16775	0.4000	0.3911	
54 Thiophene	84	9.207	9.207	0.000	52	60273	0.4000	0.3843	
51 Benzene	78	9.207	9.209	-0.002	95	101363	0.4000	0.3907	
49 n-Butanol	31	9.223	9.219	0.004	38	5619	0.4000	0.3609	
52 Carbon tetrachloride	117	9.229	9.230	-0.001	97	95982	0.4000	0.3832	
53 2,3-Dimethylpentane	71	9.347	9.349	-0.002	84	22772	0.4000	0.3769	
55 Tert-amyl methyl ether	73	9.752	9.751	0.001	97	96249	0.4000	0.4026	
56 Isooctane	57	10.048	10.049	-0.001	97	116372	0.4000	0.3860	
57 n-Heptane	71	10.474	10.480	-0.006	77	35307	0.4000	0.3827	
58 1,2-Dichloropropane	63	10.550	10.551	-0.001	85	31204	0.4000	0.4025	
59 Trichloroethene	130	10.588	10.590	-0.002	94	44392	0.4000	0.3915	
60 Dibromomethane	93	10.674	10.677	-0.003	94	44214	0.4000	0.3909	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	97	83097	0.4000	0.3777	
62 1,4-Dioxane	88	10.884	10.884	0.000	78	14190	0.4000	0.3948	
63 Methyl methacrylate	41	10.981	10.985	-0.004	78	25512	0.4000	0.3690	
64 Methylcyclohexane	83	11.413	11.414	-0.001	90	77063	0.4000	0.3899	
65 4-Methyl-2-pentanone (MIBK	43	11.898	11.896	0.002	91	38946	0.4000	0.3829	
66 cis-1,3-Dichloropropene	75	11.930	11.934	-0.004	90	59979	0.4000	0.3822	
67 trans-1,3-Dichloropropene	75	12.674	12.676	-0.002	93	57807	0.4000	0.3867	
68 Toluene	91	12.782	12.783	-0.001	94	113294	0.4000	0.3995	
69 1,1,2-Trichloroethane	83	12.874	12.875	-0.001	98	34398	0.4000	0.3951	
70 2-Methylthiophene	97	12.939	12.942	-0.003	96	94924	0.4000	0.4028	
71 3-Methylthiophene	97	13.149	13.152	-0.003	98	92948	0.4000	0.4023	
72 2-Hexanone	58	13.300	13.303	-0.003	98	21539	0.4000	0.3903	
73 n-Octane	85	13.532	13.533	-0.001	77	37708	0.4000	0.3876	
74 Chlorodibromomethane	129	13.586	13.589	-0.003	97	67349	0.4000	0.3677	
75 Ethylene Dibromide	107	13.888	13.888	0.000	99	59149	0.4000	0.3804	
76 Tetrachloroethene	129	13.963	13.966	-0.003	94	42406	0.4000	0.3844	
77 Chlorobenzene	112	14.864	14.865	-0.001	91	86732	0.4000	0.3956	
78 2,3-Dimethylheptane	43	14.912	14.914	-0.002	77	59008	0.4000	0.3912	
79 Ethylbenzene	91	15.166	15.168	-0.002	99	154002	0.4000	0.4047	
80 2-Ethylthiophene	97	15.268	15.272	-0.004	98	120392	0.4000	0.4046	
81 m-Xylene & p-Xylene	91	15.333	15.337	-0.004	99	245430	0.8000	0.8271	
83 Bromoform	173	15.775	15.776	-0.001	95	60792	0.4000	0.3408	
82 n-Nonane	57	15.786	15.790	-0.004	77	50166	0.4000	0.3941	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.807	15.807	0.000	96	72725	0.4000	0.3803	
85 o-Xylene	91	15.867	15.867	0.000	98	125205	0.4000	0.4020	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	98	77899	0.4000	0.3933	
87 1,2,3-Trichloropropane	110	16.357	16.362	-0.005	97	28342	0.4000	0.3994	
88 Isopropylbenzene	105	16.465	16.466	-0.001	96	168653	0.4000	0.4059	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	42831	0.4000	0.4008	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	96	39045	0.4000	0.4033	
91 4-Ethyltoluene	105	17.182	17.181	0.001	98	157161	0.4000	0.4053	
92 1,3,5-Trimethylbenzene	120	17.263	17.262	0.001	91	72362	0.4000	0.4009	
93 Alpha Methyl Styrene	118	17.511	17.511	0.000	87	50440	0.4000	0.3512	
94 n-Decane	57	17.598	17.599	-0.001	93	60168	0.4000	0.4055	
95 tert-Butylbenzene	119	17.722	17.721	0.001	90	147503	0.4000	0.4143	
96 1,2,4-Trimethylbenzene	105	17.732	17.735	-0.003	95	134962	0.4000	0.4038	
97 sec-Butylbenzene	105	18.013	18.013	0.000	98	192323	0.4000	0.4158	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	97	78900	0.4000	0.3888	
99 Benzyl chloride	91	18.105	18.104	0.000	97	102099	0.4000	0.3781	
100 1,4-Dichlorobenzene	146	18.110	18.112	-0.002	90	76000	0.4000	0.3854	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	159549	0.4000	0.4177	
102 1,2,3-Trimethylbenzene	105	18.239	18.240	-0.001	99	103719	0.4000	0.4110	
103 Butylcyclohexane	83	18.304	18.305	-0.001	95	103599	0.4000	0.4096	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	90	78457	0.4000	0.3964	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	93	112724	0.4000	0.3999	
106 Indene	116	18.628	18.632	-0.004	91	75444	0.4000	0.3564	
107 n-Butylbenzene	91	18.649	18.652	-0.003	98	142744	0.4000	0.4068	
108 Undecane	57	19.000	19.000	0.000	87	50871	0.4000	0.3451	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	102719	0.4000	0.3817	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	94	26856	0.4000	0.3379	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	111155	0.4000	0.3637	
112 1,2,3,5-Tetramethylbenzene	119	19.496	19.498	-0.002	94	68246	0.4000	0.3642	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	96	80186	0.4000	0.3400	
114 Dodecane	57	20.078	20.078	0.000	92	21967	0.4000	0.2479	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	92	36073	0.4000	0.2719	
116 Naphthalene	128	20.359	20.357	0.002	98	64256	0.4000	0.2622	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	99	34379	0.4000	0.2609	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	95	67724	0.4000	0.3573	
119 1,2,3-Trichlorobenzene	180	20.634	20.631	0.003	93	27762	0.4000	0.2541	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	99	35887	1.25	0.7128	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	98	27147	1.25	0.6387	
A 124 Toluene Range	1	12.782	(12.752-12.812)		0	271821	0.4000	0.3970	
A 125 C8 Range	1	13.525	(13.502-13.562)		0	266745	0.4000	0.3891	
S 126 Xylenes, Total	100				0		1.20	1.23	
S 127 1,2-Dichloroethene, Total	1				0		0.8000	0.7913	

Reagents:

40L4DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

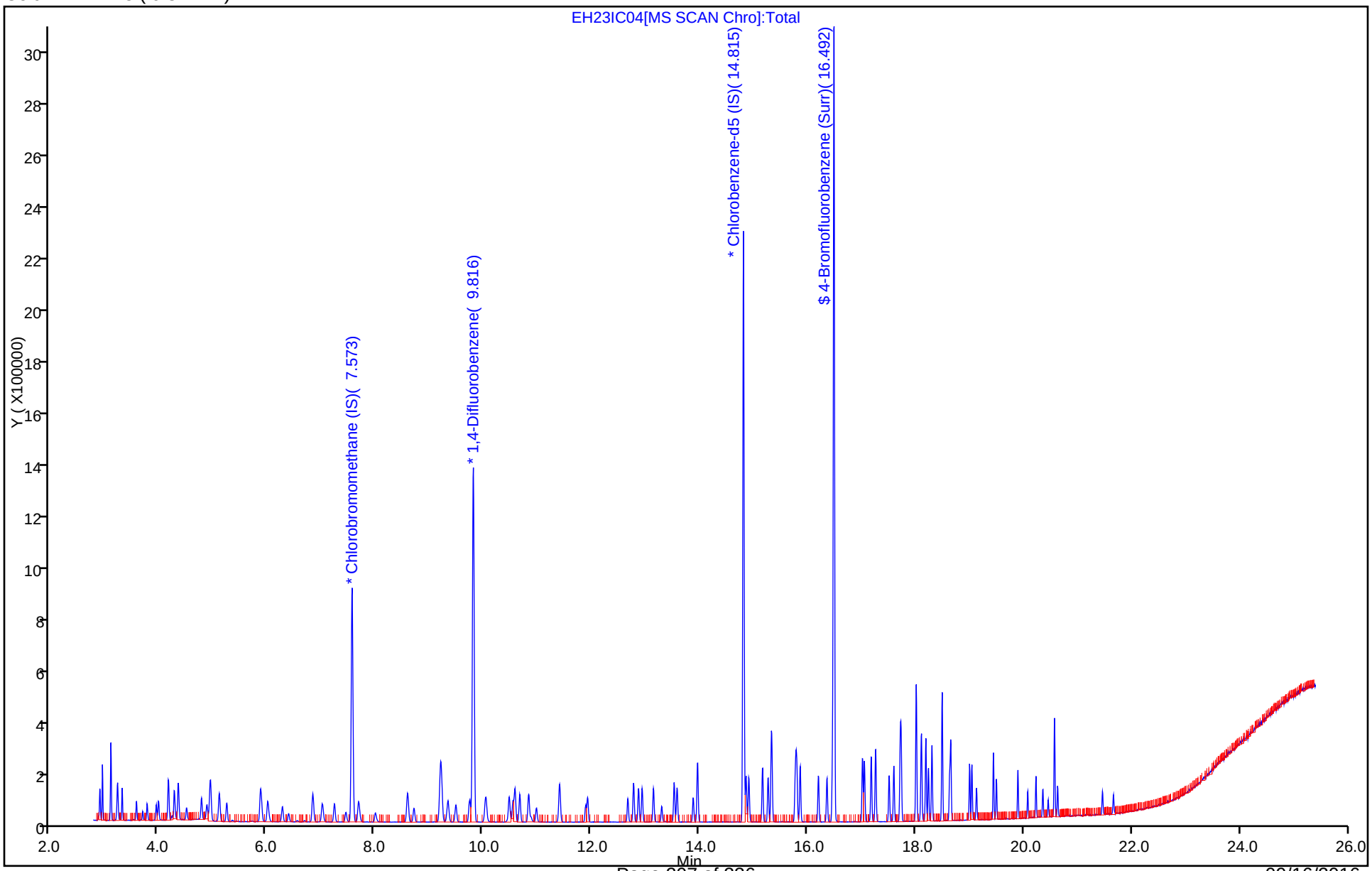
Report Date: 25-Aug-2016 12:59:35 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC04.D

Injection Date:	23-Aug-2016 19:17:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L4			Worklist Smp#:	6
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

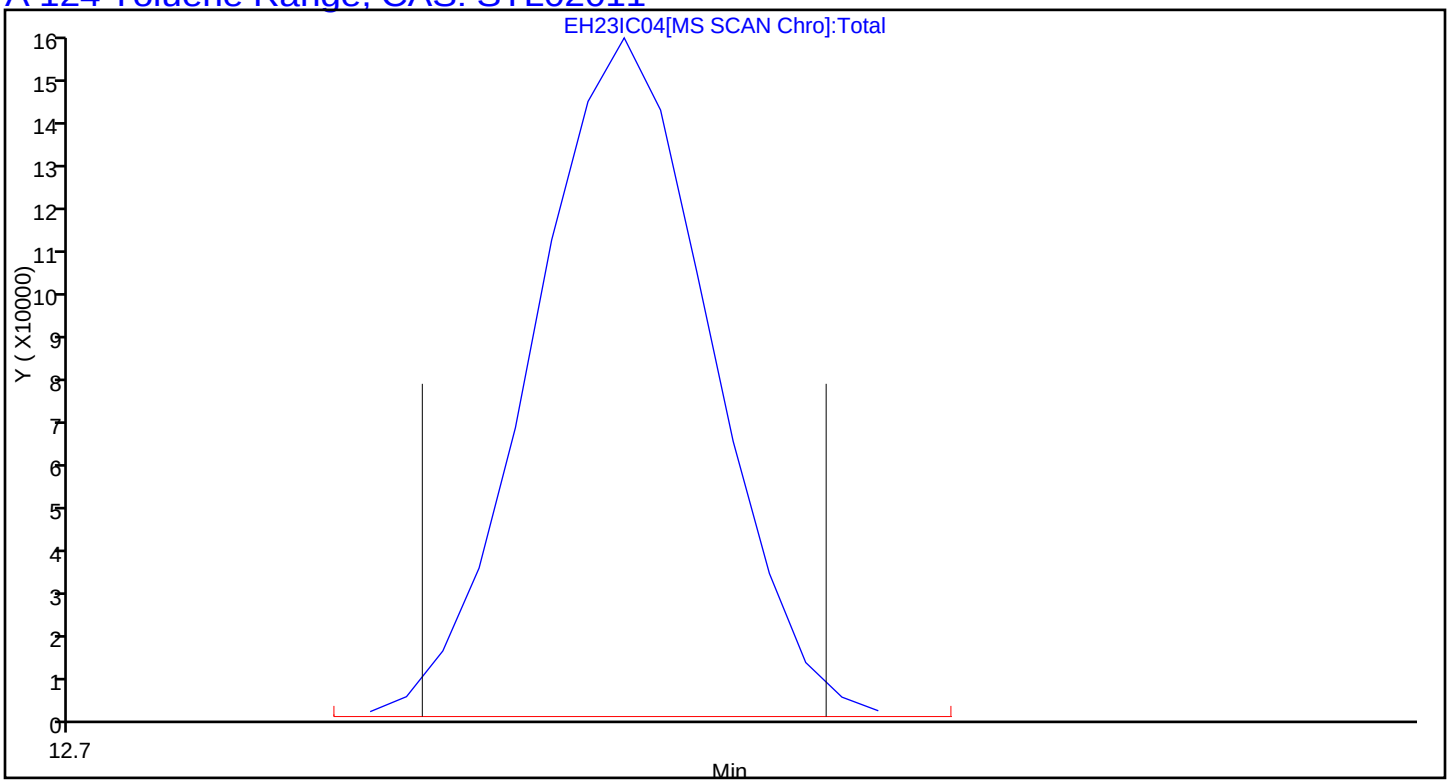


Report Date: 25-Aug-2016 12:59:36 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC04.D				
Injection Date:	23-Aug-2016 19:17:30	Instrument ID:	ME		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

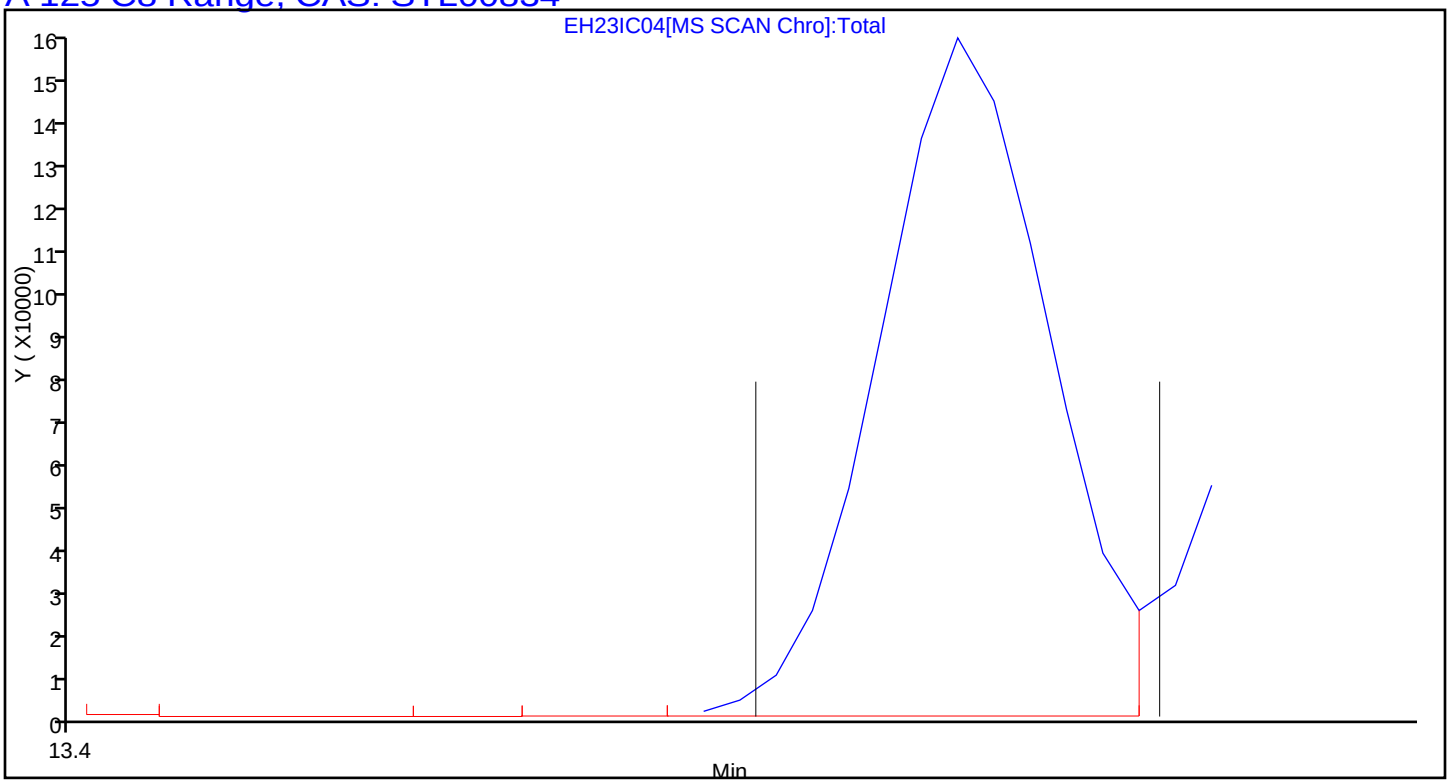


Report Date: 25-Aug-2016 12:59:36 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC04.D				
Injection Date:	23-Aug-2016 19:17:30	Instrument ID:	ME		
Lims ID:	IC L4				
Client ID:					
Operator ID:	403648	ALS Bottle#:	9	Worklist Smp#:	6
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC05.D
Lims ID: IC L5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 23-Aug-2016 20:01:30 ALS Bottle#: 10 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052172
Misc. Info.: 140-0003339-007
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:39 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 13:31:30

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.573	7.576	-0.003	73	265768	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.819	-0.003	94	1270566	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1190257	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.492	16.492	0.000	90	978264	4.00	4.02	
6 Chlorodifluoromethane	67	2.903	2.900	0.003	94	31671	1.00	1.00	
7 Propene	41	2.909	2.909	0.000	94	43114	1.00	0.99	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	285347	1.00	1.02	
9 Chloromethane	52	3.103	3.102	0.001	99	16758	1.00	0.9339	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.110	-0.002	95	151194	1.00	1.02	
11 Acetaldehyde	44	3.232	3.232	0.000	91	102442	5.01	5.99	
12 Vinyl chloride	62	3.243	3.244	-0.001	98	71324	1.00	1.00	
13 Butane	43	3.319	3.317	0.002	81	75855	1.00	0.9707	
14 Butadiene	54	3.319	3.317	0.002	77	44842	1.00	0.9893	
15 Bromomethane	94	3.583	3.583	0.000	98	80807	1.00	1.00	
16 Chloroethane	64	3.701	3.700	0.001	98	37379	1.00	0.9801	
17 Ethanol	31	3.782	3.786	-0.004	99	94084	5.01	4.99	
18 Vinyl bromide	106	3.950	3.950	0.000	97	77061	1.00	0.99	
19 2-Methylbutane	43	3.993	3.990	0.003	86	55332	1.00	0.9265	
20 Trichlorofluoromethane	101	4.171	4.173	-0.002	99	276442	1.00	1.02	
21 Acrolein	56	4.181	4.186	-0.005	95	15226	1.00	0.8611	
22 Acetonitrile	40	4.241	4.243	-0.002	98	18124	1.00	1.05	
23 Acetone	58	4.278	4.283	-0.005	99	89220	3.01	3.52	
24 Isopropyl alcohol	45	4.354	4.361	-0.007	97	202651	3.01	3.01	
25 Pentane	72	4.359	4.362	-0.003	95	14910	1.00	1.05	
26 Ethyl ether	31	4.505	4.510	-0.005	81	44219	1.00	1.01	
27 1,1-Dichloroethene	96	4.791	4.790	0.001	100	77206	1.00	0.9527	
29 Acrylonitrile	53	4.888	4.891	-0.003	95	32693	1.00	0.9545	
28 2-Methyl-2-propanol	59	4.882	4.892	-0.010	94	109176	1.00	0.99	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.950	-0.003	96	175826	1.00	1.01	
31 Methylene Chloride	84	5.109	5.112	-0.003	79	82064	1.00	0.9844	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.125	5.126	-0.001	88	66473	1.00	0.9848	
33 Carbon disulfide	76	5.254	5.255	-0.001	98	255435	1.00	1.02	
34 trans-1,2-Dichloroethene	96	5.875	5.877	-0.002	96	89328	1.00	1.01	
35 2-Methylpentane	43	5.896	5.895	0.001	87	109529	1.00	1.01	
36 Methyl tert-butyl ether	73	6.009	6.013	-0.004	93	266995	1.00	1.05	
37 1,1-Dichloroethane	63	6.284	6.286	-0.002	99	150055	1.00	1.02	
38 Vinyl acetate	43	6.398	6.401	-0.003	99	139184	1.00	1.04	
39 2-Butanone (MEK)	72	6.840	6.843	-0.003	98	39647	1.00	1.02	
40 Hexane	56	6.851	6.852	-0.001	81	52363	1.00	1.01	
41 Isopropyl ether	45	7.018	7.025	-0.007	89	165774	1.00	1.04	
42 cis-1,2-Dichloroethene	96	7.250	7.249	0.001	92	90478	1.00	1.02	
43 Ethyl acetate	43	7.455	7.459	-0.004	98	109695	1.00	1.06	
44 Chloroform	83	7.589	7.592	-0.003	97	222354	1.00	1.00	
45 Tert-butyl ethyl ether	59	7.692	7.698	-0.006	90	210400	1.00	1.05	
46 Tetrahydrofuran	42	7.994	8.001	-0.007	76	53071	1.00	1.02	
47 1,1,1-Trichloroethane	97	8.603	8.603	0.000	94	253978	1.00	1.02	
48 1,2-Dichloroethane	62	8.716	8.721	-0.005	98	145593	1.00	1.01	
50 Cyclohexane	69	9.202	9.202	0.000	66	42831	1.00	0.99	
54 Thiophene	84	9.207	9.207	0.000	53	157834	1.00	1.00	
51 Benzene	78	9.207	9.209	-0.002	94	258726	1.00	0.99	
49 n-Butanol	31	9.218	9.219	-0.001	39	14208	1.00	0.9091	
52 Carbon tetrachloride	117	9.229	9.230	-0.001	97	256403	1.00	1.02	
53 2,3-Dimethylpentane	71	9.347	9.349	-0.002	84	59803	1.00	0.9859	
55 Tert-amyl methyl ether	73	9.746	9.751	-0.005	97	248836	1.00	1.03	
56 Isooctane	57	10.043	10.049	-0.006	97	300690	1.00	0.99	
57 n-Heptane	71	10.480	10.480	0.000	78	91476	1.00	0.9878	
58 1,2-Dichloropropane	63	10.550	10.551	-0.001	85	79431	1.00	1.02	
59 Trichloroethene	130	10.588	10.590	-0.002	94	112424	1.00	0.9876	
60 Dibromomethane	93	10.674	10.677	-0.003	96	112531	1.00	0.99	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	97	222787	1.00	1.01	
62 1,4-Dioxane	88	10.879	10.884	-0.005	79	35770	1.00	0.99	
63 Methyl methacrylate	41	10.987	10.985	0.002	78	69730	1.00	1.00	
64 Methylcyclohexane	83	11.413	11.414	-0.001	90	195638	1.00	0.9860	
65 4-Methyl-2-pentanone (MIBK	43	11.892	11.896	-0.004	91	98443	1.00	0.9643	
66 cis-1,3-Dichloropropene	75	11.936	11.934	0.002	90	158688	1.00	1.01	
67 trans-1,3-Dichloropropene	75	12.674	12.676	-0.002	93	155761	1.00	1.03	
68 Toluene	91	12.782	12.783	-0.001	94	292256	1.00	1.02	
69 1,1,2-Trichloroethane	83	12.874	12.875	-0.001	98	89240	1.00	1.02	
70 2-Methylthiophene	97	12.939	12.942	-0.003	96	244758	1.00	1.03	
71 3-Methylthiophene	97	13.149	13.152	-0.003	98	239879	1.00	1.03	
72 2-Hexanone	58	13.300	13.303	-0.003	97	56286	1.00	1.01	
73 n-Octane	85	13.532	13.533	-0.001	78	100195	1.00	1.02	
74 Chlorodibromomethane	129	13.591	13.589	0.002	96	191276	1.00	1.04	
75 Ethylene Dibromide	107	13.888	13.888	0.000	98	162823	1.00	1.04	
76 Tetrachloroethene	129	13.963	13.966	-0.003	94	111764	1.00	1.01	
77 Chlorobenzene	112	14.864	14.865	-0.001	91	226397	1.00	1.03	
78 2,3-Dimethylheptane	43	14.912	14.914	-0.002	78	154795	1.00	1.02	
79 Ethylbenzene	91	15.166	15.168	-0.002	99	404807	1.00	1.06	
80 2-Ethylthiophene	97	15.274	15.272	0.002	97	315480	1.00	1.05	
81 m-Xylene & p-Xylene	91	15.333	15.337	-0.004	99	637658	2.00	2.13	
83 Bromoform	173	15.775	15.776	-0.001	95	189843	1.00	1.06	
82 n-Nonane	57	15.791	15.790	0.001	76	134711	1.00	1.05	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.807	15.807	0.000	96	213035	1.00	1.11	
85 o-Xylene	91	15.867	15.867	0.000	98	333631	1.00	1.06	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	98	210910	1.00	1.06	
87 1,2,3-Trichloropropane	110	16.363	16.362	0.001	97	75599	1.00	1.06	
88 Isopropylbenzene	105	16.465	16.466	-0.001	97	439412	1.00	1.05	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	115851	1.00	1.08	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	96	102641	1.00	1.05	
91 4-Ethyltoluene	105	17.177	17.181	-0.004	98	430948	1.00	1.10	
92 1,3,5-Trimethylbenzene	120	17.263	17.262	0.001	91	194923	1.00	1.07	
93 Alpha Methyl Styrene	118	17.511	17.511	0.000	88	153984	1.00	1.06	
94 n-Decane	57	17.598	17.599	-0.001	93	166121	1.00	1.11	
95 tert-Butylbenzene	119	17.722	17.721	0.001	88	388192	1.00	1.08	
96 1,2,4-Trimethylbenzene	105	17.732	17.735	-0.003	95	371867	1.00	1.11	
97 sec-Butylbenzene	105	18.013	18.013	0.000	97	513295	1.00	1.10	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	98	219701	1.00	1.08	
99 Benzyl chloride	91	18.105	18.104	0.000	97	299387	1.00	1.10	
100 1,4-Dichlorobenzene	146	18.110	18.112	-0.002	93	212012	1.00	1.07	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	432443	1.00	1.12	
102 1,2,3-Trimethylbenzene	105	18.239	18.240	-0.001	98	280160	1.00	1.10	
103 Butylcyclohexane	83	18.304	18.305	-0.001	95	274151	1.00	1.08	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	91	213558	1.00	1.07	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	93	310919	1.00	1.10	
106 Indene	116	18.628	18.632	-0.004	92	224053	1.00	1.05	
107 n-Butylbenzene	91	18.655	18.652	0.003	99	413197	1.00	1.17	
108 Undecane	57	19.000	19.000	0.000	86	164093	1.00	1.11	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	305314	1.00	1.13	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	93	86056	1.00	1.08	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	347469	1.00	1.13	
112 1,2,3,5-Tetramethylbenzene	119	19.496	19.498	-0.002	94	209526	1.00	1.11	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	96	264067	1.00	1.11	
114 Dodecane	57	20.078	20.078	0.000	91	77719	1.00	0.8713	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	93	123778	1.00	0.9266	
116 Naphthalene	128	20.359	20.357	0.002	98	229592	1.00	0.9307	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	99	109620	1.00	0.8263	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	95	212592	1.00	1.11	
119 1,2,3-Trichlorobenzene	180	20.628	20.631	-0.003	93	93044	1.00	0.8457	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	98	149931	3.13	2.96	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	99	131902	3.13	3.08	
A 124 Toluene Range	1	12.782	(12.752-12.812)		0	697680	1.00	1.02	
A 125 C8 Range	1	13.525	(13.502-13.562)		0	688848	1.00	1.00	
S 126 Xylenes, Total	100				0		3.00	3.20	
S 127 1,2-Dichloroethene, Total	1				0		2.00	2.03	

Reagents:

40L5DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

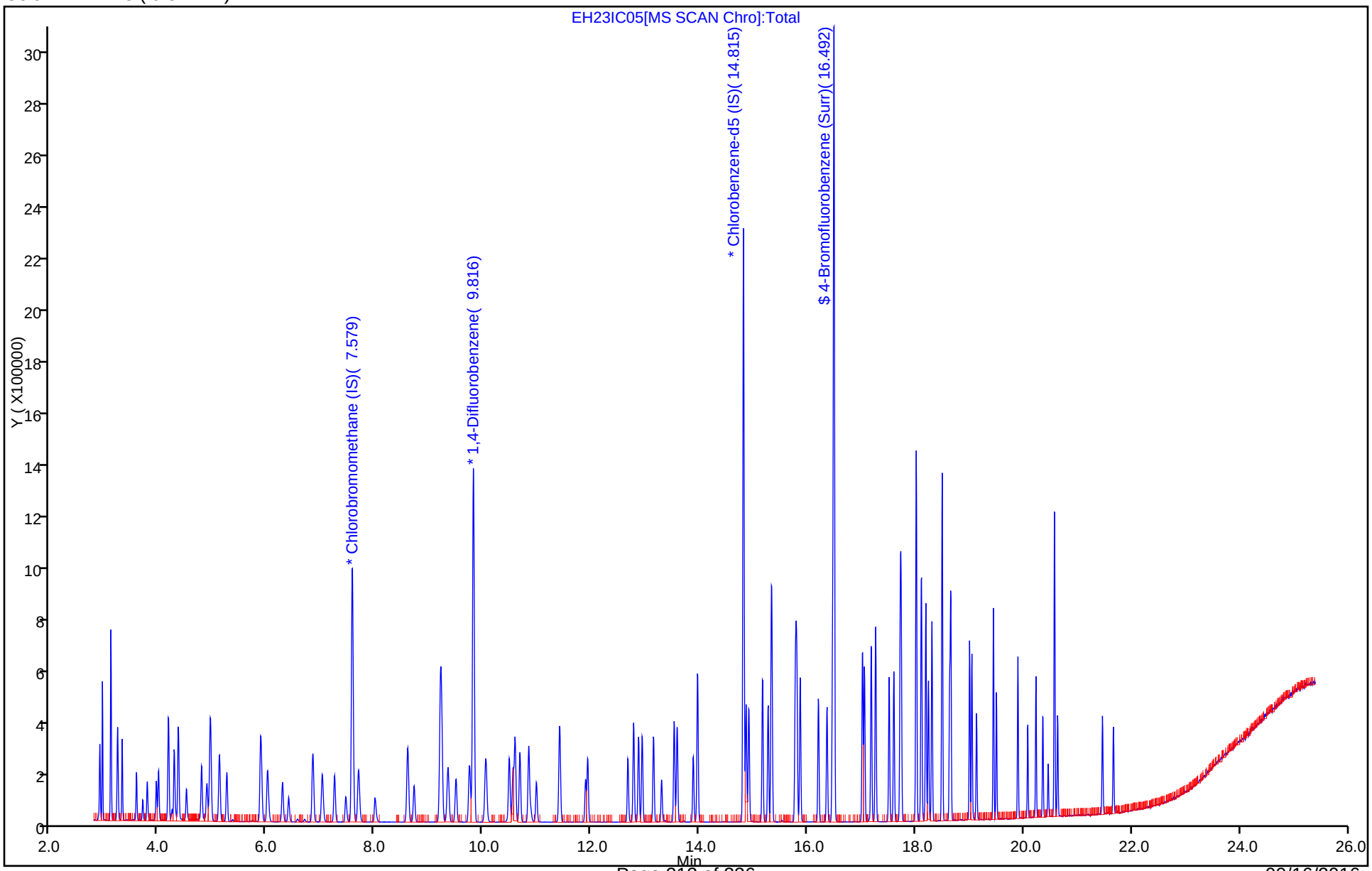
Report Date: 25-Aug-2016 12:59:40 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC05.D

Injection Date:	23-Aug-2016 20:01:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L5			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

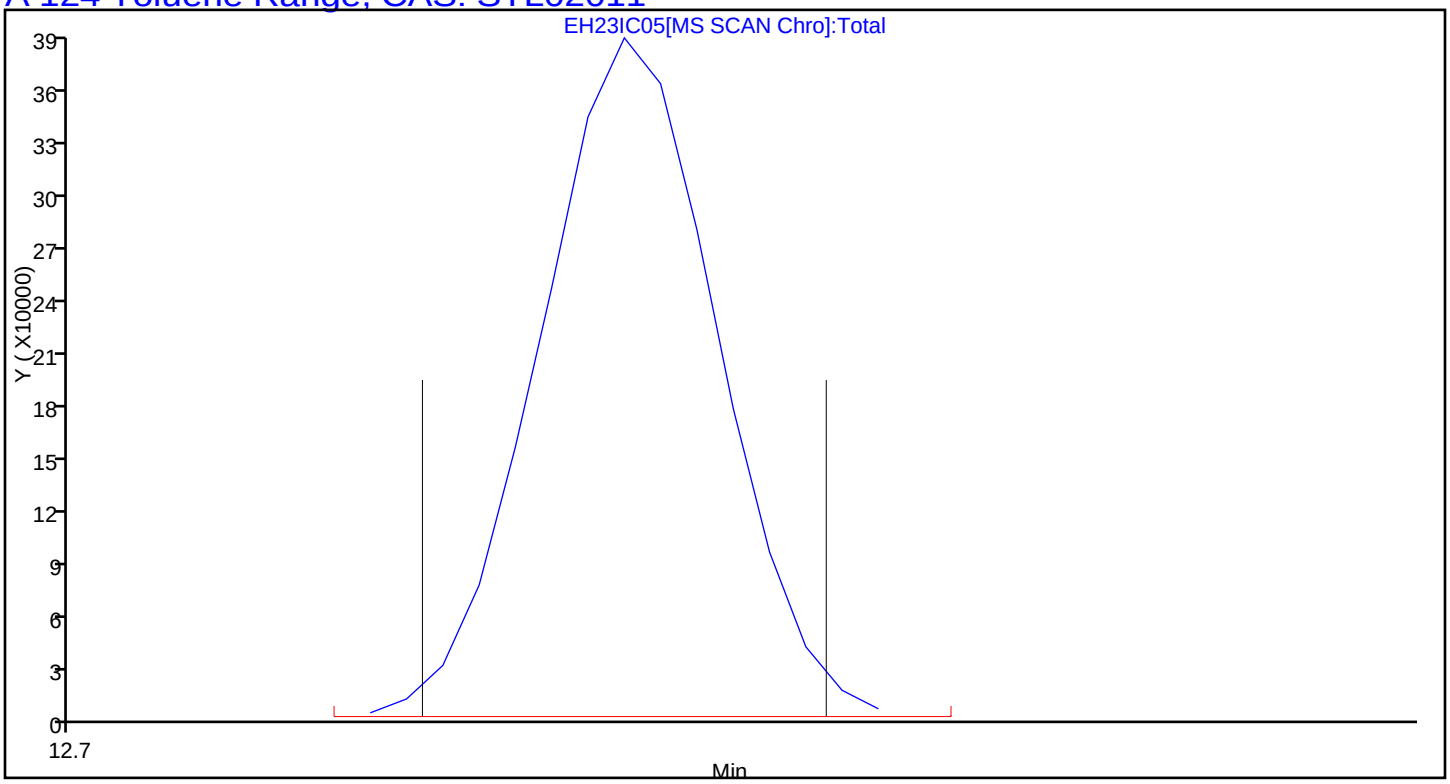


Report Date: 25-Aug-2016 12:59:40 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC05.D				
Injection Date:	23-Aug-2016 20:01:30	Instrument ID:	ME		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

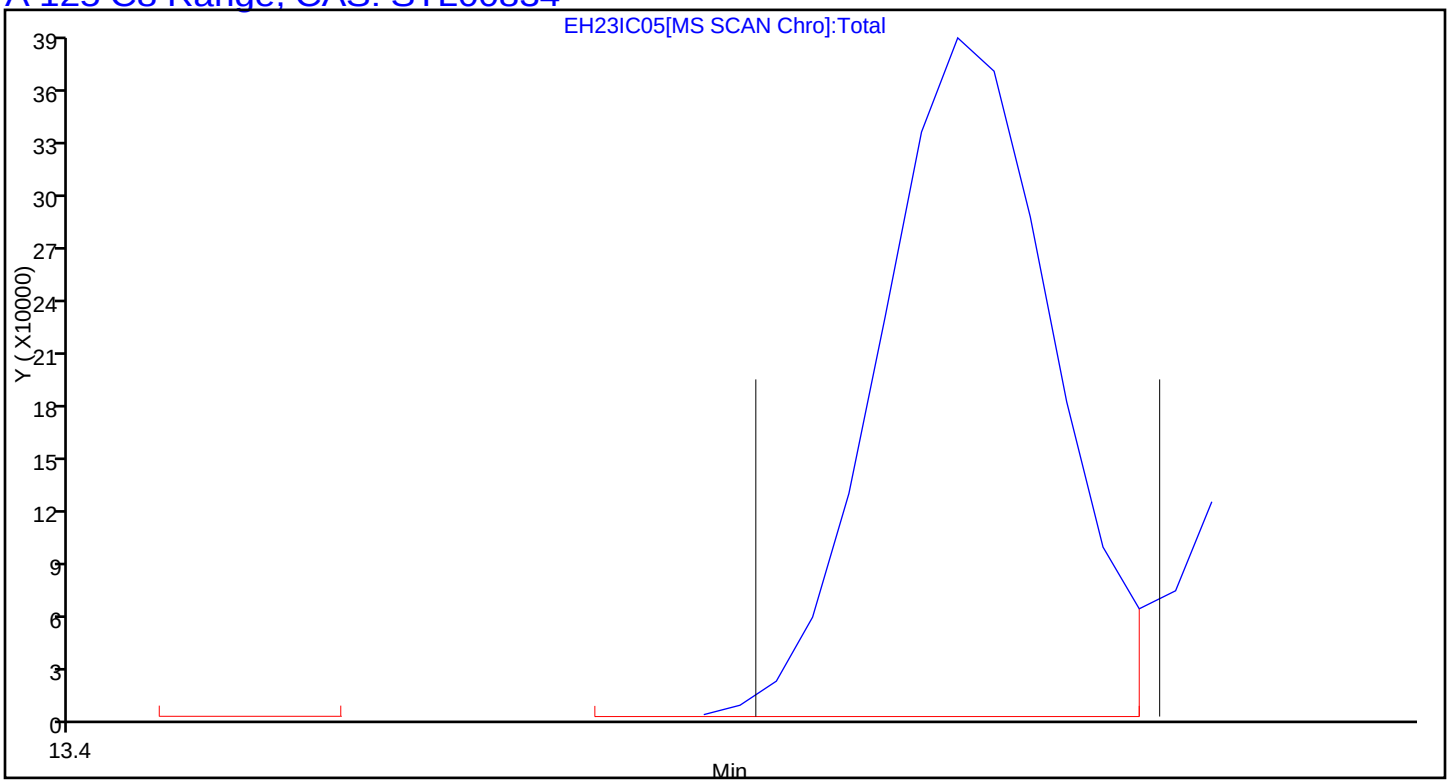


Report Date: 25-Aug-2016 12:59:40 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC05.D				
Injection Date:	23-Aug-2016 20:01:30	Instrument ID:	ME		
Lims ID:	IC L5				
Client ID:					
Operator ID:	403648	ALS Bottle#:	10	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC06.D
Lims ID: ICIS L6
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 23-Aug-2016 20:46:30 ALS Bottle#: 11 Worklist Smp#: 8
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052170
Misc. Info.: 140-0003339-008
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:43 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 10:09:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.573	7.576	-0.003	79	269675	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.819	-0.003	94	1287098	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1211436	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.492	16.492	0.000	90	998139	4.00	4.03	
6 Chlorodifluoromethane	67	2.898	2.900	-0.002	95	61822	2.00	1.93	
7 Propene	41	2.909	2.909	0.000	95	84095	2.00	1.91	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	570285	2.00	2.01	
9 Chloromethane	52	3.103	3.102	0.001	98	31364	2.00	1.72	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.110	-0.002	95	301658	2.00	2.00	
11 Acetaldehyde	44	3.232	3.232	0.000	91	160626	9.99	9.26	
12 Vinyl chloride	62	3.243	3.244	-0.001	99	140638	2.00	1.93	
13 Butane	43	3.313	3.317	-0.004	81	149120	2.00	1.88	
14 Butadiene	54	3.313	3.317	-0.004	78	86814	2.00	1.89	
15 Bromomethane	94	3.583	3.583	0.000	98	156847	2.00	1.91	
16 Chloroethane	64	3.696	3.700	-0.004	98	73166	2.00	1.89	
17 Ethanol	31	3.782	3.786	-0.004	99	179028	9.99	9.36	
18 Vinyl bromide	106	3.950	3.950	0.000	97	151363	2.00	1.92	
19 2-Methylbutane	43	3.987	3.990	-0.003	85	109370	2.00	1.80	
20 Trichlorofluoromethane	101	4.171	4.173	-0.002	99	531022	2.00	1.93	
21 Acrolein	56	4.181	4.186	-0.005	97	35585	2.00	1.98	
22 Acetonitrile	40	4.241	4.243	-0.002	99	31720	2.00	1.82	
23 Acetone	58	4.278	4.283	-0.005	98	147307	5.99	5.73	
24 Isopropyl alcohol	45	4.354	4.361	-0.007	95	396373	5.99	5.80	
25 Pentane	72	4.359	4.362	-0.003	96	28100	2.00	1.94	
26 Ethyl ether	31	4.505	4.510	-0.005	82	87130	2.00	1.96	
27 1,1-Dichloroethene	96	4.785	4.790	-0.005	100	150972	2.00	1.84	
29 Acrylonitrile	53	4.888	4.891	-0.003	93	63707	2.00	1.83	
28 2-Methyl-2-propanol	59	4.882	4.892	-0.010	93	221435	2.00	1.98	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.950	-0.003	96	344561	2.00	1.94	
31 Methylene Chloride	84	5.114	5.112	0.002	79	158716	2.00	1.88	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.125	5.126	-0.001	87	132672	2.00	1.94	
33 Carbon disulfide	76	5.254	5.255	-0.001	98	504376	2.00	1.99	
34 trans-1,2-Dichloroethene	96	5.880	5.877	0.003	96	177199	2.00	1.98	
35 2-Methylpentane	43	5.896	5.895	0.001	85	211749	2.00	1.92	
36 Methyl tert-butyl ether	73	6.004	6.013	-0.009	93	524448	2.00	2.03	
37 1,1-Dichloroethane	63	6.284	6.286	-0.002	99	293707	2.00	1.96	
38 Vinyl acetate	43	6.398	6.401	-0.003	99	276789	2.00	2.04	
39 2-Butanone (MEK)	72	6.834	6.843	-0.009	99	76143	2.00	1.94	
40 Hexane	56	6.851	6.852	-0.001	84	100815	2.00	1.91	
41 Isopropyl ether	45	7.018	7.025	-0.007	90	331632	2.00	2.05	
42 cis-1,2-Dichloroethene	96	7.250	7.249	0.001	92	180059	2.00	1.99	
43 Ethyl acetate	43	7.455	7.459	-0.004	98	219344	2.00	2.08	
44 Chloroform	83	7.589	7.592	-0.003	97	442178	2.00	1.97	
45 Tert-butyl ethyl ether	59	7.692	7.698	-0.006	91	417978	2.00	2.05	
46 Tetrahydrofuran	42	7.994	8.001	-0.007	76	101819	2.00	1.93	
47 1,1,1-Trichloroethane	97	8.603	8.603	0.000	94	503011	2.00	2.00	
48 1,2-Dichloroethane	62	8.722	8.721	0.001	98	288122	2.00	1.97	
50 Cyclohexane	69	9.202	9.202	0.000	94	83943	2.00	1.92	
54 Thiophene	84	9.207	9.207	0.000	63	312594	2.00	1.96	
51 Benzene	78	9.207	9.209	-0.002	95	508450	2.00	1.93	
49 n-Butanol	31	9.212	9.219	-0.007	59	29976	2.00	1.89	
52 Carbon tetrachloride	117	9.229	9.230	-0.001	97	508933	2.00	2.00	
53 2,3-Dimethylpentane	71	9.347	9.349	-0.002	85	117785	2.00	1.92	
55 Tert-amyl methyl ether	73	9.741	9.751	-0.010	96	504302	2.00	2.06	
56 Isooctane	57	10.048	10.049	-0.001	97	596371	2.00	1.95	
57 n-Heptane	71	10.480	10.480	0.000	79	181150	2.00	1.93	
58 1,2-Dichloropropane	63	10.550	10.551	-0.001	84	156418	2.00	1.98	
59 Trichloroethene	130	10.588	10.590	-0.002	93	224706	2.00	1.95	
60 Dibromomethane	93	10.679	10.677	0.002	96	224186	2.00	1.95	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	97	455767	2.00	2.04	
62 1,4-Dioxane	88	10.873	10.884	-0.011	79	75001	2.00	2.05	
63 Methyl methacrylate	41	10.981	10.985	-0.004	78	145099	2.00	2.06	
64 Methylcyclohexane	83	11.413	11.414	-0.001	90	389263	2.00	1.94	
65 4-Methyl-2-pentanone (MIBK	43	11.893	11.896	-0.004	90	215605	2.00	2.08	
66 cis-1,3-Dichloropropene	75	11.930	11.934	-0.004	90	321547	2.00	2.01	
67 trans-1,3-Dichloropropene	75	12.674	12.676	-0.002	93	315429	2.00	2.06	
68 Toluene	91	12.782	12.783	-0.001	94	580354	2.00	2.00	
69 1,1,2-Trichloroethane	83	12.874	12.875	-0.001	98	177178	2.00	1.99	
70 2-Methylthiophene	97	12.944	12.942	0.002	96	497602	2.00	2.06	
71 3-Methylthiophene	97	13.149	13.152	-0.003	98	484667	2.00	2.05	
72 2-Hexanone	58	13.300	13.303	-0.003	98	122120	2.00	2.16	
73 n-Octane	85	13.532	13.533	-0.001	78	201515	2.00	2.02	
74 Chlorodibromomethane	129	13.586	13.589	-0.003	97	401579	2.00	2.14	
75 Ethylene Dibromide	107	13.888	13.888	0.000	98	330814	2.00	2.08	
76 Tetrachloroethene	129	13.963	13.966	-0.003	94	222437	2.00	1.97	
77 Chlorobenzene	112	14.864	14.865	-0.001	91	448078	2.00	1.99	
78 2,3-Dimethylheptane	43	14.912	14.914	-0.002	76	303525	2.00	1.96	
79 Ethylbenzene	91	15.166	15.168	-0.002	98	801501	2.00	2.06	
80 2-Ethylthiophene	97	15.274	15.272	0.002	98	643748	2.00	2.11	
81 m-Xylene & p-Xylene	91	15.338	15.337	0.001	99	1264106	3.99	4.16	
83 Bromoform	173	15.775	15.776	-0.001	96	410628	2.00	2.25	
82 n-Nonane	57	15.791	15.790	0.001	77	269364	2.00	2.07	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.807	15.807	0.000	96	442128	2.00	2.26	
85 o-Xylene	91	15.867	15.867	0.000	98	660323	2.00	2.07	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	99	434322	2.00	2.14	
87 1,2,3-Trichloropropane	110	16.363	16.362	0.001	97	150393	2.00	2.07	
88 Isopropylbenzene	105	16.465	16.466	-0.001	97	872303	2.00	2.05	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	232788	2.00	2.13	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	96	204257	2.00	2.06	
91 4-Ethyltoluene	105	17.182	17.181	0.001	98	868312	2.00	2.19	
92 1,3,5-Trimethylbenzene	120	17.263	17.262	0.001	91	390767	2.00	2.11	
93 Alpha Methyl Styrene	118	17.511	17.511	0.000	86	329584	2.00	2.24	
94 n-Decane	57	17.598	17.599	-0.001	94	327049	2.00	2.15	
95 tert-Butylbenzene	119	17.716	17.721	-0.005	90	777364	2.00	2.13	
96 1,2,4-Trimethylbenzene	105	17.732	17.735	-0.003	96	741071	2.00	2.16	
97 sec-Butylbenzene	105	18.013	18.013	0.000	97	1018995	2.00	2.15	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	97	449629	2.00	2.16	
99 Benzyl chloride	91	18.105	18.104	0.001	97	631803	2.00	2.28	
100 1,4-Dichlorobenzene	146	18.110	18.112	-0.002	91	440987	2.00	2.18	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	868508	2.00	2.22	
102 1,2,3-Trimethylbenzene	105	18.239	18.240	-0.001	98	556747	2.00	2.15	
103 Butylcyclohexane	83	18.304	18.305	-0.001	95	538465	2.00	2.08	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	90	436557	2.00	2.15	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	93	624298	2.00	2.16	
106 Indene	116	18.633	18.632	0.001	93	469235	2.00	2.16	
107 n-Butylbenzene	91	18.649	18.652	-0.003	98	831941	2.00	2.31	
108 Undecane	57	19.000	19.000	0.000	86	342623	2.00	2.27	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	616989	2.00	2.24	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	94	196098	2.00	2.41	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	724740	2.00	2.31	
112 1,2,3,5-Tetramethylbenzene	119	19.496	19.498	-0.002	94	443730	2.00	2.31	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	96	573073	2.00	2.37	
114 Dodecane	57	20.078	20.078	0.000	92	179885	2.00	1.98	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	93	305159	2.00	2.24	
116 Naphthalene	128	20.353	20.357	-0.004	98	582551	2.00	2.32	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	99	266068	2.00	1.97	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	95	438302	2.00	2.26	
119 1,2,3-Trichlorobenzene	180	20.628	20.631	-0.003	93	222221	2.00	1.98	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	99	328115	6.24	6.36	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	99	277982	6.24	6.38	
A 124 Toluene Range	1	12.782	(12.752-12.812)		0	1388876	2.00	1.99	
A 125 C8 Range	1	13.525	(13.502-13.562)		0	1374344	2.00	1.97	
S 126 Xylenes, Total	100				0		5.99	6.23	
S 127 1,2-Dichloroethene, Total	1				0		3.99	3.98	

Reagents:

40L6DNP_00007	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

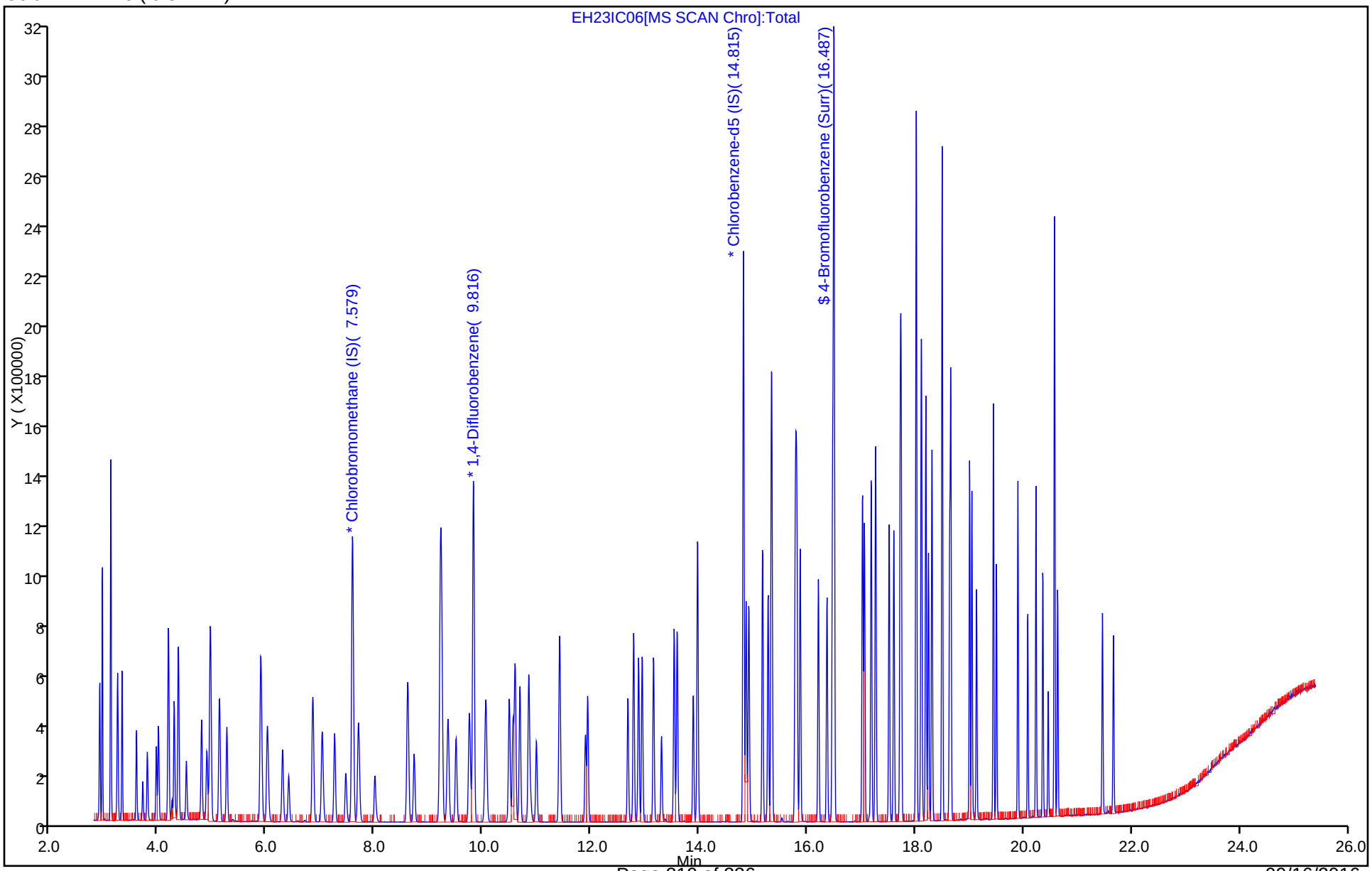
Report Date: 25-Aug-2016 12:59:44 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC06.D

Injection Date:	23-Aug-2016 20:46:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	ICIS L6			Worklist Smp#:	8
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

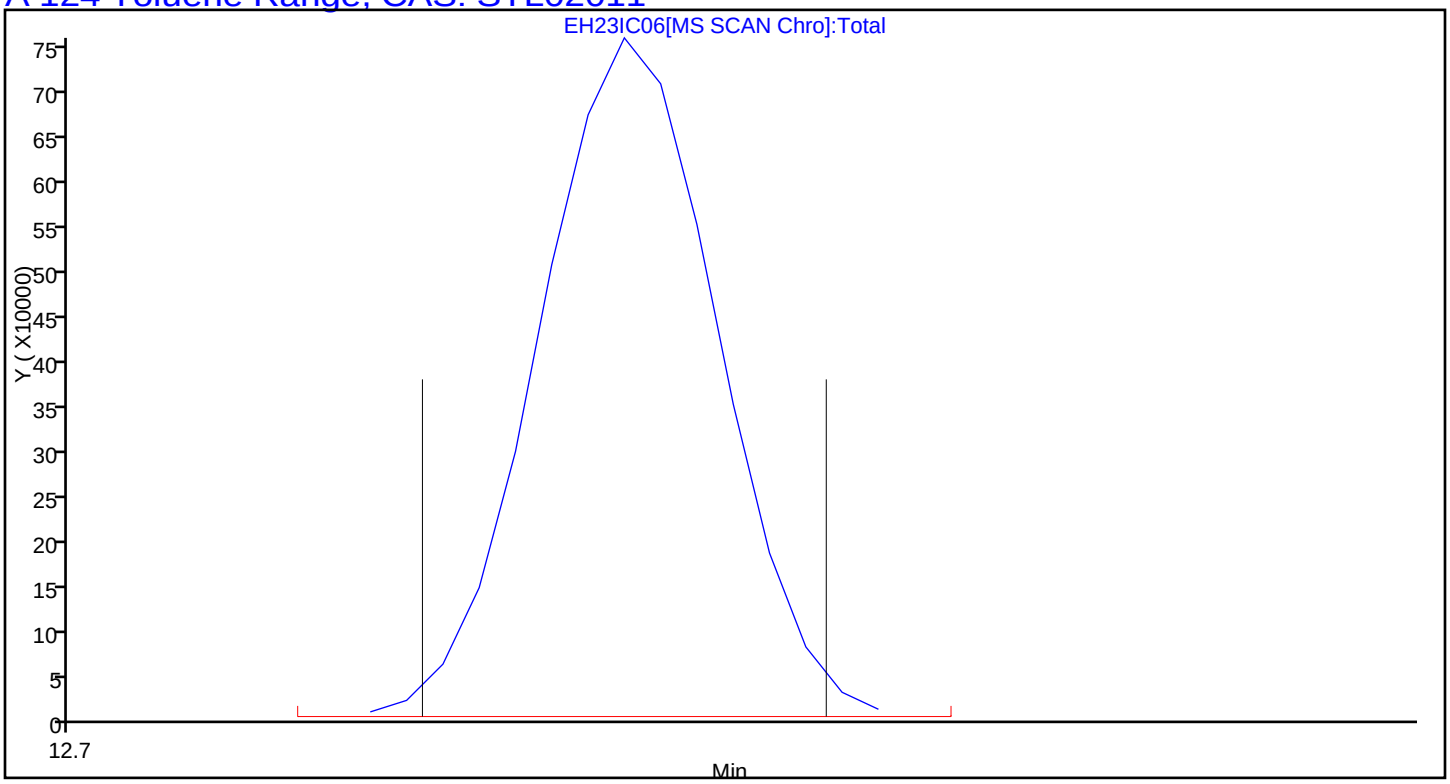


Report Date: 25-Aug-2016 12:59:44 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC06.D				
Injection Date:	23-Aug-2016 20:46:30	Instrument ID:	ME		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

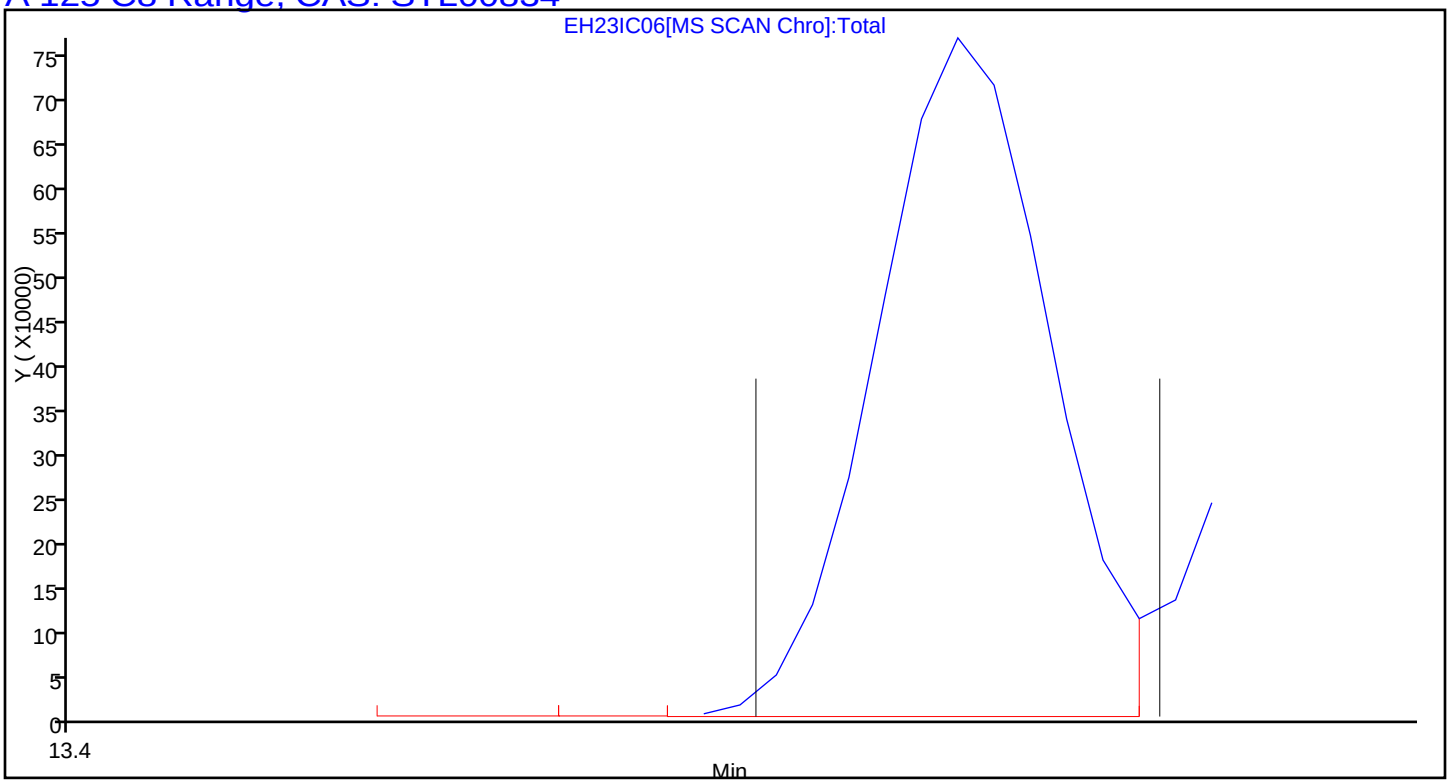


Report Date: 25-Aug-2016 12:59:44 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC06.D				
Injection Date:	23-Aug-2016 20:46:30	Instrument ID:	ME		
Lims ID:	ICIS L6				
Client ID:					
Operator ID:	403648	ALS Bottle#:	11	Worklist Smp#:	8
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC07.D
Lims ID: IC L7
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 23-Aug-2016 21:31:30 ALS Bottle#: 12 Worklist Smp#: 9
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052169
Misc. Info.: 140-0003339-009
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:48 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 13:32:29

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.579	7.576	0.003	80	266164	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.822	9.819	0.003	94	1239418	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1158632	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.492	16.492	0.000	90	941828	4.00	3.97	
6 Chlorodifluoromethane	67	2.898	2.900	-0.002	94	122753	4.00	3.89	
7 Propene	41	2.909	2.909	0.000	95	164168	4.00	3.78	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	1065086	4.00	3.81	
9 Chloromethane	52	3.098	3.102	-0.004	99	61884	4.00	3.44	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.110	-0.002	95	536115	4.00	3.60	
11 Acetaldehyde	44	3.232	3.232	0.000	91	298221	20.0	17.4	
12 Vinyl chloride	62	3.243	3.244	-0.001	99	280576	4.00	3.91	
13 Butane	43	3.313	3.317	-0.004	82	297557	4.00	3.80	
14 Butadiene	54	3.313	3.317	-0.004	77	174350	4.00	3.84	
15 Bromomethane	94	3.583	3.583	0.000	98	316269	4.00	3.89	
16 Chloroethane	64	3.701	3.700	0.001	99	144362	4.00	3.78	
17 Ethanol	31	3.788	3.786	0.002	99	344174	20.0	18.2	
18 Vinyl bromide	106	3.949	3.950	-0.001	98	304097	4.00	3.92	
19 2-Methylbutane	43	3.987	3.990	-0.003	86	218301	4.00	3.65	
20 Trichlorofluoromethane	101	4.176	4.173	0.003	99	1051244	4.00	3.88	
21 Acrolein	56	4.187	4.186	0.001	97	65676	4.00	3.71	
22 Acetonitrile	40	4.241	4.243	-0.002	98	62514	4.00	3.63	
23 Acetone	58	4.278	4.283	-0.005	98	262456	12.0	10.3	
24 Isopropyl alcohol	45	4.359	4.361	-0.002	80	752605	12.0	11.2	
25 Pentane	72	4.365	4.362	0.003	76	58677	4.00	4.11	
26 Ethyl ether	31	4.505	4.510	-0.005	82	163685	4.00	3.72	
27 1,1-Dichloroethene	96	4.785	4.790	-0.005	99	305462	4.00	3.76	
29 Acrylonitrile	53	4.893	4.891	0.002	95	118033	4.00	3.44	
28 2-Methyl-2-propanol	59	4.882	4.892	-0.010	93	426365	4.00	3.87	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.950	-0.003	96	671371	4.00	3.84	
31 Methylene Chloride	84	5.114	5.112	0.002	78	302156	4.00	3.62	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.125	5.126	-0.001	88	254777	4.00	3.77	
33 Carbon disulfide	76	5.254	5.255	-0.001	98	985401	4.00	3.93	
34 trans-1,2-Dichloroethene	96	5.880	5.877	0.003	95	344048	4.00	3.90	
35 2-Methylpentane	43	5.891	5.895	-0.004	85	407193	4.00	3.73	
36 Methyl tert-butyl ether	73	6.004	6.013	-0.009	93	944686	4.00	3.70	
37 1,1-Dichloroethane	63	6.290	6.286	0.004	99	565390	4.00	3.82	
38 Vinyl acetate	43	6.398	6.401	-0.003	99	516154	4.00	3.86	
39 2-Butanone (MEK)	72	6.834	6.843	-0.009	98	134374	4.00	3.46	
40 Hexane	56	6.851	6.852	-0.001	87	197120	4.00	3.79	
41 Isopropyl ether	45	7.018	7.025	-0.007	89	592024	4.00	3.70	
42 cis-1,2-Dichloroethene	96	7.250	7.249	0.001	91	348332	4.00	3.91	
43 Ethyl acetate	43	7.455	7.459	-0.004	98	385530	4.00	3.70	
44 Chloroform	83	7.595	7.592	0.003	95	845620	4.00	3.81	
45 Tert-butyl ethyl ether	59	7.692	7.698	-0.006	91	752929	4.00	3.75	
46 Tetrahydrofuran	42	7.988	8.001	-0.013	76	185923	4.00	3.57	
47 1,1,1-Trichloroethane	97	8.603	8.603	0.000	93	962972	4.00	3.87	
48 1,2-Dichloroethane	62	8.722	8.721	0.001	98	537769	4.00	3.82	
50 Cyclohexane	69	9.202	9.202	0.000	95	163307	4.00	3.89	
54 Thiophene	84	9.202	9.207	-0.005	65	597290	4.00	3.89	
51 Benzene	78	9.212	9.209	0.003	94	951416	4.00	3.75	
49 n-Butanol	31	9.207	9.219	-0.012	69	63903	4.00	4.19	
52 Carbon tetrachloride	117	9.229	9.230	-0.001	97	974957	4.00	3.98	
53 2,3-Dimethylpentane	71	9.347	9.349	-0.002	85	227817	4.00	3.85	
55 Tert-amyl methyl ether	73	9.741	9.751	-0.010	96	895818	4.00	3.82	
56 Isooctane	57	10.048	10.049	-0.001	97	1149309	4.00	3.89	
57 n-Heptane	71	10.480	10.480	0.000	78	350840	4.00	3.88	
58 1,2-Dichloropropane	63	10.550	10.551	-0.001	84	298142	4.00	3.93	
59 Trichloroethene	130	10.593	10.590	0.003	96	436756	4.00	3.93	
60 Dibromomethane	93	10.679	10.677	0.002	96	434049	4.00	3.92	
61 Dichlorobromomethane	83	10.841	10.843	-0.002	97	890002	4.00	4.13	
62 1,4-Dioxane	88	10.873	10.884	-0.011	80	140622	4.00	4.00	
63 Methyl methacrylate	41	10.981	10.985	-0.004	78	259190	4.00	3.83	
64 Methylcyclohexane	83	11.413	11.414	-0.001	91	753857	4.00	3.90	
65 4-Methyl-2-pentanone (MIBK	43	11.892	11.896	-0.004	91	390128	4.00	3.92	
66 cis-1,3-Dichloropropene	75	11.936	11.934	0.002	90	607644	4.00	3.95	
67 trans-1,3-Dichloropropene	75	12.674	12.676	-0.002	93	604586	4.00	4.13	
68 Toluene	91	12.782	12.783	-0.001	94	1094823	4.00	3.94	
69 1,1,2-Trichloroethane	83	12.874	12.875	-0.001	98	338754	4.00	3.97	
70 2-Methylthiophene	97	12.944	12.942	0.002	96	937085	4.00	4.06	
71 3-Methylthiophene	97	13.154	13.152	0.002	98	912530	4.00	4.03	
72 2-Hexanone	58	13.300	13.303	-0.003	98	224945	4.00	4.16	
73 n-Octane	85	13.532	13.533	-0.001	78	390371	4.00	4.09	
74 Chlorodibromomethane	129	13.591	13.589	0.002	96	794467	4.00	4.43	
75 Ethylene Dibromide	107	13.888	13.888	0.000	98	634861	4.00	4.17	
76 Tetrachloroethene	129	13.963	13.966	-0.003	95	431359	4.00	3.99	
77 Chlorobenzene	112	14.864	14.865	-0.001	91	854251	4.00	3.98	
78 2,3-Dimethylheptane	43	14.912	14.914	-0.002	76	583942	4.00	3.95	
79 Ethylbenzene	91	15.171	15.168	0.003	98	1482682	4.00	3.98	
80 2-Ethylthiophene	97	15.273	15.272	0.001	97	1189105	4.00	4.08	
81 m-Xylene & p-Xylene	91	15.338	15.337	0.001	99	2293730	8.00	7.89	
83 Bromoform	173	15.775	15.776	-0.001	96	827421	4.00	4.73	
82 n-Nonane	57	15.791	15.790	0.001	77	510303	4.00	4.09	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.807	15.807	0.000	96	839948	4.00	4.48	
85 o-Xylene	91	15.867	15.867	0.000	98	1211234	4.00	3.97	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	99	791030	4.00	4.07	
87 1,2,3-Trichloropropane	110	16.363	16.362	0.001	97	273751	4.00	3.94	
88 Isopropylbenzene	105	16.465	16.466	-0.001	97	1584733	4.00	3.89	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	424172	4.00	4.05	
90 2-Chlorotoluene	126	17.053	17.054	-0.001	96	382213	4.00	4.03	
91 4-Ethyltoluene	105	17.182	17.181	0.001	98	1559536	4.00	4.10	
92 1,3,5-Trimethylbenzene	120	17.263	17.262	0.001	92	712511	4.00	4.03	
93 Alpha Methyl Styrene	118	17.511	17.511	0.000	87	634614	4.00	4.51	
94 n-Decane	57	17.598	17.599	-0.001	94	600636	4.00	4.13	
95 tert-Butylbenzene	119	17.722	17.721	0.001	90	1380562	4.00	3.96	
96 1,2,4-Trimethylbenzene	105	17.738	17.735	0.003	96	1326106	4.00	4.05	
97 sec-Butylbenzene	105	18.013	18.013	0.000	97	1807431	4.00	3.99	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	98	832738	4.00	4.19	
99 Benzyl chloride	91	18.104	18.104	0.000	97	1193451	4.00	4.51	
100 1,4-Dichlorobenzene	146	18.115	18.112	0.003	92	824733	4.00	4.27	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	1535240	4.00	4.10	
102 1,2,3-Trimethylbenzene	105	18.239	18.240	-0.001	98	999985	4.00	4.04	
103 Butylcyclohexane	83	18.304	18.305	-0.001	95	989255	4.00	3.99	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	91	800951	4.00	4.13	
105 2,3-Dihydroindene	117	18.493	18.495	-0.002	93	1135862	4.00	4.11	
106 Indene	116	18.633	18.632	0.001	91	865612	4.00	4.17	
107 n-Butylbenzene	91	18.655	18.652	0.002	98	1449313	4.00	4.21	
108 Undecane	57	19.000	19.000	0.000	86	617284	4.00	4.27	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	1082391	4.00	4.10	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	94	368272	4.00	4.73	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	95	1284194	4.00	4.29	
112 1,2,3,5-Tetramethylbenzene	119	19.496	19.498	-0.002	94	793534	4.00	4.32	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	96	1046682	4.00	4.53	
114 Dodecane	57	20.078	20.078	0.000	92	427564	4.00	4.92	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	94	665315	4.00	5.12	
116 Naphthalene	128	20.358	20.357	0.001	98	1290008	4.00	5.37	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	99	663992	4.00	5.14	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	96	808993	4.00	4.36	
119 1,2,3-Trichlorobenzene	180	20.628	20.631	-0.003	94	556933	4.00	5.20	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	99	775394	12.5	15.7	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	99	646523	12.5	15.5	
A 124 Toluene Range	1	12.782	(12.752-12.812)		0	2611091	4.00	3.89	
A 125 C8 Range	1	13.525	(13.502-13.562)		0	2662409	4.00	3.97	
S 126 Xylenes, Total	100				0		12.0	11.9	
S 127 1,2-Dichloroethene, Total	1				0		8.00	7.81	

Reagents:

40L7DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

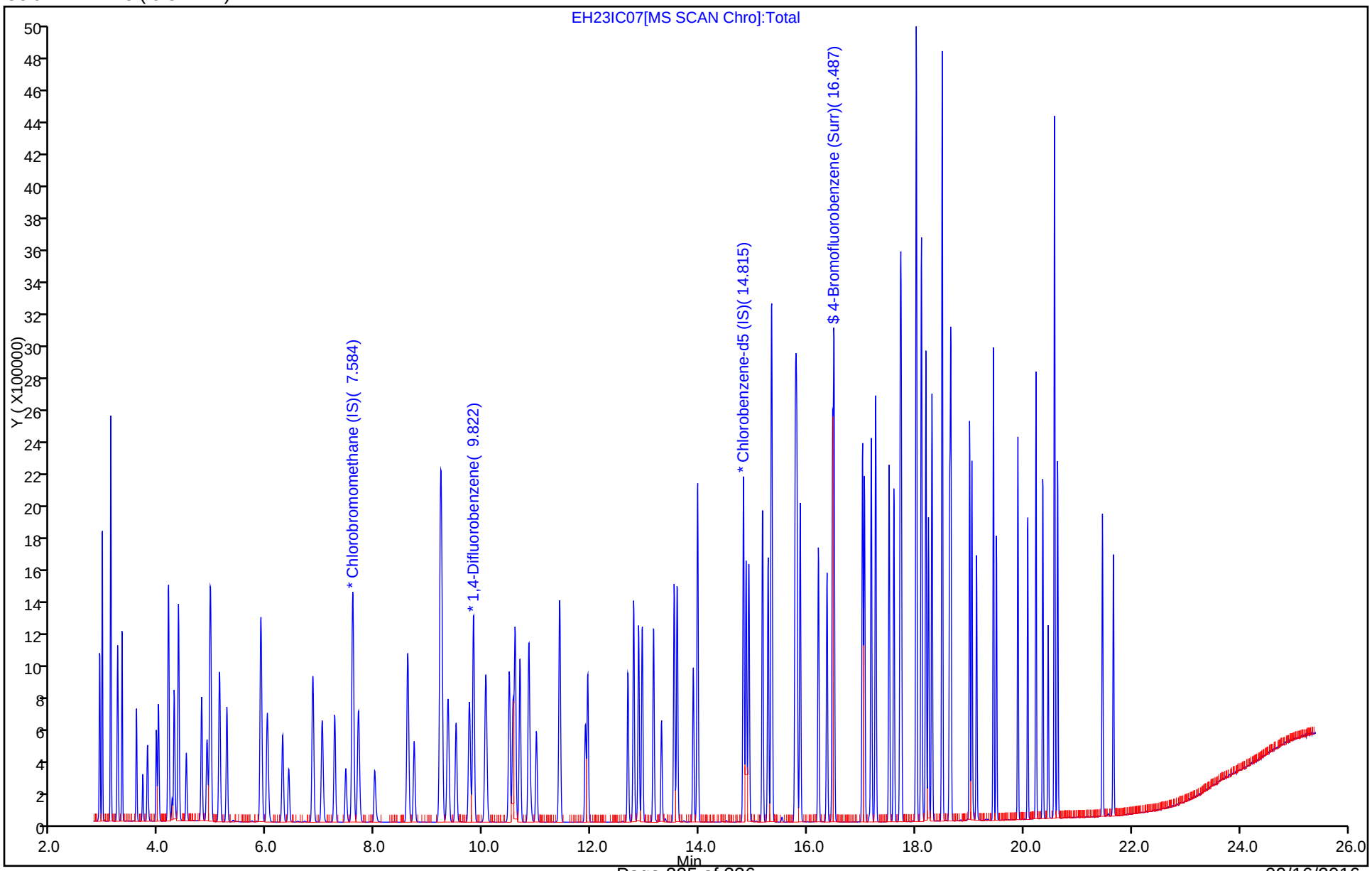
Report Date: 25-Aug-2016 12:59:49 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC07.D

Injection Date:	23-Aug-2016 21:31:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L7			Worklist Smp#:	9
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

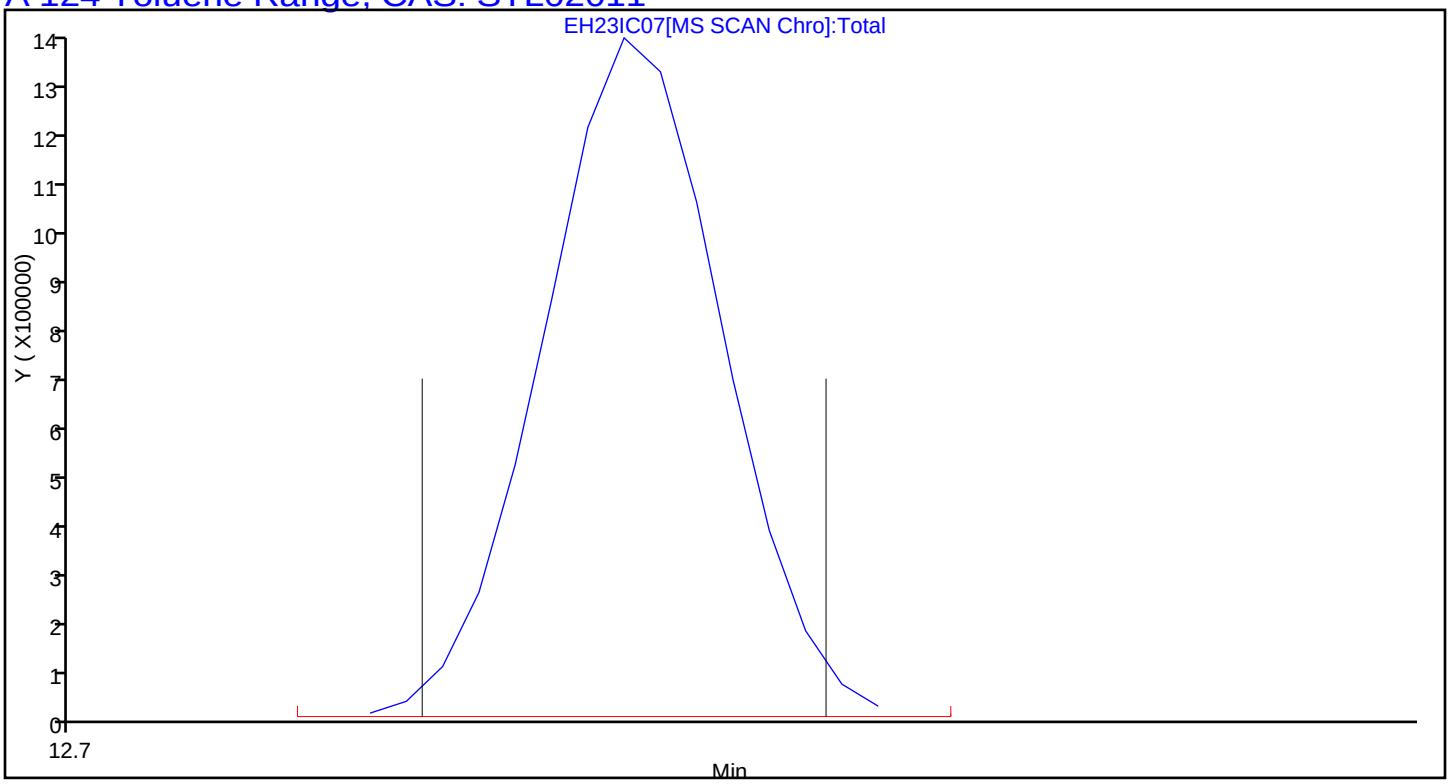


Report Date: 25-Aug-2016 12:59:49 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC07.D				
Injection Date:	23-Aug-2016 21:31:30	Instrument ID:	ME		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

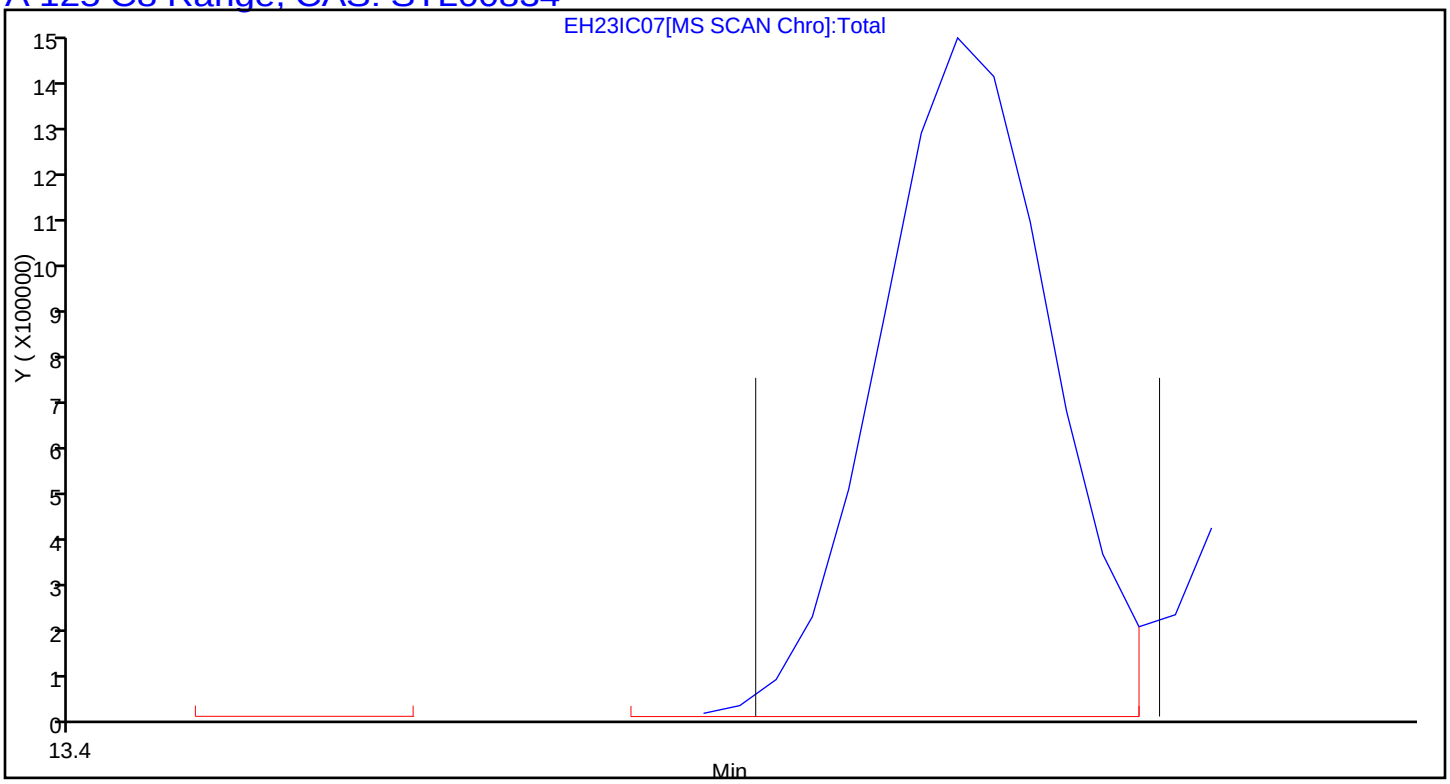


Report Date: 25-Aug-2016 12:59:49 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC07.D				
Injection Date:	23-Aug-2016 21:31:30	Instrument ID:	ME		
Lims ID:	IC L7				
Client ID:					
Operator ID:	403648	ALS Bottle#:	12	Worklist Smp#:	9
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC08.D
Lims ID: IC L8
Client ID:
Sample Type: IC Calib Level: 8
Inject. Date: 23-Aug-2016 22:17:30 ALS Bottle#: 13 Worklist Smp#: 10
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052168
Misc. Info.: 140-0003339-010
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:52 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 13:32:41

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.584	7.576	0.008	74	259188	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.822	9.819	0.003	94	1177462	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	88	1153463	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.492	16.492	0.000	90	958423	4.00	4.06	
6 Chlorodifluoromethane	67	2.898	2.900	-0.002	95	242433	8.00	7.88	
7 Propene	41	2.909	2.909	0.000	95	334314	8.00	7.91	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	98	2073013	8.00	7.61	
9 Chloromethane	52	3.103	3.102	0.001	99	122595	8.00	7.01	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.109	3.110	-0.001	94	1128953	8.00	7.79	
11 Acetaldehyde	44	3.233	3.232	0.001	92	603191	40.0	36.2	
12 Vinyl chloride	62	3.243	3.244	-0.001	98	570655	8.00	8.17	
13 Butane	43	3.319	3.317	0.002	81	603481	8.00	7.92	
14 Butadiene	54	3.319	3.317	0.002	78	358281	8.00	8.10	
15 Bromomethane	94	3.583	3.583	0.000	98	637838	8.00	8.07	
16 Chloroethane	64	3.702	3.700	0.002	98	294933	8.00	7.93	
17 Ethanol	31	3.793	3.786	0.007	99	682822	40.0	37.2	
18 Vinyl bromide	106	3.955	3.950	0.005	98	616492	8.00	8.16	
19 2-Methylbutane	43	3.993	3.990	0.003	85	440024	8.00	7.56	
20 Trichlorofluoromethane	101	4.176	4.173	0.003	99	2071990	8.00	7.85	
21 Acrolein	56	4.187	4.186	0.001	95	131570	8.00	7.63	
22 Acetonitrile	40	4.246	4.243	0.003	98	127213	8.00	7.58	
23 Acetone	58	4.284	4.283	0.001	98	520254	24.0	21.0	
24 Isopropyl alcohol	45	4.365	4.361	0.004	94	1499717	24.0	22.8	
25 Pentane	72	4.365	4.362	0.003	96	116174	8.00	8.36	
26 Ethyl ether	31	4.505	4.510	-0.005	83	335199	8.00	7.83	
27 1,1-Dichloroethene	96	4.791	4.790	0.001	99	618548	8.00	7.83	
29 Acrylonitrile	53	4.893	4.891	0.002	50	246559	8.00	7.38	
28 2-Methyl-2-propanol	59	4.893	4.892	0.001	92	876118	8.00	8.16	
30 1,1,2-Trichloro-1,2,2-trif	101	4.953	4.950	0.003	96	1369350	8.00	8.04	
31 Methylene Chloride	84	5.114	5.112	0.002	78	606626	8.00	7.46	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.131	5.126	0.005	87	512353	8.00	7.78	
33 Carbon disulfide	76	5.260	5.255	0.005	98	1962117	8.00	8.04	
34 trans-1,2-Dichloroethene	96	5.880	5.877	0.003	95	697415	8.00	8.12	
35 2-Methylpentane	43	5.896	5.895	0.001	85	827410	8.00	7.79	
36 Methyl tert-butyl ether	73	6.004	6.013	-0.009	93	1902290	8.00	7.66	
37 1,1-Dichloroethane	63	6.290	6.286	0.004	99	1131279	8.00	7.85	
38 Vinyl acetate	43	6.403	6.401	0.002	98	1075172	8.00	8.26	
39 2-Butanone (MEK)	72	6.840	6.843	-0.003	99	272986	8.00	7.23	
40 Hexane	56	6.851	6.852	-0.001	84	395291	8.00	7.81	
41 Isopropyl ether	45	7.023	7.025	-0.002	89	1204622	8.00	7.73	
42 cis-1,2-Dichloroethene	96	7.255	7.249	0.006	91	714434	8.00	8.24	
43 Ethyl acetate	43	7.460	7.459	0.001	97	797761	8.00	7.87	
44 Chloroform	83	7.600	7.592	0.008	96	1688433	8.00	7.81	
45 Tert-butyl ethyl ether	59	7.692	7.698	-0.006	91	1536459	8.00	7.85	
46 Tetrahydrofuran	42	7.989	8.001	-0.012	76	381534	8.00	7.52	
47 1,1,1-Trichloroethane	97	8.609	8.603	0.006	94	1931274	8.00	7.97	
48 1,2-Dichloroethane	62	8.727	8.721	0.006	99	1083476	8.00	8.11	
50 Cyclohexane	69	9.202	9.202	0.000	96	324420	8.00	8.13	
54 Thiophene	84	9.207	9.207	0.000	67	1200122	8.00	8.23	
51 Benzene	78	9.213	9.209	0.004	95	1895126	8.00	7.85	
49 n-Butanol	31	9.213	9.219	-0.006	79	136710	8.00	9.44	
52 Carbon tetrachloride	117	9.234	9.230	0.004	97	1936171	8.00	8.31	
53 2,3-Dimethylpentane	71	9.353	9.349	0.004	85	461939	8.00	8.22	
55 Tert-amyl methyl ether	73	9.747	9.751	-0.004	96	1820156	8.00	7.80	
56 Isooctane	57	10.049	10.049	-0.001	98	2286361	8.00	8.15	
57 n-Heptane	71	10.485	10.480	0.005	78	708768	8.00	8.26	
58 1,2-Dichloropropane	63	10.555	10.551	0.004	84	594381	8.00	8.24	
59 Trichloroethene	130	10.593	10.590	0.003	95	875136	8.00	8.30	
60 Dibromomethane	93	10.679	10.677	0.002	96	885348	8.00	8.41	
61 Dichlorobromomethane	83	10.847	10.843	0.004	98	1789431	8.00	8.74	
62 1,4-Dioxane	88	10.879	10.884	-0.005	83	278394	8.00	8.33	
63 Methyl methacrylate	41	10.987	10.985	0.002	83	543935	8.00	8.46	
64 Methylcyclohexane	83	11.418	11.414	0.004	90	1506790	8.00	8.19	
65 4-Methyl-2-pentanone (MIBK	43	11.893	11.896	-0.003	91	772677	8.00	8.17	
66 cis-1,3-Dichloropropene	75	11.936	11.934	0.002	90	1257896	8.00	8.62	
67 trans-1,3-Dichloropropene	75	12.680	12.676	0.004	93	1241706	8.00	8.51	
68 Toluene	91	12.788	12.783	0.005	94	2182437	8.00	7.89	
69 1,1,2-Trichloroethane	83	12.880	12.875	0.005	98	682266	8.00	8.03	
70 2-Methylthiophene	97	12.944	12.942	0.002	96	1879129	8.00	8.17	
71 3-Methylthiophene	97	13.155	13.152	0.003	98	1825649	8.00	8.10	
72 2-Hexanone	58	13.300	13.303	-0.003	98	470040	8.00	8.73	
73 n-Octane	85	13.537	13.533	0.004	77	788319	8.00	8.31	
74 Chlorodibromomethane	129	13.591	13.589	0.002	97	1614046	8.00	9.03	
75 Ethylene Dibromide	107	13.888	13.888	0.000	99	1295383	8.00	8.54	
76 Tetrachloroethene	129	13.969	13.966	0.003	96	861861	8.00	8.01	
77 Chlorobenzene	112	14.869	14.865	0.004	91	1705133	8.00	7.97	
78 2,3-Dimethylheptane	43	14.918	14.914	0.004	75	1172837	8.00	7.97	
79 Ethylbenzene	91	15.171	15.168	0.003	98	2927336	8.00	7.89	
80 2-Ethylthiophene	97	15.274	15.272	0.002	97	2380715	8.00	8.20	
81 m-Xylene & p-Xylene	91	15.338	15.337	0.001	98	4453513	16.0	15.4	
83 Bromoform	173	15.775	15.776	-0.001	96	1696654	8.00	9.75	
82 n-Nonane	57	15.791	15.790	0.001	77	1018016	8.00	8.20	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.808	15.807	0.001	96	1706172	8.00	9.15	
85 o-Xylene	91	15.867	15.867	0.000	98	2413900	8.00	7.94	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.202	-0.001	98	1600723	8.00	8.28	
87 1,2,3-Trichloropropane	110	16.363	16.362	0.001	97	557217	8.00	8.05	
88 Isopropylbenzene	105	16.465	16.466	-0.001	98	3141082	8.00	7.75	
89 N-Propylbenzene	120	17.021	17.021	0.000	99	867100	8.00	8.32	
90 2-Chlorotoluene	126	17.059	17.054	0.005	96	771336	8.00	8.17	
91 4-Ethyltoluene	105	17.183	17.181	0.002	97	3098109	8.00	8.19	
92 1,3,5-Trimethylbenzene	120	17.264	17.262	0.002	92	1439108	8.00	8.17	
93 Alpha Methyl Styrene	118	17.512	17.511	0.001	86	1312588	8.00	9.37	
94 n-Decane	57	17.603	17.599	0.004	94	1200057	8.00	8.29	
95 tert-Butylbenzene	119	17.722	17.721	0.001	91	2722919	8.00	7.84	
96 1,2,4-Trimethylbenzene	105	17.738	17.735	0.003	96	2605971	8.00	7.99	
97 sec-Butylbenzene	105	18.013	18.013	0.000	97	3513808	8.00	7.79	
98 1,3-Dichlorobenzene	146	18.018	18.019	-0.001	98	1698531	8.00	8.58	
99 Benzyl chloride	91	18.105	18.104	0.001	97	2467506	8.00	9.37	
100 1,4-Dichlorobenzene	146	18.116	18.112	0.004	93	1686002	8.00	8.76	
101 4-Isopropyltoluene	119	18.191	18.191	0.000	96	2988630	8.00	8.02	
102 1,2,3-Trimethylbenzene	105	18.240	18.240	0.000	98	1975362	8.00	8.02	
103 Butylcyclohexane	83	18.304	18.305	-0.001	95	1929931	8.00	7.82	
104 1,2-Dichlorobenzene	146	18.493	18.493	0.000	90	1607098	8.00	8.32	
105 2,3-Dihydroindene	117	18.498	18.495	0.003	94	2244014	8.00	8.16	
106 Indene	116	18.633	18.632	0.001	91	1762740	8.00	8.53	
107 n-Butylbenzene	91	18.655	18.652	0.003	99	2814718	8.00	8.22	
108 Undecane	57	19.000	19.000	0.000	86	1219733	8.00	8.48	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.043	0.000	97	2138720	8.00	8.15	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.130	-0.001	95	756511	8.00	9.76	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.442	0.000	96	2468612	8.00	8.28	
112 1,2,3,5-Tetramethylbenzene	119	19.501	19.498	0.003	94	1531519	8.00	8.38	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.895	0.000	97	2005252	8.00	8.71	
114 Dodecane	57	20.078	20.078	0.000	91	835790	8.00	9.67	
115 1,2,4-Trichlorobenzene	180	20.229	20.230	-0.001	94	1341362	8.00	10.4	
116 Naphthalene	128	20.359	20.357	0.002	98	2585522	8.00	10.8	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	98	1372667	8.00	10.7	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	96	1521596	8.00	8.23	
119 1,2,3-Trichlorobenzene	180	20.634	20.631	0.003	93	1137089	8.00	10.7	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	99	1508159	25.0	30.7	
121 1-Methylnaphthalene	142	21.664	21.664	0.000	99	1240578	25.0	29.9	
A 124 Toluene Range	1	12.788	(12.758-12.818)		0	5241600	8.00	8.23	
A 125 C8 Range	1	13.531	(13.507-13.567)		0	5417670	8.00	8.49	
S 126 Xylenes, Total	100				0		24.0	23.3	
S 127 1,2-Dichloroethene, Total	1				0		16.0	16.4	

Reagents:

40L8DNP_00006	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

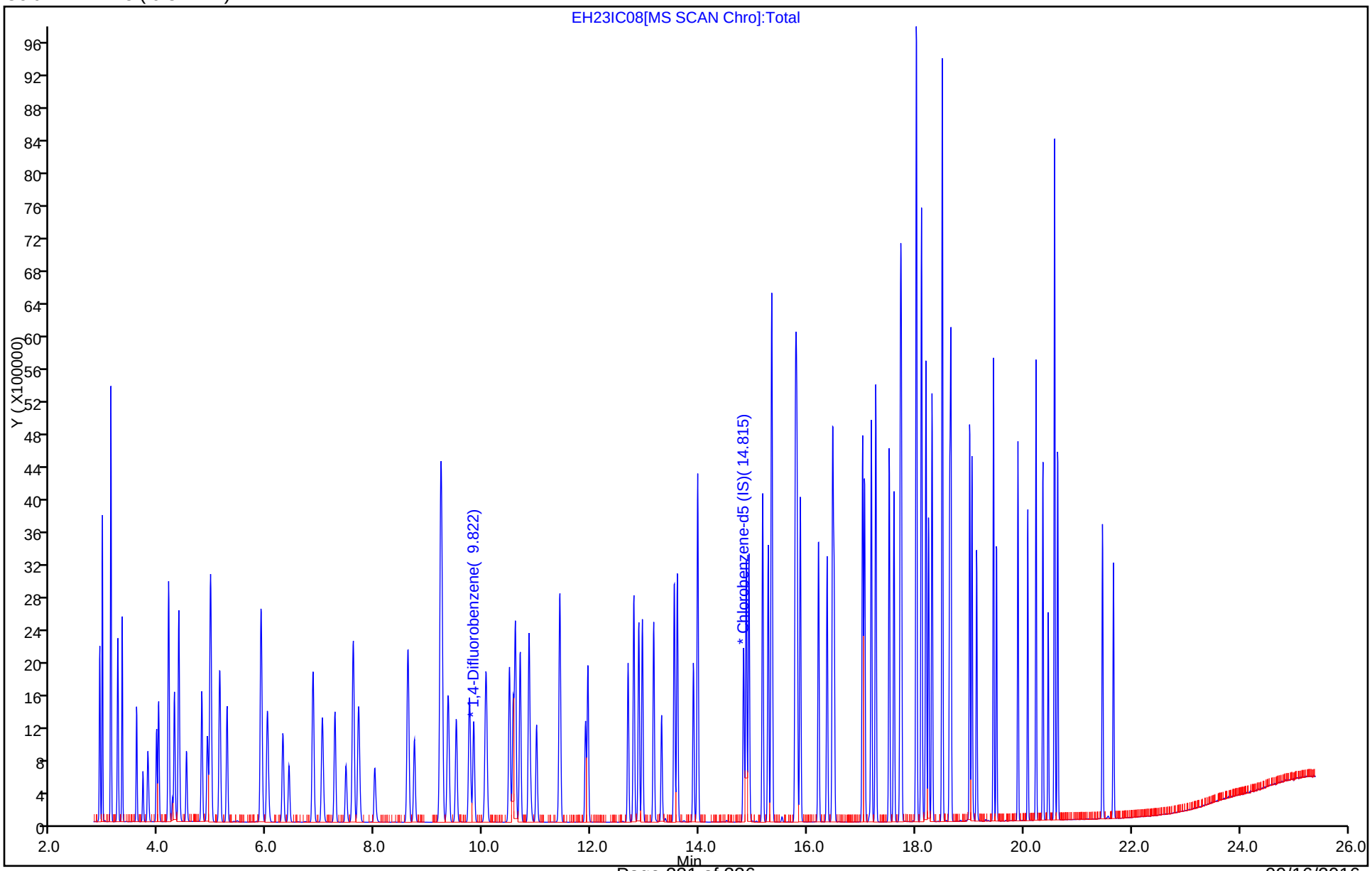
Report Date: 25-Aug-2016 12:59:53 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC08.D

Injection Date:	23-Aug-2016 22:17:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L8			Worklist Smp#:	10
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

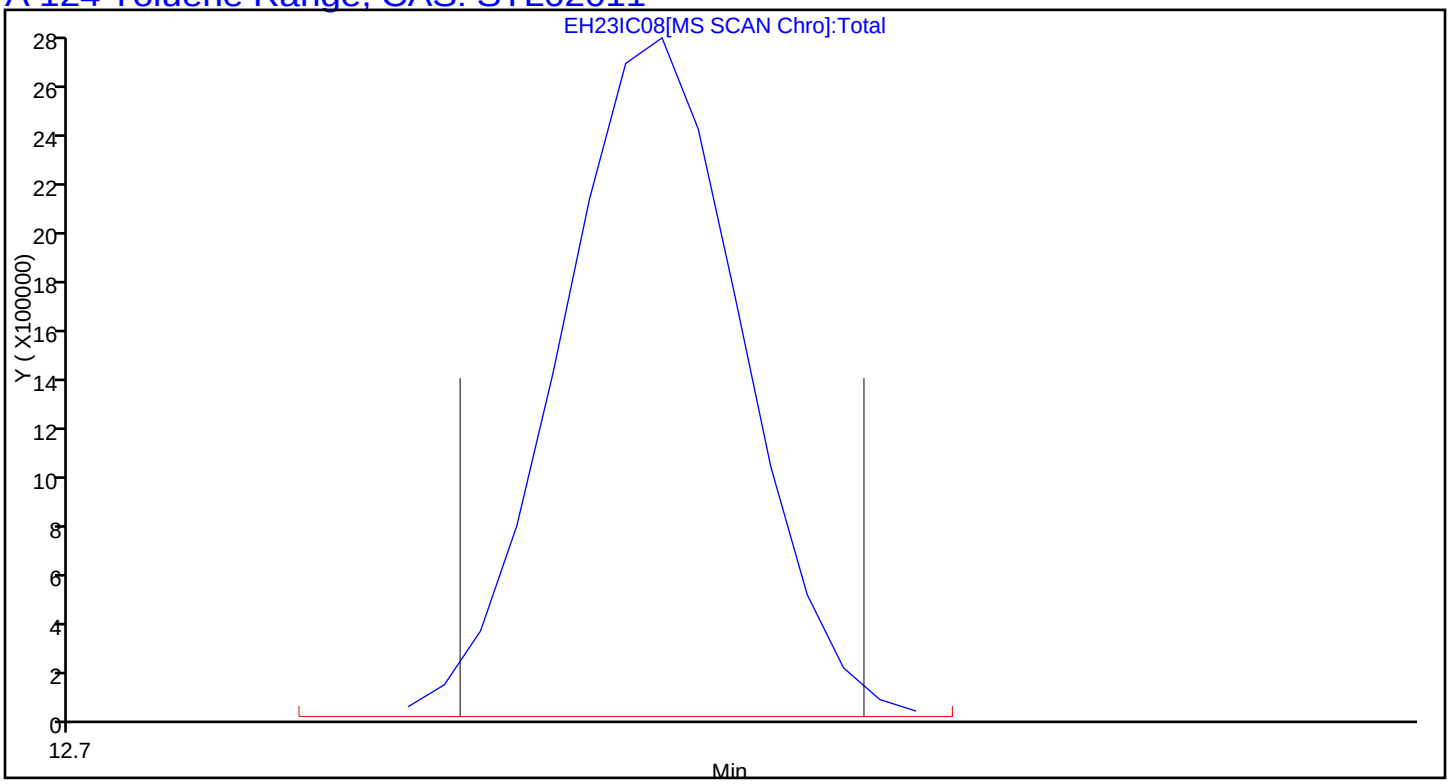


Report Date: 25-Aug-2016 12:59:54 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC08.D				
Injection Date:	23-Aug-2016 22:17:30	Instrument ID:	ME		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

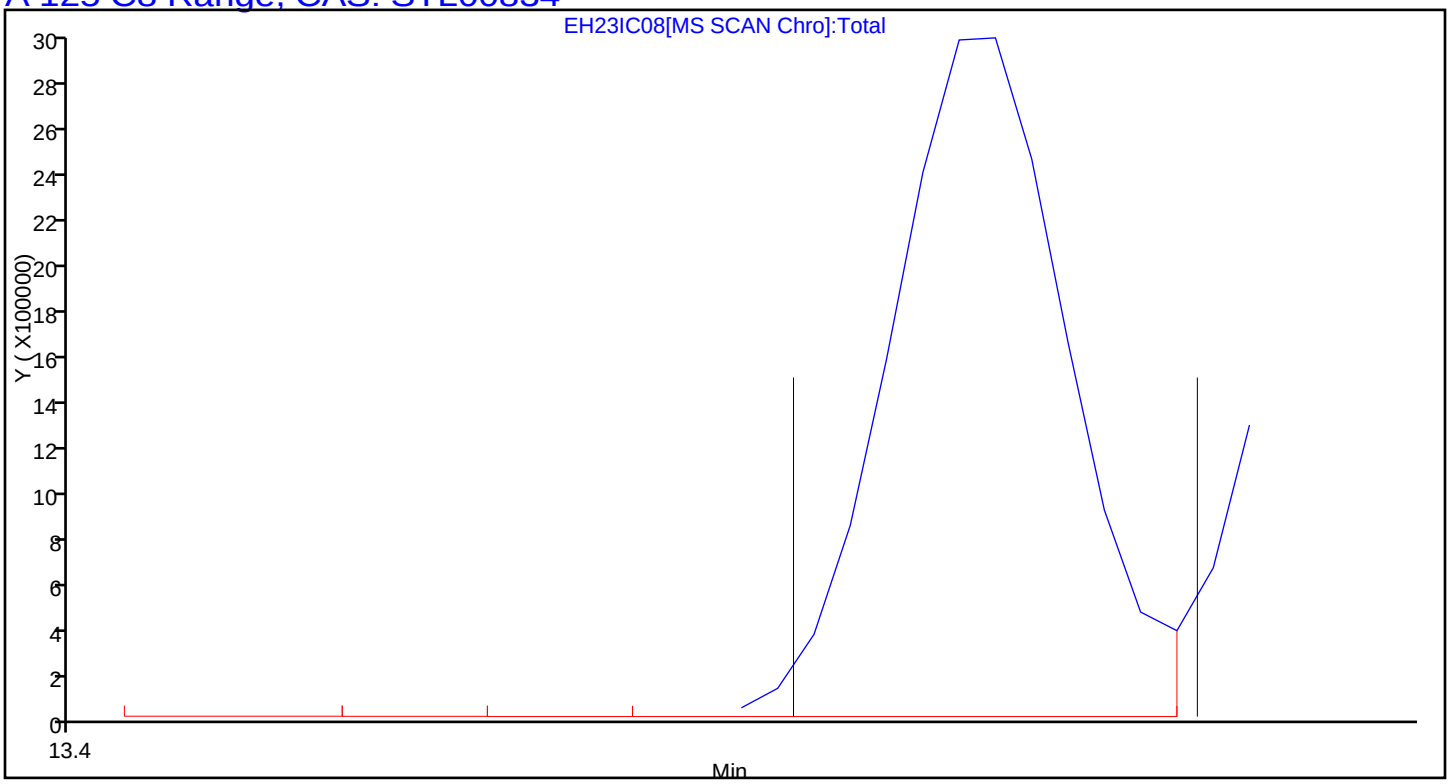


Report Date: 25-Aug-2016 12:59:54 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC08.D				
Injection Date:	23-Aug-2016 22:17:30	Instrument ID:	ME		
Lims ID:	IC L8				
Client ID:					
Operator ID:	403648	ALS Bottle#:	13	Worklist Smp#:	10
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D
Lims ID: IC L9
Client ID:
Sample Type: IC Calib Level: 9
Inject. Date: 23-Aug-2016 23:02:30 ALS Bottle#: 14 Worklist Smp#: 11
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052167
Misc. Info.: 140-0003339-011
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 12:59:57 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK026

First Level Reviewer: barlozhetskayaa Date: 24-Aug-2016 13:36:57

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.589	7.576	0.013	82	268767	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.827	9.819	0.008	94	1261491	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.821	14.816	0.004	88	1224910	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.498	16.492	0.006	95	992236	4.00	3.96	
6 Chlorodifluoromethane	67	2.898	2.900	-0.002	94	469686	16.0	14.7	
7 Propene	41	2.909	2.909	0.000	95	649043	16.0	14.8	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	98	3746080	16.0	13.3	
9 Chloromethane	52	3.103	3.102	0.001	99	240332	16.0	13.2	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.114	3.110	0.004	92	2114275	16.0	14.1	
11 Acetaldehyde	44	3.238	3.232	0.006	93	1228060	80.0	71.0	
12 Vinyl chloride	62	3.248	3.244	0.004	98	1097667	16.0	15.2	
13 Butane	43	3.319	3.317	0.002	81	1194649	16.0	15.1	
14 Butadiene	54	3.319	3.317	0.002	78	711110	16.0	15.5	
15 Bromomethane	94	3.588	3.583	0.005	98	1260571	16.0	15.4	
16 Chloroethane	64	3.707	3.700	0.007	99	584496	16.0	15.2	
17 Ethanol	31	3.804	3.786	0.018	99	1350335	80.0	70.9	
18 Vinyl bromide	106	3.955	3.950	0.005	98	1222946	16.0	15.6	
19 2-Methylbutane	43	3.993	3.990	0.003	86	880719	16.0	14.6	
20 Trichlorofluoromethane	101	4.181	4.173	0.008	99	3859984	16.0	14.1	
21 Acrolein	56	4.192	4.186	0.006	96	291990	16.0	16.3	
22 Acetonitrile	40	4.251	4.243	0.008	98	300347	16.0	17.3	
23 Acetone	58	4.289	4.283	0.006	97	1102505	48.0	43.0	
24 Isopropyl alcohol	45	4.381	4.361	0.020	97	2961253	48.0	43.5	
25 Pentane	72	4.365	4.362	0.003	96	236638	16.0	16.4	
26 Ethyl ether	31	4.510	4.510	0.000	82	715101	16.0	16.1	
27 1,1-Dichloroethene	96	4.796	4.790	0.006	98	1230023	16.0	15.0	
29 Acrylonitrile	53	4.904	4.891	0.013	92	523026	16.0	15.1	
28 2-Methyl-2-propanol	59	4.909	4.892	0.017	92	1751968	16.0	15.7	
30 1,1,2-Trichloro-1,2,2-trif	101	4.958	4.950	0.008	96	2683210	16.0	15.2	
31 Methylene Chloride	84	5.120	5.112	0.008	79	1186247	16.0	14.1	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.136	5.126	0.010	88	1010942	16.0	14.8	
33 Carbon disulfide	76	5.260	5.255	0.005	98	3768546	16.0	14.9	
34 trans-1,2-Dichloroethene	96	5.885	5.877	0.008	94	1379488	16.0	15.5	
35 2-Methylpentane	43	5.902	5.895	0.007	85	1645031	16.0	14.9	
36 Methyl tert-butyl ether	73	6.009	6.013	-0.004	93	3992522	16.0	15.5	
37 1,1-Dichloroethane	63	6.295	6.286	0.009	99	2259461	16.0	15.1	
38 Vinyl acetate	43	6.408	6.401	0.007	98	2309147	16.0	17.1	
39 2-Butanone (MEK)	72	6.845	6.843	0.002	99	586143	16.0	15.0	
40 Hexane	56	6.856	6.852	0.004	84	791459	16.0	15.1	
41 Isopropyl ether	45	7.029	7.025	0.004	89	2587020	16.0	16.0	
42 cis-1,2-Dichloroethene	96	7.260	7.249	0.011	90	1441790	16.0	16.0	
43 Ethyl acetate	43	7.465	7.459	0.006	97	1754653	16.0	16.7	
44 Chloroform	83	7.606	7.592	0.014	97	3361601	16.0	15.0	
45 Tert-butyl ethyl ether	59	7.697	7.698	-0.001	91	3265007	16.0	16.1	
46 Tetrahydrofuran	42	7.994	8.001	-0.007	83	834578	16.0	15.9	
47 1,1,1-Trichloroethane	97	8.608	8.603	0.005	94	3823404	16.0	15.2	
48 1,2-Dichloroethane	62	8.733	8.721	0.012	98	2199272	16.0	15.4	
50 Cyclohexane	69	9.207	9.202	0.005	92	641188	16.0	15.0	
54 Thiophene	84	9.212	9.207	0.005	67	2360523	16.0	15.1	
51 Benzene	78	9.218	9.209	0.009	95	3761648	16.0	14.5	
49 n-Butanol	31	9.218	9.219	-0.001	68	276402	16.0	17.8	
52 Carbon tetrachloride	117	9.239	9.230	0.009	98	3741835	16.0	15.0	
53 2,3-Dimethylpentane	71	9.358	9.349	0.009	85	931179	16.0	15.5	
55 Tert-amyl methyl ether	73	9.752	9.751	0.001	97	3872410	16.0	15.6	
56 Isooctane	57	10.054	10.049	0.005	97	4543372	16.0	15.1	
57 n-Heptane	71	10.490	10.480	0.010	78	1436461	16.0	15.6	
58 1,2-Dichloropropane	63	10.561	10.551	0.010	85	1240155	16.0	16.1	
59 Trichloroethene	130	10.598	10.590	0.008	95	1779192	16.0	15.7	
60 Dibromomethane	93	10.690	10.677	0.013	95	1773527	16.0	15.7	
61 Dichlorobromomethane	83	10.852	10.843	0.009	98	3583453	16.0	16.3	
62 1,4-Dioxane	88	10.879	10.884	-0.005	81	569065	16.0	15.9	
63 Methyl methacrylate	41	10.992	10.985	0.007	78	1204588	16.0	17.5	
64 Methylcyclohexane	83	11.418	11.414	0.004	90	2986759	16.0	15.2	
65 4-Methyl-2-pentanone (MIBK	43	11.898	11.896	0.002	91	1647426	16.0	16.3	
66 cis-1,3-Dichloropropene	75	11.941	11.934	0.007	90	2563611	16.0	16.4	
67 trans-1,3-Dichloropropene	75	12.685	12.676	0.009	94	2606992	16.0	16.8	
68 Toluene	91	12.793	12.783	0.010	95	4426217	16.0	15.1	
69 1,1,2-Trichloroethane	83	12.885	12.875	0.010	98	1417572	16.0	15.7	
70 2-Methylthiophene	97	12.949	12.942	0.007	95	3827830	16.0	15.7	
71 3-Methylthiophene	97	13.160	13.152	0.008	97	3704338	16.0	15.5	
72 2-Hexanone	58	13.305	13.303	0.002	98	982468	16.0	17.2	
73 n-Octane	85	13.537	13.533	0.004	78	1590022	16.0	15.8	
74 Chlorodibromomethane	129	13.596	13.589	0.007	96	3262185	16.0	17.2	
75 Ethylene Dibromide	107	13.893	13.888	0.005	98	2692354	16.0	16.7	
76 Tetrachloroethene	129	13.974	13.966	0.008	95	1736176	16.0	15.2	
77 Chlorobenzene	112	14.869	14.865	0.004	90	3462502	16.0	15.2	
78 2,3-Dimethylheptane	43	14.918	14.914	0.004	75	2356966	16.0	15.1	
79 Ethylbenzene	91	15.176	15.168	0.008	97	5740123	16.0	14.6	
80 2-Ethylthiophene	97	15.279	15.272	0.007	97	4726350	16.0	15.3	
81 m-Xylene & p-Xylene	91	15.344	15.337	0.007	96	8445950	32.0	27.5	
83 Bromoform	173	15.780	15.776	0.004	97	3577134	16.0	19.4	
82 n-Nonane	57	15.797	15.790	0.007	77	2032588	16.0	15.4	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.813	15.807	0.006	96	3547238	16.0	17.9	
85 o-Xylene	91	15.872	15.867	0.005	99	4767807	16.0	14.8	
86 1,1,2,2-Tetrachloroethane	83	16.206	16.202	0.004	98	3306686	16.0	16.1	
87 1,2,3-Trichloropropane	110	16.368	16.362	0.006	96	1182507	16.0	16.1	
88 Isopropylbenzene	105	16.471	16.466	0.005	98	6134373	16.0	14.2	
89 N-Propylbenzene	120	17.026	17.021	0.005	97	1830699	16.0	16.5	
90 2-Chlorotoluene	126	17.058	17.054	0.004	96	1605221	16.0	16.0	
91 4-Ethyltoluene	105	17.188	17.181	0.007	96	6142846	16.0	15.3	
92 1,3,5-Trimethylbenzene	120	17.269	17.262	0.007	93	3013892	16.0	16.1	
93 Alpha Methyl Styrene	118	17.517	17.511	0.006	86	2792870	16.0	18.8	
94 n-Decane	57	17.603	17.599	0.004	93	2440593	16.0	15.9	
95 tert-Butylbenzene	119	17.727	17.721	0.006	94	5459193	16.0	14.8	
96 1,2,4-Trimethylbenzene	105	17.743	17.735	0.008	95	5205042	16.0	15.0	
97 sec-Butylbenzene	105	18.018	18.013	0.005	95	6710905	16.0	14.0	
98 1,3-Dichlorobenzene	146	18.024	18.019	0.005	97	3520402	16.0	16.7	
99 Benzyl chloride	91	18.110	18.104	0.006	98	5037033	16.0	18.0	
100 1,4-Dichlorobenzene	146	18.121	18.112	0.009	91	3523407	16.0	17.2	
101 4-Isopropyltoluene	119	18.196	18.191	0.005	94	5904118	16.0	14.9	
102 1,2,3-Trimethylbenzene	105	18.245	18.240	0.005	97	4048474	16.0	15.5	
103 Butylcyclohexane	83	18.309	18.305	0.004	95	3837052	16.0	14.6	
104 1,2-Dichlorobenzene	146	18.498	18.493	0.005	91	3343640	16.0	16.3	
105 2,3-Dihydroindene	117	18.504	18.495	0.009	94	4497011	16.0	15.4	
106 Indene	116	18.638	18.632	0.006	91	3680888	16.0	16.8	
107 n-Butylbenzene	91	18.654	18.652	0.002	98	5536359	16.0	15.2	
108 Undecane	57	19.005	19.000	0.005	86	2534545	16.0	16.6	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.048	19.043	0.005	97	4357916	16.0	15.6	
110 1,2-Dibromo-3-Chloropropan	157	19.134	19.130	0.004	96	1727184	16.0	21.0	
111 1,2,4,5-Tetramethylbenzene	119	19.447	19.442	0.005	97	4989637	16.0	15.8	
112 1,2,3,5-Tetramethylbenzene	119	19.501	19.498	0.003	95	3228944	16.0	16.6	
113 1,2,3,4-Tetramethylbenzene	119	19.900	19.895	0.005	97	4093587	16.0	16.8	
114 Dodecane	57	20.078	20.078	0.000	90	1858569	16.0	20.2	
115 1,2,4-Trichlorobenzene	180	20.234	20.230	0.004	94	2922266	16.0	21.3	
116 Naphthalene	128	20.358	20.357	0.001	97	5255646	16.0	20.7	
117 Benzo(b)thiophene	134	20.456	20.456	0.000	98	2930895	16.0	21.5	
118 Hexachlorobutadiene	225	20.574	20.574	0.000	96	3190142	16.0	16.2	
119 1,2,3-Trichlorobenzene	180	20.633	20.631	0.002	94	2375998	16.0	21.0	
120 2-Methylnaphthalene	142	21.459	21.459	0.000	99	1955688	50.0	37.5	
121 1-Methylnaphthalene	142	21.663	21.664	-0.001	99	1523739	50.0	34.6	
A 124 Toluene Range	1	12.793	(12.763-12.823)		0	10835824	16.0	15.9	
A 125 C8 Range	1	13.531	(13.507-13.567)		0	10797608	16.0	15.8	
S 126 Xylenes, Total	100				0		48.0	42.3	
S 127 1,2-Dichloroethene, Total	1				0		32.0	31.5	

Reagents:

40L9DNP_00008	Amount Added: 200.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

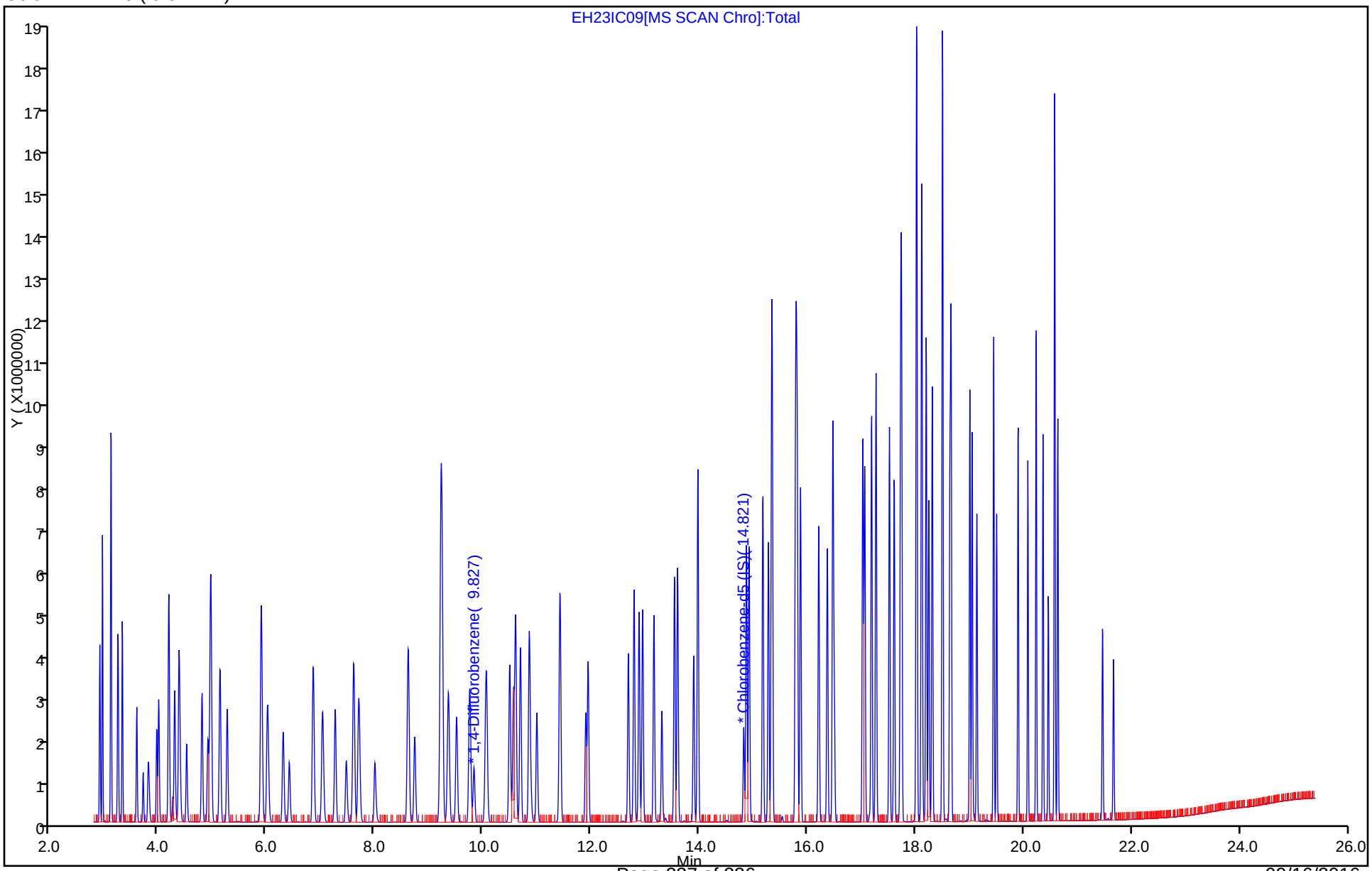
Report Date: 25-Aug-2016 12:59:57 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Injection Date:	23-Aug-2016 23:02:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	IC L9			Worklist Smp#:	11
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)

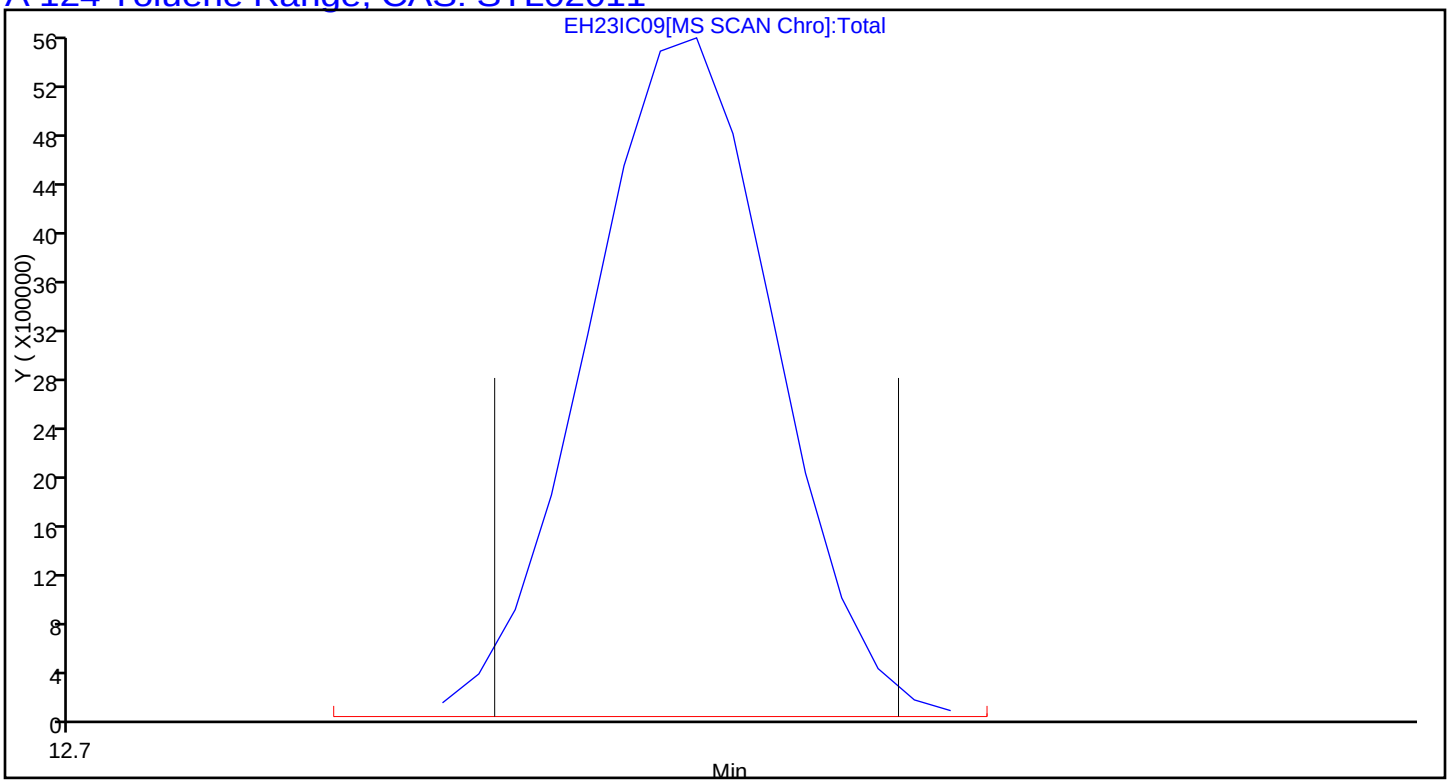


Report Date: 25-Aug-2016 12:59:57 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Injection Date:	23-Aug-2016 23:02:30	Instrument ID:	ME		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 124 Toluene Range, CAS: STL02011

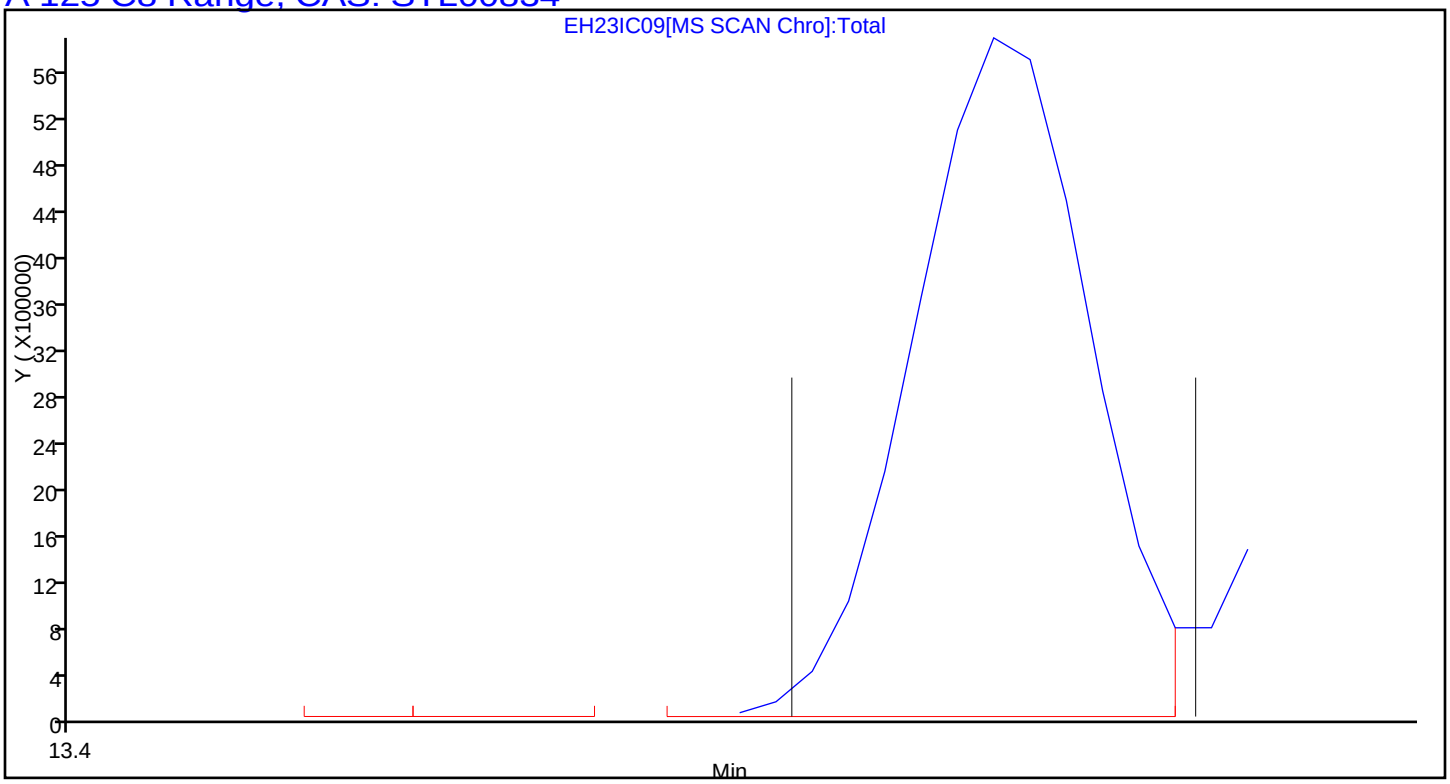


Report Date: 25-Aug-2016 12:59:57 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Injection Date:	23-Aug-2016 23:02:30	Instrument ID:	ME		
Lims ID:	IC L9				
Client ID:					
Operator ID:	403648	ALS Bottle#:	14	Worklist Smp#:	11
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		
Column:	RTX-5 (0.32 mm)	Detector	MS SCAN		

A 125 C8 Range, CAS: STL00834



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5046		2.13	2.00	6.3	35.0
Propene	Ave	0.6524	0.6817		2.09	2.00	4.5	35.0
Dichlorodifluoromethane	Ave	4.206	4.489		2.13	2.00	6.7	35.0
Chloromethane	Ave	0.2701	0.2490		1.84	2.00	-7.8	35.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.359		2.11	2.00	5.5	35.0
Acetaldehyde	Ave	0.2573	0.2265		8.80	10.0	-12.0	35.0
Vinyl chloride	Ave	1.078	1.157		2.15	2.00	7.3	35.0
1,3-Butadiene	Ave	0.6822	0.6973		2.04	2.00	2.2	35.0
Butane	Ave	1.176	1.230		2.09	2.00	4.6	35.0
Bromomethane	Ave	1.220	1.246		2.04	2.00	2.1	35.0
Chloroethane	Ave	0.5740	0.5737		2.00	2.00	-0.0	35.0
Ethanol	Ave	0.2836	0.2613		9.21	10.0	-7.9	35.0
Vinyl bromide	Ave	1.166	1.291		2.21	2.00	10.7	35.0
2-Methylbutane	Ave	0.8988	0.8896		1.98	2.00	-1.0	35.0
Trichlorofluoromethane	Ave	4.072	4.243		2.08	2.00	4.2	35.0
Acrolein	Ave	0.2661	0.2482		1.87	2.00	-6.7	35.0
Acetonitrile	Ave	0.2589	0.2415		1.87	2.00	-6.7	35.0
Acetone	Ave	0.3815	0.3226		5.07	6.00	-15.5	35.0
Isopropyl alcohol	Ave	1.014	0.9494		5.62	6.00	-6.3	35.0
Pentane	Ave	0.2144	0.2340		2.18	2.00	9.1	35.0
Ethyl ether	Ave	0.6609	0.6532		1.98	2.00	-1.2	35.0
1,1-Dichloroethene	Ave	1.220	1.204		1.97	2.00	-1.3	35.0
tert-Butyl alcohol	Ave	1.656	1.652		2.00	2.00	-0.2	35.0
Acrylonitrile	Ave	0.5155	0.4859		1.89	2.00	-5.7	35.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.596		1.97	2.00	-1.3	35.0
Methylene Chloride	Ave	1.255	1.205		1.92	2.00	-4.0	35.0
3-Chloropropene	Ave	1.016	0.9020		1.78	2.00	-11.2	35.0
Carbon disulfide	Ave	3.766	3.967		2.11	2.00	5.4	35.0
trans-1,2-Dichloroethene	Ave	1.326	1.345		2.03	2.00	1.4	35.0
2-Methylpentane	Ave	1.640	1.754		2.14	2.00	7.0	35.0
Methyl tert-butyl ether	Ave	3.835	3.629		1.89	2.00	-5.4	35.0
1,1-Dichloroethane	Ave	2.224	2.276		2.05	2.00	2.3	35.0
Vinyl acetate	Ave	2.009	1.795		1.79	2.00	-10.7	35.0
2-Butanone (MEK)	Ave	0.5829	0.4994		1.71	2.00	-14.3	35.0
Hexane	Ave	0.7813	0.7819		2.00	2.00	0.0	35.0
Isopropyl ether	Ave	2.404	2.149		1.79	2.00	-10.6	35.0
cis-1,2-Dichloroethene	Ave	1.339	1.403		2.10	2.00	4.8	35.0
Ethyl acetate	Ave	1.564	1.348		1.72	2.00	-13.8	35.0
Chloroform	Ave	3.335	3.413		2.05	2.00	2.4	35.0
Tert-butyl ethyl ether	Ave	3.019	3.074		2.04	2.00	1.8	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.7092		1.81	2.00	-9.5	35.0
1,1,1-Trichloroethane	Ave	3.737	3.887		2.08	2.00	4.0	35.0
1,2-Dichloroethane	Ave	0.4541	0.4612		2.03	2.00	1.6	35.0
Cyclohexane	Ave	0.1355	0.1371		2.02	2.00	1.1	35.0
1-Butanol	Ave	0.0492	0.0554		2.25	2.00	12.7	35.0
Benzene	Ave	0.8198	0.8478		2.07	2.00	3.4	35.0
Thiophene	Ave	0.4957	0.5108		2.06	2.00	3.1	35.0
Carbon tetrachloride	Ave	0.7915	0.8269		2.09	2.00	4.5	35.0
2,3-Dimethylpentane	Ave	0.1910	0.1774		1.86	2.00	-7.1	35.0
Tert-amyl methyl ether	Ave	0.8089	0.7689		1.90	2.00	-4.9	35.0
2,2,4-Trimethylpentane	Ave	0.9528	0.9934		2.09	2.00	4.3	35.0
Heptane	Ave	0.2915	0.2971		2.04	2.00	1.9	35.0
1,2-Dichloropropane	Ave	0.2450	0.2556		2.09	2.00	4.3	35.0
Trichloroethene	Ave	0.3584	0.4116		2.30	2.00	14.9	35.0
Dibromomethane	Ave	0.3575	0.3730		2.09	2.00	4.3	35.0
Bromodichloromethane	Ave	0.6953	0.7520		2.16	2.00	8.2	35.0
1,4-Dioxane	Ave	0.1136	0.1060		1.87	2.00	-6.7	35.0
Methyl methacrylate	Ave	0.2185	0.1885		1.73	2.00	-13.7	35.0
Methylcyclohexane	Ave	0.6246	0.5214		1.67	2.00	-16.5	35.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.2988		1.86	2.00	-7.0	35.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5210		2.10	2.00	5.1	35.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5322		2.10	2.00	5.2	35.0
Toluene	Ave	0.9594	1.032		2.15	2.00	7.5	35.0
1,1,2-Trichloroethane	Ave	0.2946	0.3064		2.08	2.00	4.0	35.0
2-Methylthiophene	Ave	0.7973	0.8950		2.25	2.00	12.3	35.0
3-Methylthiophene	Ave	0.7817	0.9074		2.32	2.00	16.1	35.0
2-Hexanone	Ave	0.1867	0.1880		2.01	2.00	0.6	35.0
Octane	Ave	0.3291	0.3599		2.19	2.00	9.3	35.0
Dibromochloromethane	Ave	0.6197	0.6932		2.24	2.00	11.9	35.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.5606		2.13	2.00	6.5	35.0
Tetrachloroethene	Ave	0.3732	0.3991		2.14	2.00	6.9	35.0
Chlorobenzene	Ave	0.7417	0.7955		2.14	2.00	7.2	35.0
2,3-Dimethylheptane	Ave	0.5103	0.5575		2.18	2.00	9.2	35.0
Ethylbenzene	Ave	1.287	1.367		2.12	2.00	6.2	35.0
2-Ethylthiophene	Ave	1.007	1.070		2.13	2.00	6.3	35.0
m-Xylene & p-Xylene	Ave	1.004	1.071		4.27	4.00	6.7	35.0
Bromoform	Ave	0.6036	0.6731		2.23	2.00	11.5	35.0
Nonane	Ave	0.4307	0.4703		2.18	2.00	9.2	35.0
Styrene	Ave	0.6469	0.7439		2.30	2.00	15.0	35.0
o-Xylene	Ave	1.054	1.086		2.06	2.00	3.0	35.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.6159		1.84	2.00	-8.1	35.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: ICV 140-6379/13 Calibration Date: 08/24/2016 00:30

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: EH23ICV.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2388		1.99	2.00	-0.5	35.0
Isopropylbenzene	Ave	1.406	1.469		2.09	2.00	4.5	35.0
Propylbenzene	Ave	0.3616	0.3822		2.11	2.00	5.7	35.0
2-Chlorotoluene	Ave	0.3276	0.3492		2.13	2.00	6.6	35.0
4-Ethyltoluene	Ave	1.312	1.324		2.02	2.00	0.9	35.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.6390		2.09	2.00	4.6	35.0
Alpha Methyl Styrene	Ave	0.4859	0.5360		2.21	2.00	10.3	35.0
Decane	Ave	0.5020	0.5428		2.16	2.00	8.1	35.0
tert-Butylbenzene	Ave	1.205	1.239		2.06	2.00	2.8	35.0
1,2,4-Trimethylbenzene	Ave	1.131	1.178		2.08	2.00	4.2	35.0
sec-Butylbenzene	Ave	1.565	1.625		2.08	2.00	3.8	35.0
1,3-Dichlorobenzene	Ave	0.6866	0.7347		2.14	2.00	7.0	35.0
Benzyl chloride	Ave	0.9136	0.9711		2.13	2.00	6.3	35.0
1,4-Dichlorobenzene	Ave	0.6673	0.7139		2.14	2.00	7.0	35.0
4-Isopropyltoluene	Ave	1.292	1.323		2.05	2.00	2.4	35.0
1,2,3-Trimethylbenzene	Ave	0.8539	0.9481		2.22	2.00	11.0	35.0
Butylcyclohexane	Ave	0.8557	0.8876		2.07	2.00	3.7	35.0
1,2-Dichlorobenzene	Ave	0.6696	0.7022		2.10	2.00	4.9	35.0
Indane	Ave	0.9538	0.9486		1.99	2.00	-0.5	35.0
Indene	Ave	0.7162	0.9197		2.57	2.00	28.4	35.0
Butylbenzene	Ave	1.187	1.254		2.11	2.00	5.6	35.0
Undecane	Ave	0.4988	0.4581		1.84	2.00	-8.2	35.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.132		2.49	2.00	24.3	35.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.1772		1.32	2.00	-34.1	35.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.152		2.23	2.00	11.4	35.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7358		2.32	2.00	16.1	35.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.9101		2.28	2.00	14.0	35.0
Dodecane	Ave	0.2998	0.3737		2.49	2.00	24.7	35.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5310		2.37	2.00	18.3	35.0
Naphthalene	Ave	0.8290	1.027		2.48	2.00	23.9	35.0
Benzo(b)thiophene	Ave	0.4459	0.5779		2.59	2.00	29.6	35.0
Hexachlorobutadiene	Ave	0.6412	0.6964		2.17	2.00	8.6	35.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.4754		2.57	2.00	28.6	35.0
2-Methylnaphthalene	Ave	0.1703	0.1317		4.83	6.25	-22.7	50.0
1-Methylnaphthalene	Ave	0.1438	0.0985		4.28	6.25	-31.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8034		3.93	4.00	-1.8	35.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23ICV.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 24-Aug-2016 00:30:30 ALS Bottle#: 15 Worklist Smp#: 13
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 052146
Misc. Info.: 140-0003339-013
Operator ID: 403648 Instrument ID: ME
Sublist:

Method: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 25-Aug-2016 13:44:26 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK028

First Level Reviewer: barlozhetskayaa Date: 25-Aug-2016 13:44:26

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.573	7.576	-0.003	80	255853	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.816	9.819	-0.003	94	1211654	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.815	14.816	-0.001	89	1126201	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.487	16.491	-0.005	89	904830	4.00	3.93	
6 Chlorodifluoromethane	67	2.898	2.899	-0.002	95	64552	2.00	2.13	
7 Propene	41	2.909	2.908	0.000	95	87209	2.00	2.09	
8 Dichlorodifluoromethane	85	2.952	2.951	0.000	99	574205	2.00	2.13	
9 Chloromethane	52	3.097	3.100	-0.005	98	31849	2.00	1.84	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.109	-0.002	95	301759	2.00	2.11	
11 Acetaldehyde	44	3.232	3.231	0.000	91	144885	10.0	8.80	
12 Vinyl chloride	62	3.243	3.243	-0.001	98	148021	2.00	2.15	
13 Butane	43	3.313	3.315	-0.004	82	157368	2.00	2.09	
14 Butadiene	54	3.313	3.316	-0.004	75	89204	2.00	2.04	
15 Bromomethane	94	3.583	3.582	0.000	98	159443	2.00	2.04	
16 Chloroethane	64	3.696	3.698	-0.004	98	73391	2.00	2.00	
17 Ethanol	31	3.782	3.784	-0.004	99	167138	10.0	9.21	
18 Vinyl bromide	106	3.949	3.948	-0.001	98	165187	2.00	2.21	
19 2-Methylbutane	43	3.987	3.988	-0.003	85	113803	2.00	1.98	
20 Trichlorofluoromethane	101	4.170	4.171	-0.003	99	542778	2.00	2.08	
21 Acrolein	56	4.181	4.184	-0.005	96	31757	2.00	1.87	
22 Acetonitrile	40	4.240	4.241	-0.003	98	30891	2.00	1.87	
23 Acetone	58	4.278	4.281	-0.005	98	123798	6.00	5.07	
24 Isopropyl alcohol	45	4.354	4.359	-0.007	93	364383	6.00	5.62	
25 Pentane	72	4.359	4.360	-0.003	96	29928	2.00	2.18	
26 Ethyl ether	31	4.505	4.508	-0.005	83	83556	2.00	1.98	
27 1,1-Dichloroethene	96	4.785	4.787	-0.005	99	154059	2.00	1.97	
29 Acrylonitrile	53	4.888	4.889	-0.003	93	62164	2.00	1.89	
28 2-Methyl-2-propanol	59	4.882	4.890	-0.010	93	211368	2.00	2.00	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.947	-0.003	96	332076	2.00	1.97	
31 Methylene Chloride	84	5.109	5.110	-0.003	78	154144	2.00	1.92	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.125	5.124	-0.001	88	115388	2.00	1.78	
33 Carbon disulfide	76	5.254	5.252	-0.001	98	507532	2.00	2.11	
34 trans-1,2-Dichloroethene	96	5.874	5.874	-0.003	96	172037	2.00	2.03	
35 2-Methylpentane	43	5.891	5.892	-0.005	86	224353	2.00	2.14	
36 Methyl tert-butyl ether	73	6.004	6.010	-0.009	93	464188	2.00	1.89	
37 1,1-Dichloroethane	63	6.284	6.284	-0.002	99	291169	2.00	2.05	
38 Vinyl acetate	43	6.397	6.398	-0.004	99	229647	2.00	1.79	
39 2-Butanone (MEK)	72	6.840	6.840	-0.003	98	63884	2.00	1.71	
40 Hexane	56	6.845	6.849	-0.007	84	100024	2.00	2.00	
41 Isopropyl ether	45	7.018	7.022	-0.007	90	274907	2.00	1.79	
42 cis-1,2-Dichloroethene	96	7.249	7.246	0.000	91	179464	2.00	2.10	
43 Ethyl acetate	43	7.454	7.456	-0.005	97	172422	2.00	1.72	
44 Chloroform	83	7.589	7.588	-0.003	96	436653	2.00	2.05	
45 Tert-butyl ethyl ether	59	7.692	7.694	-0.006	91	393306	2.00	2.04	
46 Tetrahydrofuran	42	7.994	7.998	-0.007	76	90727	2.00	1.81	
47 1,1,1-Trichloroethane	97	8.603	8.599	0.000	93	497190	2.00	2.08	
48 1,2-Dichloroethane	62	8.722	8.718	0.001	98	279411	2.00	2.03	
50 Cyclohexane	69	9.201	9.199	-0.001	95	83058	2.00	2.02	
54 Thiophene	84	9.207	9.205	0.000	66	309469	2.00	2.06	
51 Benzene	78	9.207	9.206	-0.002	95	513602	2.00	2.07	
49 n-Butanol	31	9.207	9.217	-0.012	57	33588	2.00	2.25	
52 Carbon tetrachloride	117	9.228	9.227	-0.002	97	500929	2.00	2.09	
53 2,3-Dimethylpentane	71	9.347	9.346	-0.002	85	107490	2.00	1.86	
55 Tert-amyl methyl ether	73	9.741	9.750	-0.010	96	433033	2.00	1.90	
56 Isooctane	57	10.048	10.046	-0.001	98	601853	2.00	2.09	
57 n-Heptane	71	10.479	10.477	-0.001	78	179962	2.00	2.04	
58 1,2-Dichloropropane	63	10.550	10.548	-0.001	85	154876	2.00	2.09	
59 Trichloroethene	130	10.587	10.587	-0.003	95	249372	2.00	2.30	
60 Dibromomethane	93	10.679	10.674	0.002	96	225978	2.00	2.09	
61 Dichlorobromomethane	83	10.841	10.840	-0.002	97	455552	2.00	2.16	
62 1,4-Dioxane	88	10.878	10.881	-0.006	80	64231	2.00	1.87	
63 Methyl methacrylate	41	10.981	10.982	-0.004	78	114203	2.00	1.73	
64 Methylcyclohexane	83	11.412	11.411	-0.002	90	315886	2.00	1.67	
65 4-Methyl-2-pentanone (MIBK	43	11.887	11.893	-0.009	92	181007	2.00	1.86	
66 cis-1,3-Dichloropropene	75	11.935	11.931	0.001	90	315651	2.00	2.10	
67 trans-1,3-Dichloropropene	75	12.674	12.675	-0.002	93	299662	2.00	2.10	
68 Toluene	91	12.782	12.782	-0.001	94	580873	2.00	2.15	
69 1,1,2-Trichloroethane	83	12.874	12.870	-0.001	98	172504	2.00	2.08	
70 2-Methylthiophene	97	12.944	12.941	0.002	96	503967	2.00	2.25	
71 3-Methylthiophene	97	13.149	13.151	-0.003	98	510976	2.00	2.32	
72 2-Hexanone	58	13.300	13.302	-0.003	98	105833	2.00	2.01	
73 n-Octane	85	13.532	13.532	-0.001	78	202646	2.00	2.19	
74 Chlorodibromomethane	129	13.585	13.588	-0.004	97	390318	2.00	2.24	
75 Ethylene Dibromide	107	13.887	13.887	-0.001	98	315654	2.00	2.13	
76 Tetrachloroethene	129	13.968	13.965	0.002	95	224735	2.00	2.14	
77 Chlorobenzene	112	14.863	14.864	-0.002	91	447916	2.00	2.14	
78 2,3-Dimethylheptane	43	14.912	14.913	-0.002	76	313899	2.00	2.18	
79 Ethylbenzene	91	15.171	15.167	0.003	98	769758	2.00	2.12	
80 2-Ethylthiophene	97	15.273	15.271	0.001	98	602718	2.00	2.13	
81 m-Xylene & p-Xylene	91	15.333	15.336	-0.004	99	1206371	4.00	4.27	
83 Bromoform	173	15.775	15.775	-0.001	96	378996	2.00	2.23	
82 n-Nonane	57	15.786	15.789	-0.004	77	264813	2.00	2.18	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.807	15.806	0.000	96	418910	2.00	2.30	
85 o-Xylene	91	15.866	15.866	-0.001	98	611355	2.00	2.06	
86 1,1,2,2-Tetrachloroethane	83	16.201	16.201	-0.001	99	346799	2.00	1.84	
87 1,2,3-Trichloropropane	110	16.363	16.361	0.000	97	134480	2.00	1.99	
88 Isopropylbenzene	105	16.465	16.465	-0.001	97	827361	2.00	2.09	
89 N-Propylbenzene	120	17.015	17.020	-0.006	99	215219	2.00	2.11	
90 2-Chlorotoluene	126	17.053	17.053	-0.001	96	196660	2.00	2.13	
91 4-Ethyltoluene	105	17.177	17.180	-0.004	98	745303	2.00	2.02	
92 1,3,5-Trimethylbenzene	120	17.263	17.261	0.001	92	359798	2.00	2.09	
93 Alpha Methyl Styrene	118	17.511	17.510	0.000	87	301809	2.00	2.21	
94 n-Decane	57	17.597	17.598	-0.002	94	305633	2.00	2.16	
95 tert-Butylbenzene	119	17.716	17.720	-0.005	90	697546	2.00	2.06	
96 1,2,4-Trimethylbenzene	105	17.732	17.734	-0.003	96	663584	2.00	2.08	
97 sec-Butylbenzene	105	18.013	18.012	0.000	98	914997	2.00	2.08	
98 1,3-Dichlorobenzene	146	18.018	18.018	-0.001	98	413719	2.00	2.14	
99 Benzyl chloride	91	18.104	18.103	0.000	98	546826	2.00	2.13	
100 1,4-Dichlorobenzene	146	18.110	18.111	-0.002	93	402013	2.00	2.14	
101 4-Isopropyltoluene	119	18.191	18.190	-0.001	96	744881	2.00	2.05	
102 1,2,3-Trimethylbenzene	105	18.239	18.239	-0.001	99	533884	2.00	2.22	
103 Butylcyclohexane	83	18.304	18.304	-0.001	95	499800	2.00	2.07	
104 1,2-Dichlorobenzene	146	18.492	18.492	-0.001	91	395407	2.00	2.10	
105 2,3-Dihydroindene	117	18.492	18.493	-0.003	93	534154	2.00	1.99	
106 Indene	116	18.633	18.631	0.001	91	517905	2.00	2.57	
107 n-Butylbenzene	91	18.649	18.650	-0.003	98	706111	2.00	2.11	
108 Undecane	57	18.999	18.999	-0.001	87	257931	2.00	1.84	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.043	19.042	-0.001	97	637352	2.00	2.49	
110 1,2-Dibromo-3-Chloropropan	157	19.129	19.129	-0.001	94	99763	2.00	1.32	
111 1,2,4,5-Tetramethylbenzene	119	19.442	19.441	0.000	95	648704	2.00	2.23	
112 1,2,3,5-Tetramethylbenzene	119	19.495	19.496	-0.003	94	414327	2.00	2.32	
113 1,2,3,4-Tetramethylbenzene	119	19.895	19.894	-0.001	96	512459	2.00	2.28	
114 Dodecane	57	20.078	20.076	0.000	92	210418	2.00	2.49	
115 1,2,4-Trichlorobenzene	180	20.229	20.229	-0.001	93	299016	2.00	2.37	
116 Naphthalene	128	20.353	20.356	-0.004	98	578170	2.00	2.48	
117 Benzo(b)thiophene	134	20.455	20.454	-0.001	99	325425	2.00	2.59	
118 Hexachlorobutadiene	225	20.574	20.572	0.000	96	392153	2.00	2.17	
119 1,2,3-Trichlorobenzene	180	20.628	20.629	-0.003	93	267691	2.00	2.57	
120 2-Methylnaphthalene	142	21.458	21.457	-0.001	99	231816	6.25	4.83	
121 1-Methylnaphthalene	142	21.663	21.662	-0.001	99	173379	6.25	4.28	
A 124 Toluene Range	1	12.793	(12.763-12.823)		0	1396564	2.00	2.13	
A 125 C8 Range	1	13.528	(13.507-13.548)		0	1401419	2.00	2.14	
S 126 Xylenes, Total	100				0		6.00	6.33	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.12	

Reagents:

40CV101S_00018	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

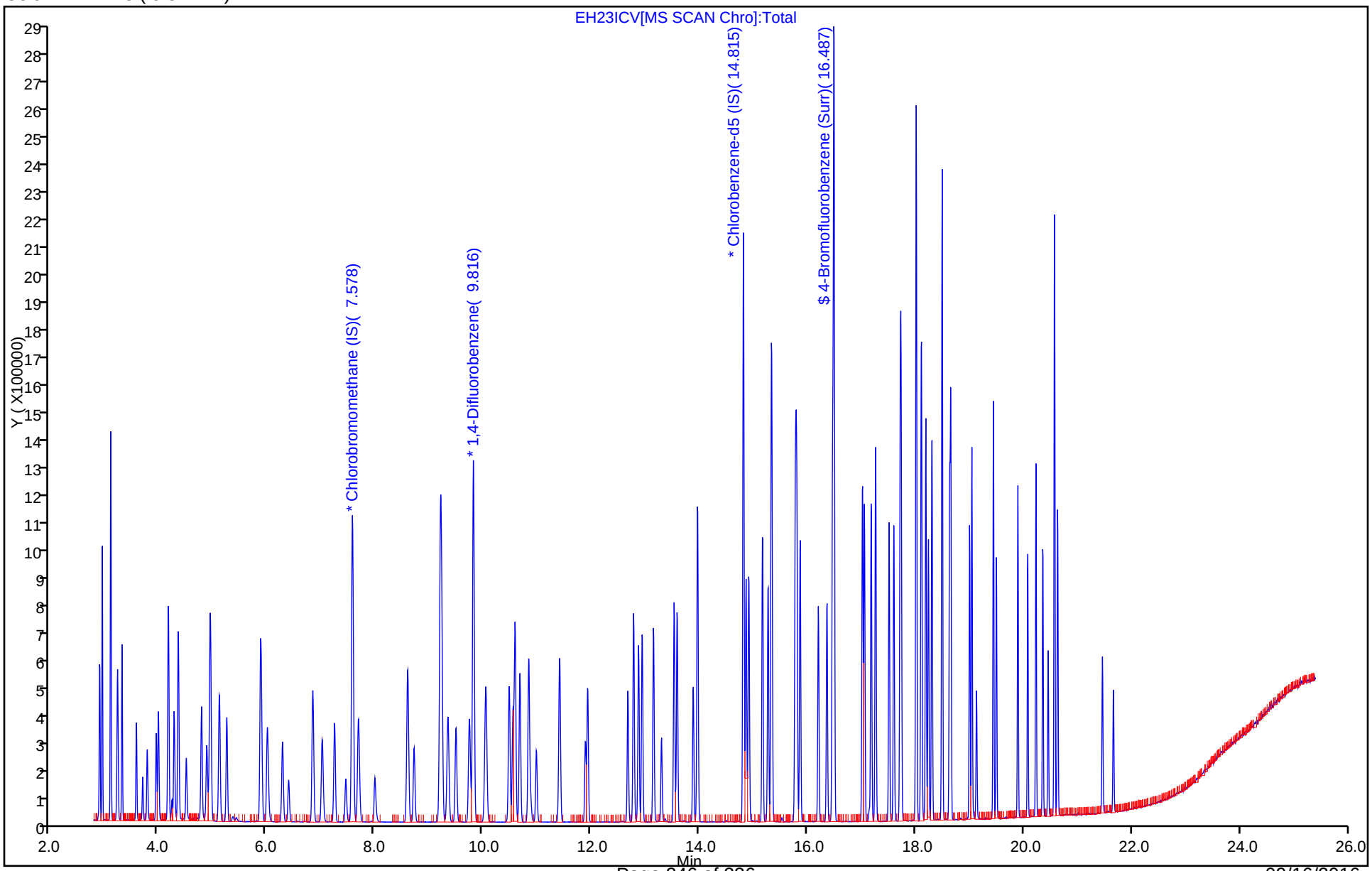
Report Date: 25-Aug-2016 13:44:28 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23ICV.D

Injection Date:	24-Aug-2016 00:30:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	ICV			Worklist Smp#:	13
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: CCVIS 140-6539/4 Calibration Date: 09/10/2016 14:39

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVI10A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5088		2.15	2.00	7.2	30.0
Propene	Ave	0.6524	0.7847		2.41	2.00	20.3	30.0
Dichlorodifluoromethane	Ave	4.206	4.884		2.32	2.00	16.1	30.0
Chloromethane	Ave	0.2701	0.3080		2.28	2.00	14.0	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.723		2.44	2.00	21.8	30.0
Acetaldehyde	Ave	0.2573	0.2693		10.5	10.0	4.7	30.0
Vinyl chloride	Ave	1.078	1.315		2.44	2.00	22.0	30.0
1,3-Butadiene	Ave	0.6822	0.7879		2.31	2.00	15.5	30.0
Butane	Ave	1.176	1.355		2.31	2.00	15.2	30.0
Bromomethane	Ave	1.220	1.499		2.46	2.00	22.8	30.0
Chloroethane	Ave	0.5740	0.6263		2.18	2.00	9.1	30.0
Ethanol	Ave	0.2836	0.2477		8.74	10.0	-12.7	30.0
Vinyl bromide	Ave	1.166	1.362		2.34	2.00	16.8	30.0
2-Methylbutane	Ave	0.8988	0.9303		2.07	2.00	3.5	30.0
Trichlorofluoromethane	Ave	4.072	4.643		2.28	2.00	14.0	30.0
Acrolein	Ave	0.2661	0.2990		2.25	2.00	12.3	30.0
Acetonitrile	Ave	0.2589	0.2592		2.00	2.00	0.1	30.0
Acetone	Ave	0.3815	0.3736		5.88	6.00	-2.1	30.0
Isopropyl alcohol	Ave	1.014	0.9830		5.82	6.00	-3.0	30.0
Pentane	Ave	0.2144	0.2389		2.23	2.00	11.4	30.0
Ethyl ether	Ave	0.6609	0.6251		1.89	2.00	-5.4	30.0
1,1-Dichloroethene	Ave	1.220	1.317		2.16	2.00	8.0	30.0
Acrylonitrile	Ave	0.5155	0.5217		2.03	2.00	1.2	30.0
tert-Butyl alcohol	Ave	1.656	1.700		2.05	2.00	2.7	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.911		2.22	2.00	10.7	30.0
Methylene Chloride	Ave	1.255	1.331		2.12	2.00	6.1	30.0
3-Chloropropene	Ave	1.016	0.9260		1.82	2.00	-8.9	30.0
Carbon disulfide	Ave	3.766	4.343		2.31	2.00	15.3	30.0
trans-1,2-Dichloroethene	Ave	1.326	1.482		2.24	2.00	11.7	30.0
2-Methylpentane	Ave	1.640	1.775		2.17	2.00	8.3	30.0
Methyl tert-butyl ether	Ave	3.835	3.952		2.06	2.00	3.1	30.0
1,1-Dichloroethane	Ave	2.224	2.455		2.21	2.00	10.4	30.0
Vinyl acetate	Ave	2.009	2.144		2.14	2.00	6.7	30.0
2-Butanone (MEK)	Ave	0.5829	0.5578		1.91	2.00	-4.3	30.0
Hexane	Ave	0.7813	0.8359		2.14	2.00	7.0	30.0
Isopropyl ether	Ave	2.404	2.597		2.16	2.00	8.0	30.0
cis-1,2-Dichloroethene	Ave	1.339	1.504		2.25	2.00	12.3	30.0
Ethyl acetate	Ave	1.564	1.612		2.06	2.00	3.1	30.0
Chloroform	Ave	3.335	3.530		2.12	2.00	5.9	30.0
Tert-butyl ethyl ether	Ave	3.019	3.185		2.11	2.00	5.5	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: CCVIS 140-6539/4 Calibration Date: 09/10/2016 14:39

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVI10A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.8061		2.06	2.00	2.9	30.0
1,1,1-Trichloroethane	Ave	3.737	3.886		2.08	2.00	4.0	30.0
1,2-Dichloroethane	Ave	0.4541	0.4700		2.07	2.00	3.5	30.0
Cyclohexane	Ave	0.1355	0.1416		2.09	2.00	4.4	30.0
Benzene	Ave	0.8198	0.8818		2.15	2.00	7.6	30.0
Thiophene	Ave	0.4957	0.5326		2.15	2.00	7.4	30.0
1-Butanol	Ave	0.0492	0.0393		1.60	2.00	-20.1	30.0
Carbon tetrachloride	Ave	0.7915	0.8190		2.07	2.00	3.5	30.0
2,3-Dimethylpentane	Ave	0.1910	0.2032		2.13	2.00	6.4	30.0
Tert-amyl methyl ether	Ave	0.8089	0.8211		2.03	2.00	1.5	30.0
2,2,4-Trimethylpentane	Ave	0.9528	1.066		2.24	2.00	11.8	30.0
Heptane	Ave	0.2915	0.3075		2.11	2.00	5.5	30.0
1,2-Dichloropropane	Ave	0.2450	0.2740		2.24	2.00	11.9	30.0
Trichloroethene	Ave	0.3584	0.3852		2.15	2.00	7.5	30.0
Dibromomethane	Ave	0.3575	0.3830		2.14	2.00	7.1	30.0
Bromodichloromethane	Ave	0.6953	0.7443		2.14	2.00	7.1	30.0
1,4-Dioxane	Ave	0.1136	0.1135		2.00	2.00	-0.0	30.0
Methyl methacrylate	Ave	0.2185	0.2135		1.96	2.00	-2.3	30.0
Methylcyclohexane	Ave	0.6246	0.6817		2.18	2.00	9.1	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.2917		1.82	2.00	-9.3	30.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5410		2.18	2.00	9.1	30.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5334		2.11	2.00	5.5	30.0
Toluene	Ave	0.9594	1.031		2.15	2.00	7.5	30.0
1,1,2-Trichloroethane	Ave	0.2946	0.3201		2.17	2.00	8.7	30.0
2-Methylthiophene	Ave	0.7973	0.9001		2.26	2.00	12.9	30.0
3-Methylthiophene	Ave	0.7817	0.8749		2.24	2.00	11.9	30.0
2-Hexanone	Ave	0.1867	0.1813		1.94	2.00	-2.9	30.0
Octane	Ave	0.3291	0.3718		2.26	2.00	13.0	30.0
Dibromochloromethane	Ave	0.6197	0.6800		2.20	2.00	9.7	30.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.5820		2.21	2.00	10.6	30.0
Tetrachloroethene	Ave	0.3732	0.4054		2.17	2.00	8.6	30.0
Chlorobenzene	Ave	0.7417	0.8251		2.23	2.00	11.2	30.0
2,3-Dimethylheptane	Ave	0.5103	0.5519		2.16	2.00	8.1	30.0
Ethylbenzene	Ave	1.287	1.403		2.18	2.00	9.0	30.0
2-Ethylthiophene	Ave	1.007	1.130		2.25	2.00	12.2	30.0
m-Xylene & p-Xylene	Ave	1.004	1.092		4.35	4.00	8.8	30.0
Bromoform	Ave	0.6036	0.6984		2.32	2.00	15.7	30.0
Nonane	Ave	0.4307	0.4965		2.31	2.00	15.3	30.0
Styrene	Ave	0.6469	0.7698		2.38	2.00	19.0	30.0
o-Xylene	Ave	1.054	1.143		2.17	2.00	8.5	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.7600		2.27	2.00	13.4	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: CCVIS 140-6539/4 Calibration Date: 09/10/2016 14:39

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVI10A.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2589		2.16	2.00	7.8	30.0
Isopropylbenzene	Ave	1.406	1.516		2.16	2.00	7.8	30.0
Propylbenzene	Ave	0.3616	0.4094		2.27	2.00	13.2	30.0
2-Chlorotoluene	Ave	0.3276	0.3647		2.23	2.00	11.3	30.0
4-Ethyltoluene	Ave	1.312	1.465		2.24	2.00	11.7	30.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.6908		2.26	2.00	13.1	30.0
Alpha Methyl Styrene	Ave	0.4859	0.5512		2.27	2.00	13.4	30.0
Decane	Ave	0.5020	0.6051		2.41	2.00	20.6	30.0
tert-Butylbenzene	Ave	1.205	1.337		2.22	2.00	11.0	30.0
1,2,4-Trimethylbenzene	Ave	1.131	1.272		2.25	2.00	12.4	30.0
1,3-Dichlorobenzene	Ave	0.6866	0.7774		2.27	2.00	13.2	30.0
sec-Butylbenzene	Ave	1.565	1.748		2.23	2.00	11.7	30.0
Benzyl chloride	Ave	0.9136	1.073		2.35	2.00	17.4	30.0
1,4-Dichlorobenzene	Ave	0.6673	0.7589		2.28	2.00	13.7	30.0
4-Isopropyltoluene	Ave	1.292	1.486		2.30	2.00	14.9	30.0
1,2,3-Trimethylbenzene	Ave	0.8539	0.9530		2.23	2.00	11.6	30.0
Butylcyclohexane	Ave	0.8557	0.9624		2.25	2.00	12.5	30.0
1,2-Dichlorobenzene	Ave	0.6696	0.7430		2.22	2.00	11.0	30.0
Indane	Ave	0.9538	1.082		2.27	2.00	13.5	30.0
Indene	Ave	0.7162	0.7871		2.20	2.00	9.9	30.0
Butylbenzene	Ave	1.187	1.384		2.33	2.00	16.6	30.0
Undecane	Ave	0.4988	0.6087		2.44	2.00	22.1	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	1.027		2.26	2.00	12.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.3148		2.34	2.00	17.1	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.192		2.31	2.00	15.3	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.7337		2.32	2.00	15.7	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.9528		2.39	2.00	19.4	30.0
Dodecane	Ave	0.2998	0.3778		2.52	2.00	26.0	30.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.5727		2.55	2.00	27.6	30.0
Naphthalene	Ave	0.8290	1.052		2.54	2.00	26.9	30.0
Benzo(b)thiophene	Ave	0.4459	0.5084		2.28	2.00	14.0	30.0
Hexachlorobutadiene	Ave	0.6412	0.7609		2.37	2.00	18.7	30.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.5134		2.78	2.00	38.9*	30.0
2-Methylnaphthalene	Ave	0.1703	0.1791		6.58	6.25	5.2	50.0
1-Methylnaphthalene	Ave	0.1438	0.1685		7.33	6.25	17.2	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8163		3.99	4.00	-0.3	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ECCVI10A.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 10-Sep-2016 14:39:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003405-002
Misc. Info.: P22
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Sep-2016 17:12:48 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 10-Sep-2016 17:12:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.568	7.568	0.000	82	381284	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	92	1808529	4.00	4.00	s
* 3 Chlorobenzene-d5 (IS)	117	14.810	14.810	0.000	88	1723895	4.00	4.00	s
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	90	1407188	4.00	3.99	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	95	97057	2.00	2.15	
7 Propene	41	2.909	2.909	0.000	97	149676	2.00	2.41	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	931575	2.00	2.32	
9 Chloromethane	52	3.097	3.097	0.000	100	58742	2.00	2.28	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.108	0.000	97	519445	2.00	2.44	
11 Acetaldehyde	44	3.227	3.227	0.000	97	256869	10.0	10.5	
12 Vinyl chloride	62	3.243	3.243	0.000	98	250850	2.00	2.44	
14 Butadiene	54	3.313	3.313	0.000	75	150279	2.00	2.31	
13 Butane	43	3.313	3.313	0.000	82	258493	2.00	2.31	
15 Bromomethane	94	3.577	3.577	0.000	98	285836	2.00	2.46	
16 Chloroethane	64	3.696	3.696	0.000	95	119453	2.00	2.18	
17 Ethanol	31	3.782	3.782	0.000	97	236203	10.0	8.74	
18 Vinyl bromide	106	3.944	3.944	0.000	98	259780	2.00	2.34	
19 2-Methylbutane	43	3.987	3.987	0.000	85	177446	2.00	2.07	
20 Trichlorofluoromethane	101	4.170	4.170	0.000	99	885569	2.00	2.28	
21 Acrolein	56	4.181	4.181	0.000	94	57023	2.00	2.25	
22 Acetonitrile	40	4.240	4.240	0.000	98	49440	2.00	2.00	
23 Acetone	58	4.278	4.278	0.000	97	213817	6.00	5.88	
24 Isopropyl alcohol	45	4.354	4.354	0.000	79	562514	6.00	5.82	
25 Pentane	72	4.354	4.354	0.000	76	45559	2.00	2.23	
26 Ethyl ether	31	4.499	4.499	0.000	78	119235	2.00	1.89	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	98	251204	2.00	2.16	
28 2-Methyl-2-propanol	59	4.882	4.882	0.000	91	324321	2.00	2.05	
29 Acrylonitrile	53	4.882	4.882	0.000	95	99506	2.00	2.03	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.947	0.000	97	555292	2.00	2.22	
31 Methylene Chloride	84	5.103	5.103	0.000	80	253873	2.00	2.12	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.119	5.119	0.000	90	176625	2.00	1.82	
33 Carbon disulfide	76	5.249	5.249	0.000	97	828371	2.00	2.31	
34 trans-1,2-Dichloroethene	96	5.869	5.869	0.000	96	282639	2.00	2.24	
35 2-Methylpentane	43	5.885	5.885	0.000	86	338602	2.00	2.17	
36 Methyl tert-butyl ether	73	5.998	5.998	0.000	93	753852	2.00	2.06	
37 1,1-Dichloroethane	63	6.279	6.279	0.000	100	468341	2.00	2.21	
38 Vinyl acetate	43	6.392	6.392	0.000	98	408964	2.00	2.14	
39 2-Butanone (MEK)	72	6.829	6.829	0.000	99	106397	2.00	1.91	
40 Hexane	56	6.840	6.840	0.000	82	159447	2.00	2.14	
41 Isopropyl ether	45	7.012	7.012	0.000	90	495308	2.00	2.16	
42 cis-1,2-Dichloroethene	96	7.239	7.239	0.000	91	286823	2.00	2.25	
43 Ethyl acetate	43	7.449	7.449	0.000	98	307457	2.00	2.06	
44 Chloroform	83	7.584	7.584	0.000	97	673311	2.00	2.12	
45 Tert-butyl ethyl ether	59	7.681	7.681	0.000	90	607430	2.00	2.11	
46 Tetrahydrofuran	42	7.988	7.988	0.000	78	153763	2.00	2.06	
47 1,1,1-Trichloroethane	97	8.592	8.592	0.000	94	741178	2.00	2.08	
48 1,2-Dichloroethane	62	8.711	8.711	0.000	99	425263	2.00	2.07	
54 Thiophene	84	9.196	9.196	0.000	66	481848	2.00	2.15	
50 Cyclohexane	69	9.191	9.191	0.000	90	128085	2.00	2.09	
51 Benzene	78	9.196	9.196	0.000	94	797838	2.00	2.15	
49 n-Butanol	31	9.201	9.201	0.000	53	35568	2.00	1.60	
52 Carbon tetrachloride	117	9.223	9.223	0.000	97	740942	2.00	2.07	
53 2,3-Dimethylpentane	71	9.336	9.336	0.000	85	183839	2.00	2.13	
55 Tert-amyl methyl ether	73	9.735	9.735	0.000	97	708084	2.00	2.03	
56 Isooctane	57	10.037	10.037	0.000	97	964038	2.00	2.24	
57 n-Heptane	71	10.474	10.474	0.000	78	278240	2.00	2.11	
58 1,2-Dichloropropane	63	10.539	10.539	0.000	87	247917	2.00	2.24	
59 Trichloroethene	130	10.582	10.582	0.000	95	348476	2.00	2.15	
60 Dibromomethane	93	10.668	10.668	0.000	96	346548	2.00	2.14	
61 Dichlorobromomethane	83	10.830	10.830	0.000	97	673408	2.00	2.14	
62 1,4-Dioxane	88	10.873	10.873	0.000	77	102710	2.00	2.00	
63 Methyl methacrylate	41	10.976	10.976	0.000	85	193151	2.00	1.96	
64 Methylcyclohexane	83	11.407	11.407	0.000	89	616727	2.00	2.18	
65 4-Methyl-2-pentanone (MIBK	43	11.881	11.881	0.000	91	263874	2.00	1.82	
66 cis-1,3-Dichloropropene	75	11.925	11.925	0.000	89	489446	2.00	2.18	
67 trans-1,3-Dichloropropene	75	12.669	12.669	0.000	93	460007	2.00	2.11	
68 Toluene	91	12.777	12.777	0.000	94	889088	2.00	2.15	
69 1,1,2-Trichloroethane	83	12.868	12.868	0.000	97	276042	2.00	2.17	
70 2-Methylthiophene	97	12.933	12.933	0.000	96	776229	2.00	2.26	
71 3-Methylthiophene	97	13.143	13.143	0.000	97	754517	2.00	2.24	
72 2-Hexanone	58	13.294	13.294	0.000	99	156320	2.00	1.94	
73 n-Octane	85	13.526	13.526	0.000	78	320672	2.00	2.26	
74 Chlorodibromomethane	129	13.580	13.580	0.000	97	586435	2.00	2.20	
75 Ethylene Dibromide	107	13.877	13.877	0.000	98	501895	2.00	2.21	
76 Tetrachloroethene	129	13.958	13.958	0.000	95	349606	2.00	2.17	
77 Chlorobenzene	112	14.858	14.858	0.000	92	711603	2.00	2.23	
78 2,3-Dimethylheptane	43	14.907	14.907	0.000	77	475930	2.00	2.16	
79 Ethylbenzene	91	15.160	15.160	0.000	98	1210035	2.00	2.18	
80 2-Ethylthiophene	97	15.262	15.262	0.000	97	974420	2.00	2.25	
81 m-Xylene & p-Xylene	91	15.327	15.327	0.000	98	1884058	4.00	4.35	
83 Bromoform	173	15.764	15.764	0.000	96	602265	2.00	2.32	
82 n-Nonane	57	15.780	15.780	0.000	78	428205	2.00	2.31	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.802	15.802	0.000	96	663896	2.00	2.38	
85 o-Xylene	91	15.856	15.856	0.000	98	986009	2.00	2.17	
86 1,1,2,2-Tetrachloroethane	83	16.195	16.195	0.000	99	655437	2.00	2.27	
87 1,2,3-Trichloropropane	110	16.352	16.352	0.000	97	223235	2.00	2.16	
88 Isopropylbenzene	105	16.460	16.460	0.000	97	1307278	2.00	2.16	
89 N-Propylbenzene	120	17.010	17.010	0.000	99	353062	2.00	2.27	
90 2-Chlorotoluene	126	17.047	17.047	0.000	96	314553	2.00	2.23	
91 4-Ethyltoluene	105	17.171	17.171	0.000	98	1263695	2.00	2.24	
92 1,3,5-Trimethylbenzene	120	17.258	17.258	0.000	92	595744	2.00	2.26	
93 Alpha Methyl Styrene	118	17.506	17.506	0.000	87	475365	2.00	2.27	
94 n-Decane	57	17.592	17.592	0.000	94	521869	2.00	2.41	
95 tert-Butylbenzene	119	17.711	17.711	0.000	91	1152733	2.00	2.22	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	96	1096621	2.00	2.25	
97 sec-Butylbenzene	105	18.007	18.007	0.000	97	1507135	2.00	2.23	
98 1,3-Dichlorobenzene	146	18.007	18.007	0.000	98	670449	2.00	2.27	
99 Benzyl chloride	91	18.099	18.099	0.000	97	925278	2.00	2.35	
100 1,4-Dichlorobenzene	146	18.104	18.104	0.000	91	654512	2.00	2.28	
101 4-Isopropyltoluene	119	18.185	18.185	0.000	96	1281114	2.00	2.30	
102 1,2,3-Trimethylbenzene	105	18.234	18.234	0.000	98	821827	2.00	2.23	
103 Butylcyclohexane	83	18.298	18.298	0.000	95	829994	2.00	2.25	
105 2,3-Dihydroindene	117	18.487	18.487	0.000	93	933496	2.00	2.27	
104 1,2-Dichlorobenzene	146	18.487	18.487	0.000	91	640756	2.00	2.22	
106 Indene	116	18.622	18.622	0.000	92	678777	2.00	2.20	
107 n-Butylbenzene	91	18.649	18.649	0.000	99	1193822	2.00	2.33	
108 Undecane	57	18.994	18.994	0.000	88	524983	2.00	2.44	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.037	19.037	0.000	97	885611	2.00	2.26	
110 1,2-Dibromo-3-Chloropropan	157	19.123	19.123	0.000	95	271480	2.00	2.34	
111 1,2,4,5-Tetramethylbenzene	119	19.436	19.436	0.000	96	1028203	2.00	2.31	
112 1,2,3,5-Tetramethylbenzene	119	19.490	19.490	0.000	94	632744	2.00	2.32	
113 1,2,3,4-Tetramethylbenzene	119	19.889	19.889	0.000	96	821728	2.00	2.39	
114 Dodecane	57	20.072	20.072	0.000	94	325835	2.00	2.52	
115 1,2,4-Trichlorobenzene	180	20.223	20.223	0.000	93	493906	2.00	2.55	
116 Naphthalene	128	20.353	20.353	0.000	98	907536	2.00	2.54	
117 Benzo(b)thiophene	134	20.450	20.450	0.000	99	438436	2.00	2.28	
118 Hexachlorobutadiene	225	20.569	20.569	0.000	96	656227	2.00	2.37	
119 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	94	442723	2.00	2.78	
120 2-Methylnaphthalene	142	21.453	21.453	0.000	99	482733	6.25	6.58	
121 1-Methylnaphthalene	142	21.658	21.658	0.000	99	453976	6.25	7.33	
A 124 Toluene Range	1	12.777	(12.747-12.807)		0	2111197	2.00	2.16	
A 125 C8 Range	1	13.520	(13.496-13.556)		0	2139864	2.00	2.18	
S 126 Xylenes, Total	100				0		6.00	6.53	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.48	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00022	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

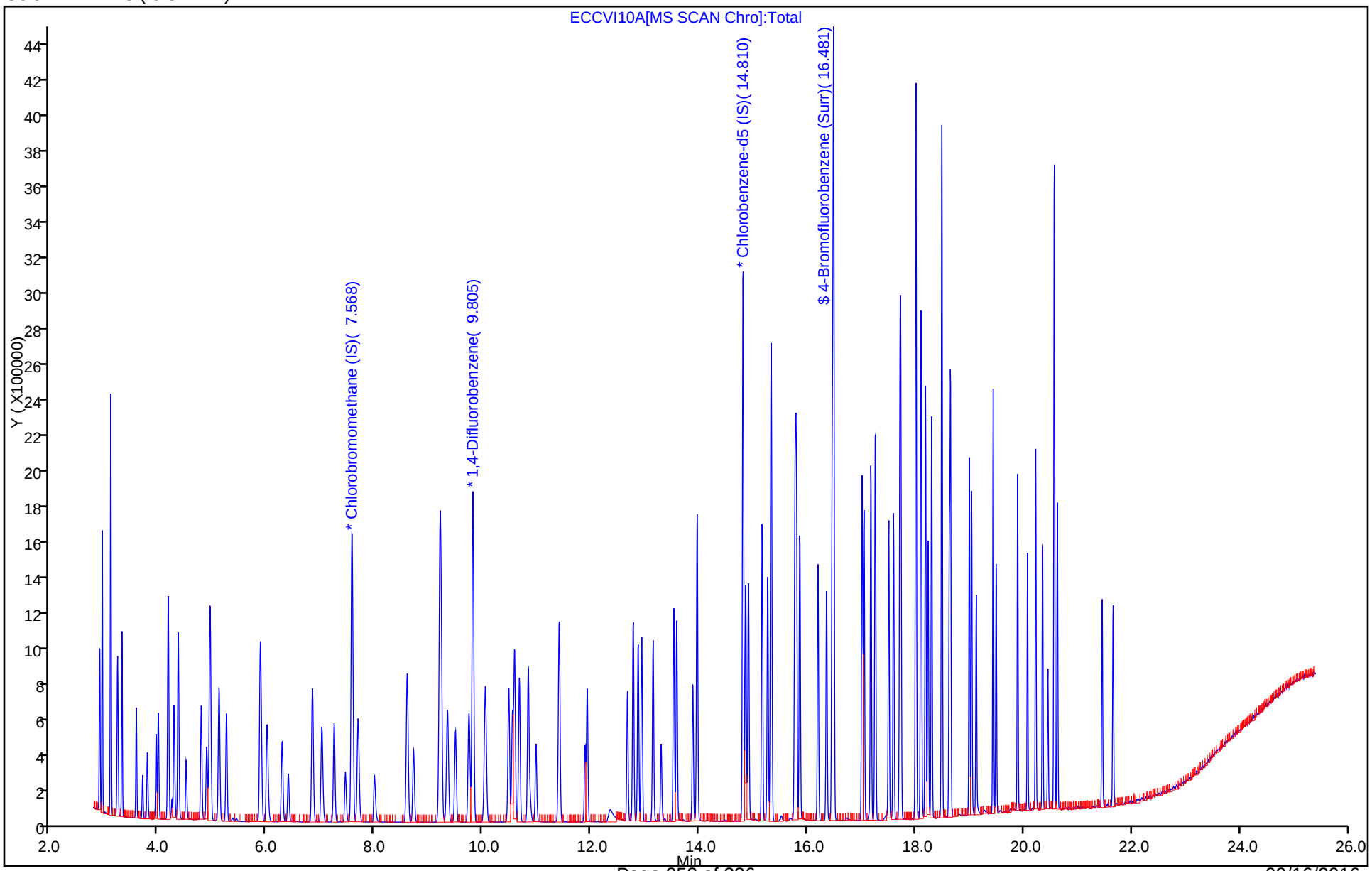
Report Date: 10-Sep-2016 17:12:49 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ECCVI10A.D

Injection Date:	10-Sep-2016 14:39:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	CCVIS			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: CCVIS 140-6540/2 Calibration Date: 09/12/2016 10:43

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVI12.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.4745	0.5169		2.18	2.00	8.9	30.0
Propene	Ave	0.6524	0.8332		2.56	2.00	27.7	30.0
Dichlorodifluoromethane	Ave	4.206	5.087		2.42	2.00	20.9	30.0
Chloromethane	Ave	0.2701	0.3179		2.36	2.00	17.7	30.0
1,2-Dichloro-1,1,2,2-tetrafluoroethane	Ave	2.236	2.733		2.45	2.00	22.2	30.0
Acetaldehyde	Ave	0.2573	0.2819		11.0	10.0	9.6	30.0
Vinyl chloride	Ave	1.078	1.367		2.54	2.00	26.8	30.0
1,3-Butadiene	Ave	0.6822	0.8163		2.39	2.00	19.6	30.0
Butane	Ave	1.176	1.394		2.37	2.00	18.5	30.0
Bromomethane	Ave	1.220	1.524		2.50	2.00	24.9	30.0
Chloroethane	Ave	0.5740	0.6440		2.25	2.00	12.2	30.0
Ethanol	Ave	0.2836	0.2441		8.61	10.0	-14.0	30.0
Vinyl bromide	Ave	1.166	1.356		2.33	2.00	16.2	30.0
2-Methylbutane	Ave	0.8988	0.9364		2.08	2.00	4.2	30.0
Trichlorofluoromethane	Ave	4.072	4.670		2.29	2.00	14.7	30.0
Acrolein	Ave	0.2661	0.2964		2.23	2.00	11.4	30.0
Acetonitrile	Ave	0.2589	0.2517		1.95	2.00	-2.8	30.0
Acetone	Ave	0.3815	0.3640		5.73	6.00	-4.6	30.0
Isopropyl alcohol	Ave	1.014	0.9244		5.47	6.00	-8.8	30.0
Pentane	Ave	0.2144	0.2427		2.26	2.00	13.2	30.0
Ethyl ether	Ave	0.6609	0.6053		1.83	2.00	-8.4	30.0
1,1-Dichloroethene	Ave	1.220	1.249		2.05	2.00	2.4	30.0
tert-Butyl alcohol	Ave	1.656	1.573		1.90	2.00	-5.1	30.0
Acrylonitrile	Ave	0.5155	0.4820		1.87	2.00	-6.5	30.0
1,1,2-Trichloro-1,2,2-trifluoroethane	Ave	2.630	2.812		2.14	2.00	6.9	30.0
Methylene Chloride	Ave	1.255	1.354		2.16	2.00	7.9	30.0
3-Chloropropene	Ave	1.016	0.9478		1.87	2.00	-6.7	30.0
Carbon disulfide	Ave	3.766	4.551		2.42	2.00	20.9	30.0
trans-1,2-Dichloroethene	Ave	1.326	1.481		2.23	2.00	11.7	30.0
2-Methylpentane	Ave	1.640	1.830		2.23	2.00	11.6	30.0
Methyl tert-butyl ether	Ave	3.835	3.785		1.97	2.00	-1.3	30.0
1,1-Dichloroethane	Ave	2.224	2.489		2.24	2.00	11.9	30.0
Vinyl acetate	Ave	2.009	2.152		2.14	2.00	7.1	30.0
2-Butanone (MEK)	Ave	0.5829	0.5647		1.94	2.00	-3.1	30.0
Hexane	Ave	0.7813	0.8440		2.16	2.00	8.0	30.0
Isopropyl ether	Ave	2.404	2.594		2.16	2.00	7.9	30.0
cis-1,2-Dichloroethene	Ave	1.339	1.470		2.20	2.00	9.8	30.0
Ethyl acetate	Ave	1.564	1.617		2.07	2.00	3.4	30.0
Chloroform	Ave	3.335	3.483		2.09	2.00	4.5	30.0
Tert-butyl ethyl ether	Ave	3.019	3.060		2.03	2.00	1.3	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: CCVIS 140-6540/2 Calibration Date: 09/12/2016 10:43

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVI12.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	0.7832	0.7976		2.04	2.00	1.8	30.0
1,1,1-Trichloroethane	Ave	3.737	3.722		1.99	2.00	-0.4	30.0
1,2-Dichloroethane	Ave	0.4541	0.4542		2.00	2.00	0.0	30.0
Cyclohexane	Ave	0.1355	0.1409		2.08	2.00	4.0	30.0
Thiophene	Ave	0.4957	0.5127		2.07	2.00	3.4	30.0
Benzene	Ave	0.8198	0.8674		2.12	2.00	5.8	30.0
1-Butanol	Ave	0.0492	0.0377		1.53	2.00	-23.3	30.0
Carbon tetrachloride	Ave	0.7915	0.7736		1.96	2.00	-2.3	30.0
2,3-Dimethylpentane	Ave	0.1910	0.2026		2.12	2.00	6.1	30.0
Tert-amyl methyl ether	Ave	0.8089	0.8161		2.02	2.00	0.9	30.0
2,2,4-Trimethylpentane	Ave	0.9528	1.046		2.20	2.00	9.7	30.0
Heptane	Ave	0.2915	0.3075		2.11	2.00	5.5	30.0
1,2-Dichloropropane	Ave	0.2450	0.2734		2.23	2.00	11.6	30.0
Trichloroethene	Ave	0.3584	0.3602		2.01	2.00	0.5	30.0
Dibromomethane	Ave	0.3575	0.3736		2.09	2.00	4.5	30.0
Bromodichloromethane	Ave	0.6953	0.7230		2.08	2.00	4.0	30.0
1,4-Dioxane	Ave	0.1136	0.1038		1.83	2.00	-8.6	30.0
Methyl methacrylate	Ave	0.2185	0.2070		1.90	2.00	-5.3	30.0
Methylcyclohexane	Ave	0.6246	0.6597		2.11	2.00	5.6	30.0
4-Methyl-2-pentanone (MIBK)	Ave	0.3214	0.2836		1.77	2.00	-11.8	30.0
cis-1,3-Dichloropropene	Ave	0.4960	0.5237		2.11	2.00	5.6	30.0
trans-1,3-Dichloropropene	Ave	0.5058	0.5251		2.08	2.00	3.8	30.0
Toluene	Ave	0.9594	1.009		2.10	2.00	5.2	30.0
1,1,2-Trichloroethane	Ave	0.2946	0.3184		2.16	2.00	8.1	30.0
2-Methylthiophene	Ave	0.7973	0.8526		2.14	2.00	6.9	30.0
3-Methylthiophene	Ave	0.7817	0.8434		2.16	2.00	7.9	30.0
2-Hexanone	Ave	0.1867	0.1790		1.92	2.00	-4.1	30.0
Octane	Ave	0.3291	0.3622		2.20	2.00	10.1	30.0
Dibromochloromethane	Ave	0.6197	0.6455		2.08	2.00	4.2	30.0
1,2-Dibromoethane (EDB)	Ave	0.5261	0.5556		2.11	2.00	5.6	30.0
Tetrachloroethene	Ave	0.3732	0.3807		2.04	2.00	2.0	30.0
Chlorobenzene	Ave	0.7417	0.7743		2.09	2.00	4.4	30.0
2,3-Dimethylheptane	Ave	0.5103	0.5503		2.16	2.00	7.8	30.0
Ethylbenzene	Ave	1.287	1.347		2.09	2.00	4.7	30.0
2-Ethylthiophene	Ave	1.007	1.081		2.15	2.00	7.4	30.0
m-Xylene & p-Xylene	Ave	1.004	1.052		4.19	4.00	4.8	30.0
Bromoform	Ave	0.6036	0.6616		2.19	2.00	9.6	30.0
Nonane	Ave	0.4307	0.4899		2.28	2.00	13.7	30.0
Styrene	Ave	0.6469	0.7367		2.28	2.00	13.9	30.0
o-Xylene	Ave	1.054	1.099		2.09	2.00	4.3	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6702	0.7492		2.24	2.00	11.8	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Lab Sample ID: CCVIS 140-6540/2 Calibration Date: 09/12/2016 10:43

Instrument ID: ME Calib Start Date: 08/23/2016 17:03

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 08/23/2016 23:02

Lab File ID: ECCVI12.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2401	0.2484		2.07	2.00	3.5	30.0
Isopropylbenzene	Ave	1.406	1.434		2.04	2.00	2.0	30.0
Propylbenzene	Ave	0.3616	0.3847		2.13	2.00	6.4	30.0
2-Chlorotoluene	Ave	0.3276	0.3470		2.12	2.00	5.9	30.0
4-Ethyltoluene	Ave	1.312	1.390		2.12	2.00	5.9	30.0
1,3,5-Trimethylbenzene	Ave	0.6108	0.6421		2.10	2.00	5.1	30.0
Alpha Methyl Styrene	Ave	0.4859	0.5246		2.16	2.00	8.0	30.0
Decane	Ave	0.5020	0.5893		2.35	2.00	17.4	30.0
tert-Butylbenzene	Ave	1.205	1.228		2.04	2.00	1.9	30.0
1,2,4-Trimethylbenzene	Ave	1.131	1.189		2.10	2.00	5.2	30.0
sec-Butylbenzene	Ave	1.565	1.644		2.10	2.00	5.0	30.0
1,3-Dichlorobenzene	Ave	0.6866	0.7117		2.07	2.00	3.7	30.0
Benzyl chloride	Ave	0.9136	0.996		2.18	2.00	9.0	30.0
1,4-Dichlorobenzene	Ave	0.6673	0.6974		2.09	2.00	4.5	30.0
4-Isopropyltoluene	Ave	1.292	1.348		2.09	2.00	4.3	30.0
1,2,3-Trimethylbenzene	Ave	0.8539	0.8871		2.08	2.00	3.9	30.0
Butylcyclohexane	Ave	0.8557	0.9260		2.17	2.00	8.2	30.0
1,2-Dichlorobenzene	Ave	0.6696	0.6840		2.04	2.00	2.2	30.0
Indane	Ave	0.9538	0.9924		2.08	2.00	4.1	30.0
Indene	Ave	0.7162	0.7310		2.04	2.00	2.1	30.0
Butylbenzene	Ave	1.187	1.304		2.20	2.00	9.9	30.0
Undecane	Ave	0.4988	0.5752		2.31	2.00	15.3	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9105	0.9311		2.05	2.00	2.3	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2689	0.2884		2.15	2.00	7.2	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.034	1.071		2.07	2.00	3.6	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.6339	0.6494		2.05	2.00	2.4	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.7980	0.8380		2.10	2.00	5.0	30.0
Dodecane	Ave	0.2998	0.3312		2.21	2.00	10.5	30.0
1,2,4-Trichlorobenzene	Ave	0.4489	0.4970		2.22	2.00	10.7	30.0
Naphthalene	Ave	0.8290	0.9308		2.25	2.00	12.3	30.0
Benzo(b)thiophene	Ave	0.4459	0.4585		2.06	2.00	2.8	30.0
Hexachlorobutadiene	Ave	0.6412	0.6627		2.07	2.00	3.3	30.0
1,2,3-Trichlorobenzene	Ave	0.3697	0.4305		2.33	2.00	16.4	30.0
2-Methylnaphthalene	Ave	0.1703	0.1430		5.25	6.25	-16.1	50.0
1-Methylnaphthalene	Ave	0.1438	0.1326		5.77	6.25	-7.8	50.0
4-Bromofluorobenzene (Surr)	Ave	0.8185	0.8462		4.14	4.00	3.4	30.0

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ECCVI12.D
Lims ID: CCVIS
Client ID:
Sample Type: CCVIS
Inject. Date: 12-Sep-2016 10:43:30 ALS Bottle#: 15 Worklist Smp#: 2
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003406-002
Misc. Info.: P22
Operator ID: 403648 Instrument ID: ME
Sublist: chrom-ME_TO15*sub4

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Sep-2016 11:41:27 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: barlozhetskayaa Date: 12-Sep-2016 19:33:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.562	7.562	0.000	83	380713	4.00	4.00	s
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	94	1831211	4.00	4.00	s
* 3 Chlorobenzene-d5 (IS)	117	14.810	14.810	0.000	88	1718365	4.00	4.00	s
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	89	1453995	4.00	4.14	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	94	98438	2.00	2.18	
7 Propene	41	2.903	2.903	0.000	97	158683	2.00	2.56	
8 Dichlorodifluoromethane	85	2.946	2.946	0.000	99	968899	2.00	2.42	
9 Chloromethane	52	3.097	3.097	0.000	98	60553	2.00	2.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.108	0.000	96	520529	2.00	2.45	
11 Acetaldehyde	44	3.227	3.227	0.000	98	268410	10.0	11.0	
12 Vinyl chloride	62	3.237	3.237	0.000	99	260320	2.00	2.54	
14 Butadiene	54	3.313	3.313	0.000	75	155461	2.00	2.39	
13 Butane	43	3.313	3.313	0.000	82	265462	2.00	2.37	
15 Bromomethane	94	3.577	3.577	0.000	98	290195	2.00	2.50	
16 Chloroethane	64	3.696	3.696	0.000	95	122661	2.00	2.25	
17 Ethanol	31	3.777	3.777	0.000	98	232403	10.0	8.61	
18 Vinyl bromide	106	3.944	3.944	0.000	98	258167	2.00	2.33	
19 2-Methylbutane	43	3.982	3.982	0.000	84	178336	2.00	2.08	
20 Trichlorofluoromethane	101	4.165	4.165	0.000	99	889343	2.00	2.29	
21 Acrolein	56	4.176	4.176	0.000	95	56458	2.00	2.23	
22 Acetonitrile	40	4.235	4.235	0.000	98	47936	2.00	1.95	
23 Acetone	58	4.273	4.273	0.000	98	207983	6.00	5.73	
24 Isopropyl alcohol	45	4.348	4.348	0.000	93	528197	6.00	5.47	
25 Pentane	72	4.354	4.354	0.000	96	46215	2.00	2.26	
26 Ethyl ether	31	4.499	4.499	0.000	77	115281	2.00	1.83	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	99	237825	2.00	2.05	
28 2-Methyl-2-propanol	59	4.877	4.877	0.000	92	299517	2.00	1.90	
29 Acrylonitrile	53	4.882	4.882	0.000	94	91804	2.00	1.87	
30 1,1,2-Trichloro-1,2,2-trif	101	4.941	4.941	0.000	96	535491	2.00	2.14	
31 Methylene Chloride	84	5.103	5.103	0.000	81	257857	2.00	2.16	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
32 3-Chloro-1-propene	39	5.114	5.114	0.000	91	180519	2.00	1.87	
33 Carbon disulfide	76	5.243	5.243	0.000	97	866817	2.00	2.42	
34 trans-1,2-Dichloroethene	96	5.869	5.869	0.000	96	282096	2.00	2.23	
35 2-Methylpentane	43	5.885	5.885	0.000	86	348632	2.00	2.23	
36 Methyl tert-butyl ether	73	5.998	5.998	0.000	93	720845	2.00	1.97	
37 1,1-Dichloroethane	63	6.273	6.273	0.000	99	473957	2.00	2.24	
38 Vinyl acetate	43	6.387	6.387	0.000	99	409958	2.00	2.14	
39 2-Butanone (MEK)	72	6.829	6.829	0.000	98	107543	2.00	1.94	
40 Hexane	56	6.840	6.840	0.000	85	160743	2.00	2.16	
41 Isopropyl ether	45	7.007	7.007	0.000	91	494112	2.00	2.16	
42 cis-1,2-Dichloroethene	96	7.239	7.239	0.000	91	280005	2.00	2.20	
43 Ethyl acetate	43	7.444	7.444	0.000	98	307989	2.00	2.07	
44 Chloroform	83	7.578	7.578	0.000	97	663432	2.00	2.09	
45 Tert-butyl ethyl ether	59	7.681	7.681	0.000	91	582805	2.00	2.03	
46 Tetrahydrofuran	42	7.983	7.983	0.000	77	151911	2.00	2.04	
47 1,1,1-Trichloroethane	97	8.592	8.592	0.000	94	708919	2.00	1.99	
48 1,2-Dichloroethane	62	8.705	8.705	0.000	99	416088	2.00	2.00	
50 Cyclohexane	69	9.191	9.191	0.000	91	129101	2.00	2.08	
54 Thiophene	84	9.191	9.191	0.000	67	469659	2.00	2.07	
51 Benzene	78	9.196	9.196	0.000	95	794616	2.00	2.12	
49 n-Butanol	31	9.201	9.201	0.000	53	34565	2.00	1.53	
52 Carbon tetrachloride	117	9.218	9.218	0.000	97	708715	2.00	1.96	
53 2,3-Dimethylpentane	71	9.336	9.336	0.000	85	185577	2.00	2.12	
55 Tert-amyl methyl ether	73	9.735	9.735	0.000	97	701586	2.00	2.02	
56 Isooctane	57	10.032	10.032	0.000	98	957799	2.00	2.20	
57 n-Heptane	71	10.469	10.469	0.000	78	281699	2.00	2.11	
58 1,2-Dichloropropane	63	10.539	10.539	0.000	87	250471	2.00	2.23	
59 Trichloroethene	130	10.576	10.576	0.000	95	329986	2.00	2.01	
60 Dibromomethane	93	10.663	10.663	0.000	95	342287	2.00	2.09	
61 Dichlorobromomethane	83	10.830	10.830	0.000	97	662372	2.00	2.08	
62 1,4-Dioxane	88	10.868	10.868	0.000	77	95128	2.00	1.83	
63 Methyl methacrylate	41	10.970	10.970	0.000	79	189595	2.00	1.90	
64 Methylcyclohexane	83	11.402	11.402	0.000	90	604343	2.00	2.11	
65 4-Methyl-2-pentanone (MIBK	43	11.881	11.881	0.000	91	259766	2.00	1.77	
66 cis-1,3-Dichloropropene	75	11.925	11.925	0.000	89	479766	2.00	2.11	
67 trans-1,3-Dichloropropene	75	12.669	12.669	0.000	93	451432	2.00	2.08	
68 Toluene	91	12.771	12.771	0.000	94	867492	2.00	2.10	
69 1,1,2-Trichloroethane	83	12.863	12.863	0.000	98	273726	2.00	2.16	
70 2-Methylthiophene	97	12.933	12.933	0.000	96	732935	2.00	2.14	
71 3-Methylthiophene	97	13.143	13.143	0.000	97	725049	2.00	2.16	
72 2-Hexanone	58	13.289	13.289	0.000	98	153894	2.00	1.92	
73 n-Octane	85	13.526	13.526	0.000	78	311389	2.00	2.20	
74 Chlorodibromomethane	129	13.580	13.580	0.000	96	554861	2.00	2.08	
75 Ethylene Dibromide	107	13.877	13.877	0.000	98	477614	2.00	2.11	
76 Tetrachloroethene	129	13.958	13.958	0.000	94	327271	2.00	2.04	
77 Chlorobenzene	112	14.858	14.858	0.000	91	665573	2.00	2.09	
78 2,3-Dimethylheptane	43	14.907	14.907	0.000	78	473086	2.00	2.16	
79 Ethylbenzene	91	15.160	15.160	0.000	98	1158251	2.00	2.09	
80 2-Ethylthiophene	97	15.262	15.262	0.000	98	929465	2.00	2.15	
81 m-Xylene & p-Xylene	91	15.327	15.327	0.000	99	1809114	4.00	4.19	
83 Bromoform	173	15.764	15.764	0.000	95	568767	2.00	2.19	
82 n-Nonane	57	15.780	15.780	0.000	78	421115	2.00	2.28	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
84 Styrene	104	15.796	15.796	0.000	96	633296	2.00	2.28	
85 o-Xylene	91	15.856	15.856	0.000	98	944447	2.00	2.09	
86 1,1,2,2-Tetrachloroethane	83	16.195	16.195	0.000	99	644067	2.00	2.24	
87 1,2,3-Trichloropropane	110	16.352	16.352	0.000	98	213525	2.00	2.07	
88 Isopropylbenzene	105	16.454	16.454	0.000	97	1232906	2.00	2.04	
89 N-Propylbenzene	120	17.010	17.010	0.000	99	330718	2.00	2.13	
90 2-Chlorotoluene	126	17.047	17.047	0.000	96	298250	2.00	2.12	
91 4-Ethyltoluene	105	17.171	17.171	0.000	98	1194628	2.00	2.12	
92 1,3,5-Trimethylbenzene	120	17.252	17.252	0.000	92	551986	2.00	2.10	
93 Alpha Methyl Styrene	118	17.506	17.506	0.000	88	450986	2.00	2.16	
94 n-Decane	57	17.592	17.592	0.000	92	506556	2.00	2.35	
95 tert-Butylbenzene	119	17.711	17.711	0.000	91	1055479	2.00	2.04	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	96	1022374	2.00	2.10	
97 sec-Butylbenzene	105	18.002	18.002	0.000	97	1413207	2.00	2.10	
98 1,3-Dichlorobenzene	146	18.007	18.007	0.000	98	611837	2.00	2.07	
99 Benzyl chloride	91	18.093	18.093	0.000	97	855784	2.00	2.18	
100 1,4-Dichlorobenzene	146	18.104	18.104	0.000	92	599482	2.00	2.09	
101 4-Isopropyltoluene	119	18.185	18.185	0.000	96	1158733	2.00	2.09	
102 1,2,3-Trimethylbenzene	105	18.234	18.234	0.000	98	762559	2.00	2.08	
103 Butylcyclohexane	83	18.298	18.298	0.000	95	796027	2.00	2.17	
104 1,2-Dichlorobenzene	146	18.482	18.482	0.000	90	588012	2.00	2.04	
105 2,3-Dihydroindene	117	18.487	18.487	0.000	94	853143	2.00	2.08	
106 Indene	116	18.622	18.622	0.000	91	628409	2.00	2.04	
107 n-Butylbenzene	91	18.643	18.643	0.000	98	1121302	2.00	2.20	
108 Undecane	57	18.994	18.994	0.000	88	494474	2.00	2.31	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.037	19.037	0.000	97	800432	2.00	2.05	
110 1,2-Dibromo-3-Chloropropan	157	19.123	19.123	0.000	94	247881	2.00	2.15	
111 1,2,4,5-Tetramethylbenzene	119	19.436	19.436	0.000	96	921017	2.00	2.07	
112 1,2,3,5-Tetramethylbenzene	119	19.490	19.490	0.000	94	558261	2.00	2.05	
113 1,2,3,4-Tetramethylbenzene	119	19.889	19.889	0.000	96	720347	2.00	2.10	
114 Dodecane	57	20.072	20.072	0.000	94	284705	2.00	2.21	
115 1,2,4-Trichlorobenzene	180	20.223	20.223	0.000	93	427233	2.00	2.22	
116 Naphthalene	128	20.347	20.347	0.000	98	800119	2.00	2.25	
117 Benzo(b)thiophene	134	20.450	20.450	0.000	99	394136	2.00	2.06	
118 Hexachlorobutadiene	225	20.569	20.569	0.000	95	569656	2.00	2.07	
119 1,2,3-Trichlorobenzene	180	20.622	20.622	0.000	93	370032	2.00	2.33	
120 2-Methylnaphthalene	142	21.453	21.453	0.000	99	384125	6.25	5.25	
121 1-Methylnaphthalene	142	21.658	21.658	0.000	99	356305	6.25	5.77	
A 124 Toluene Range	1	12.771	(12.741-12.801)		0	2408532	2.00	2.43	
A 125 C8 Range	1	13.520	(13.496-13.556)		0	2136674	2.00	2.15	
S 126 Xylenes, Total	100				0		6.00	6.28	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.43	

QC Flag Legend

Processing Flags

s - Failed ISTD Recovery Test

Reagents:

40CV101P_00022	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

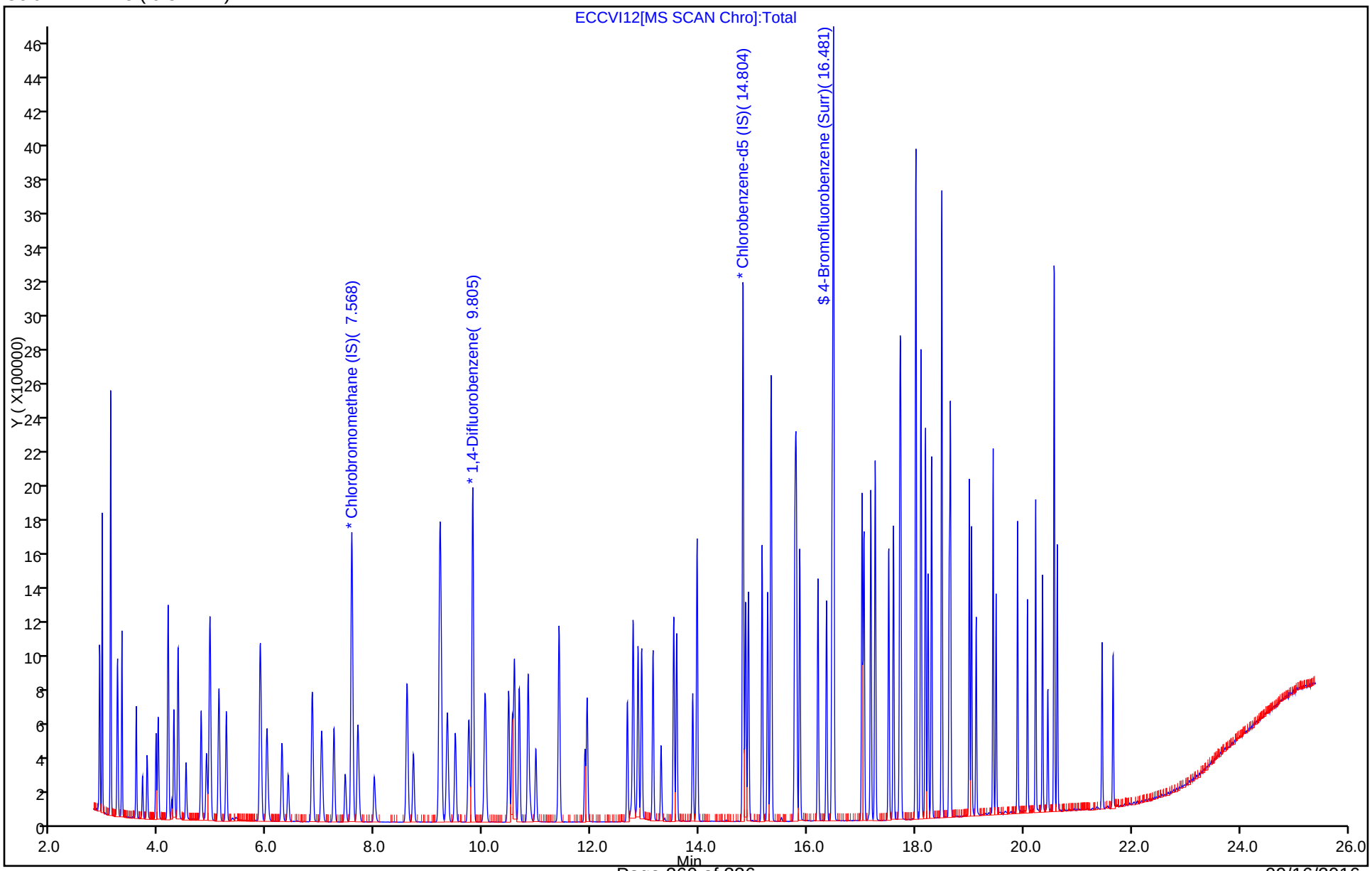
Report Date: 13-Sep-2016 11:41:28 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ECCVI12.D

Injection Date:	12-Sep-2016 10:43:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	CCVIS			Worklist Smp#:	2
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EBFBH23A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	23-Aug-2016 15:48:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	BFB,,3,,,BFB				
Misc. Info.:	140-0003339-001				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	25-Aug-2016 09:55:56	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK025				
First Level Reviewer: barlozhetskayaa		Date:	25-Aug-2016 09:55:56		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.980	4.969	0.011	0	2106098	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

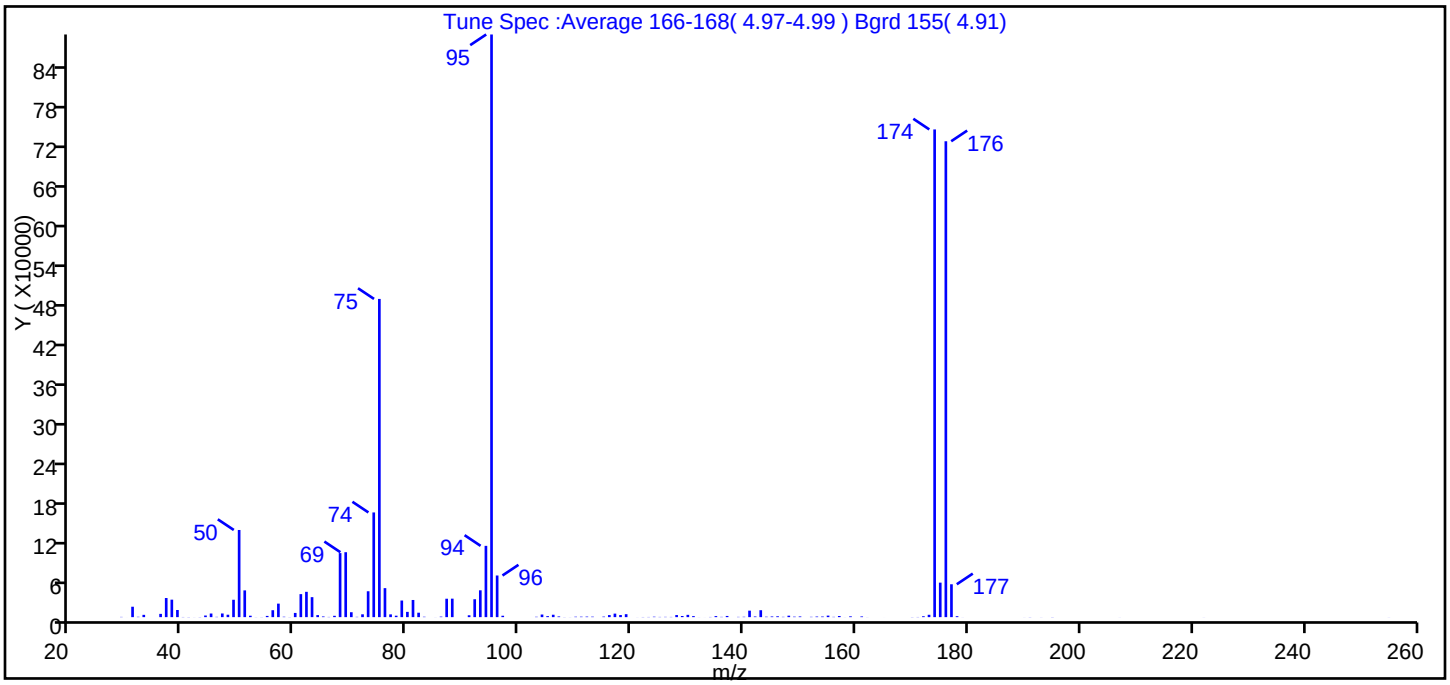
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EBFBH23A.D
Injection Date: 23-Aug-2016 15:48:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	15.0
75	30 to 60% of m/z 95	54.6
96	5 to 9% of m/z 95	7.1
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	83.7
175	5 to 9% of m/z 174	5.9 (7.1)
176	Greater than 95% but less than 101% of m/z 174	81.7 (97.6)
177	5 to 9% of m/z 176	5.6 (6.9)

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EBFBH23A.D\ME_TO15.rslt\spectra.d
Injection Date: 23-Aug-2016 15:48:30
Spectrum: Tune Spec :Average 166-168(4.97-4.99) Bgrd 155(4.91)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 137

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	353	66.00	324	109.00	90	147.00	459
30.00	20	67.00	2019	110.00	640	148.00	2205
31.00	15724	68.00	96744	111.00	706	149.00	731
32.00	525	69.00	98080	112.00	826	150.00	1049
33.00	3479	70.00	7425	113.00	719	152.00	478
36.00	4944	71.00	436	115.00	804	153.00	902
37.00	28880	72.00	4288	116.00	3122	154.00	921
38.00	26400	73.00	39112	117.00	5322	155.00	2309
39.00	10791	74.00	158144	118.00	3169	156.00	422
40.00	248	75.00	480640	119.00	4472	157.00	1717
41.00	214	76.00	43808	121.00	70	158.00	68
42.00	77	77.00	4176	122.00	233	159.00	1202
43.00	205	78.00	2190	123.00	273	161.00	1054
44.00	2450	79.00	25104	124.00	656	162.00	79
45.00	5481	80.00	7957	125.00	336	165.00	20
46.00	415	81.00	25920	126.00	415	170.00	198
47.00	5538	82.00	6698	127.00	325	171.00	252
48.00	3663	83.00	585	128.00	3166	172.00	1339
49.00	26272	85.00	74	129.00	1715	173.00	3574
50.00	131648	86.00	796	130.00	3472	174.00	736640
51.00	40424	87.00	27808	131.00	1539	175.00	52120
52.00	2146	88.00	27928	132.00	75	176.00	718784
53.00	113	91.00	2815	133.00	41	177.00	49664
54.00	152	92.00	27056	134.00	278	178.00	1401
55.00	1859	93.00	40536	135.00	1594	179.00	67
56.00	10468	94.00	107680	136.00	403	190.00	67
57.00	20408	95.00	880064	137.00	1792	191.00	183
58.00	599	96.00	62904	139.00	389	193.00	92
59.00	169	97.00	2103	140.00	545	195.00	204
60.00	6366	103.00	547	141.00	9790	207.00	70
61.00	34768	104.00	3958	142.00	991	222.00	75
62.00	38248	105.00	1515	143.00	10466	255.00	87
63.00	30184	106.00	3641	144.00	648		

Report Date: 25-Aug-2016 09:55:59 Chrom Revision: 2.2 16-Aug-2016 13:13:02
Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EBFBH23A.D\ME_TO15.rslt\spectra.d
Injection Date: 23-Aug-2016 15:48:30
Spectrum: Tune Spec :Average 166-168(4.97-4.99) Bgrd 155(4.91)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 137

m/z	Y	m/z	Y	m/z	Y	m/z	Y
64.00	3081	107.00	1048	145.00	1029		
65.00	1014	108.00	146	146.00	1282		

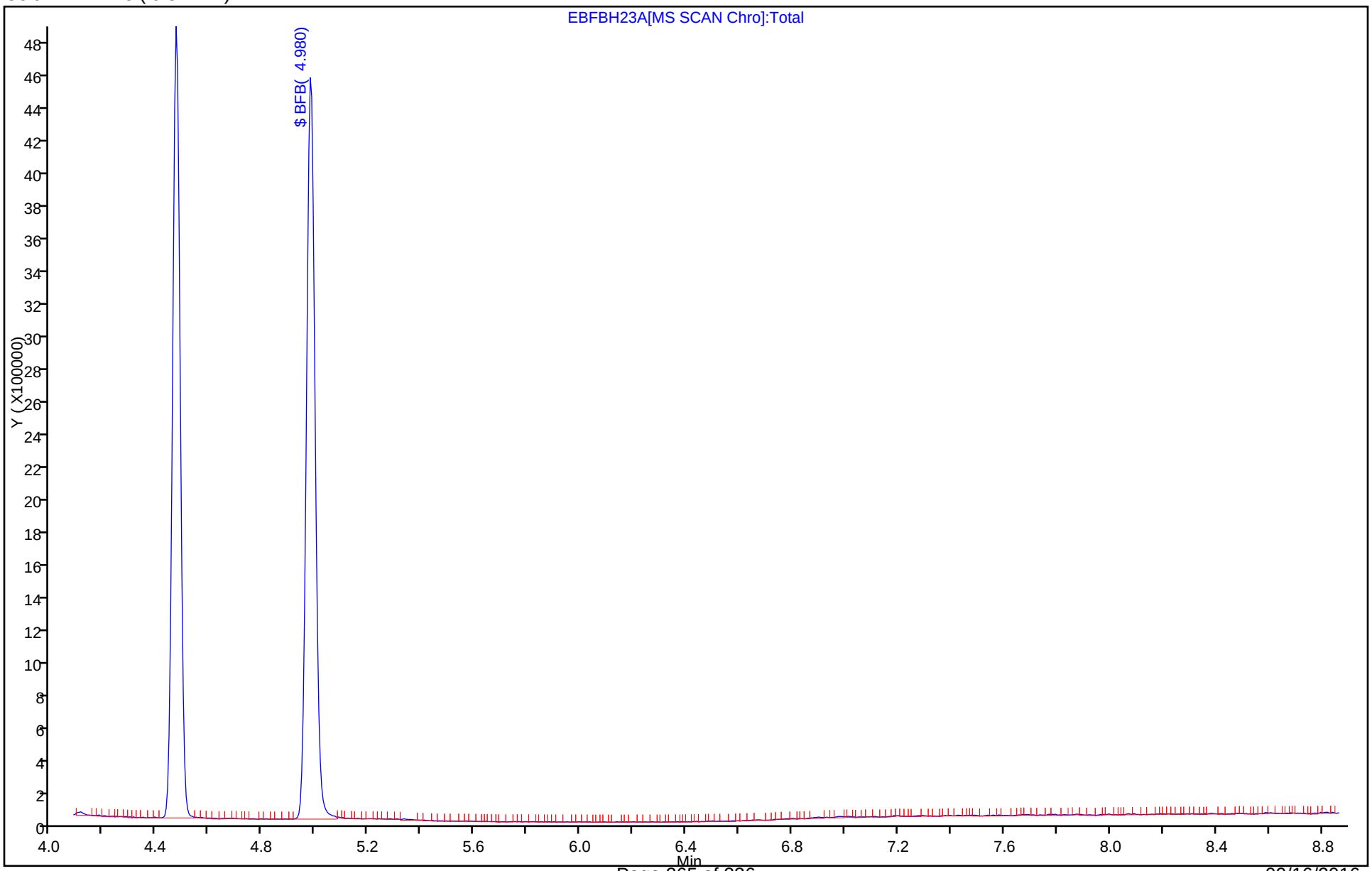
Report Date: 25-Aug-2016 09:55:59 Chrom Revision: 2.2 16-Aug-2016 13:13:02

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EBFBH23A.D

Injection Date:	23-Aug-2016 15:48:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EBFBI10A.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	10-Sep-2016 14:08:30	ALS Bottle#:	16	Worklist Smp#:	3
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	10-Sep-2016 17:09:15	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK009				
First Level Reviewer: barlozhetskayaa		Date:	10-Sep-2016 17:09:15		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.974	4.974	0.000	0	3189960	NR	NR	8

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
8 - Failed MS Tune Ratio Test

Reagents:

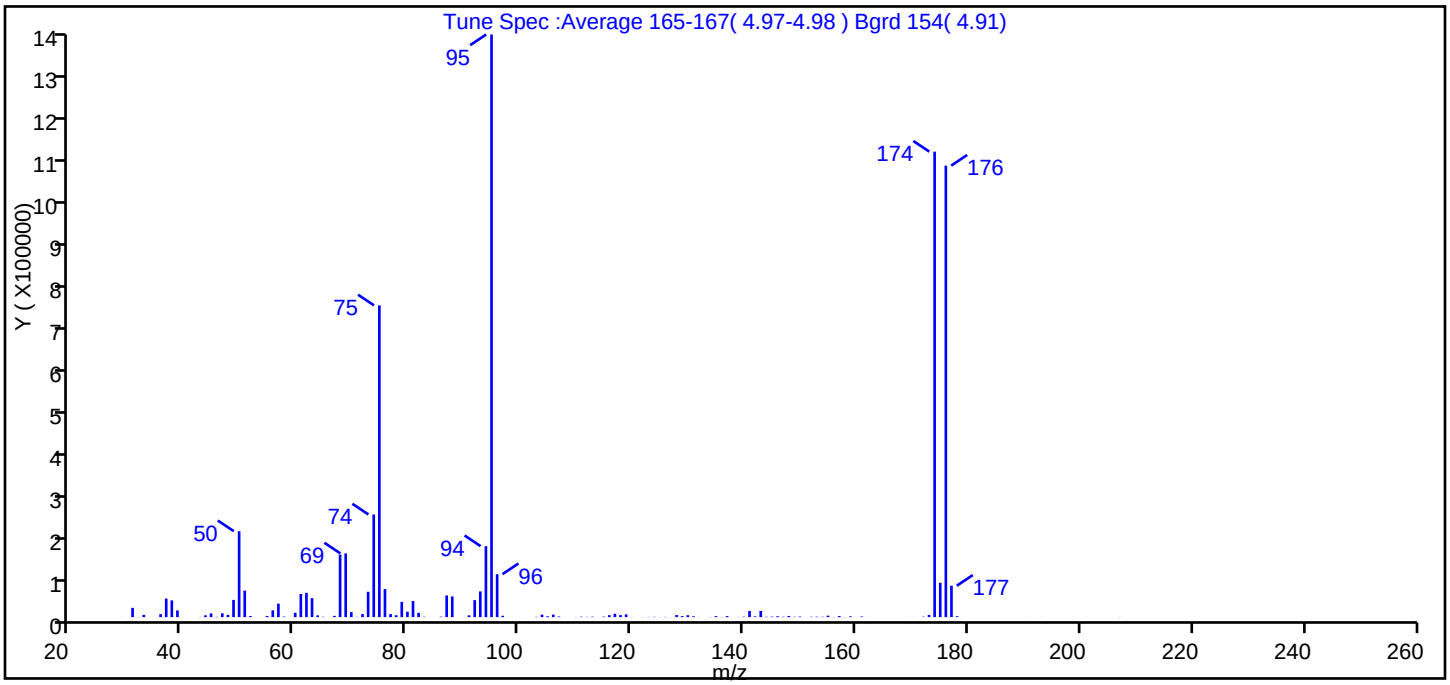
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EBFBI10A.D
Injection Date: 10-Sep-2016 14:08:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 3
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	14.8*
75	30 to 60% of m/z 95	53.5
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	79.9
175	5 to 9% of m/z 174	5.9 (7.4)
176	Greater than 95% but less than 101% of m/z 174	77.5 (97.0)
177	5 to 9% of m/z 176	5.4 (7.0)

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EBFBI10A.D\ME_TO15.rslt\spectra.d
Injection Date: 10-Sep-2016 14:08:30
Spectrum: Tune Spec :Average 165-167(4.97-4.98) Bgrd 154(4.91)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 128

m/z	Y	m/z	Y	m/z	Y	m/z	Y
29.00	93	65.00	855	104.00	5795	141.00	14298
31.00	21280	66.00	66	105.00	1947	142.00	1803
32.00	420	67.00	2925	106.00	5860	143.00	14302
33.00	5156	68.00	143552	107.00	1380	144.00	855
36.00	6850	69.00	146176	109.00	76	145.00	1162
37.00	42680	70.00	11405	110.00	206	146.00	2033
38.00	38408	71.00	592	111.00	1058	147.00	923
39.00	15433	72.00	6881	112.00	598	148.00	2723
40.00	173	73.00	58152	113.00	1093	149.00	828
41.00	78	74.00	235584	115.00	1106	150.00	1354
42.00	20	75.00	715328	116.00	4551	152.00	874
43.00	331	76.00	64472	117.00	7787	153.00	1024
44.00	4212	77.00	6937	118.00	4762	154.00	792
45.00	8521	78.00	4426	119.00	6331	155.00	3386
46.00	702	79.00	35024	120.00	383	156.00	473
47.00	8817	80.00	12500	122.00	351	157.00	2546
48.00	5292	81.00	36888	123.00	475	158.00	325
49.00	39560	82.00	9942	124.00	745	159.00	1829
50.00	197184	83.00	839	125.00	326	161.00	1428
51.00	60840	84.00	70	126.00	525	162.00	93
52.00	2485	86.00	1059	127.00	223	170.00	155
53.00	87	87.00	49792	128.00	4831	172.00	946
55.00	2625	88.00	47448	129.00	2468	173.00	5008
56.00	15690	91.00	4191	130.00	4442	174.00	1068032
57.00	30920	92.00	39016	131.00	1905	175.00	78856
58.00	1269	93.00	58992	132.00	201	176.00	1035968
59.00	71	94.00	162944	134.00	368	177.00	72032
60.00	9929	95.00	1336832	135.00	2352	178.00	2092
61.00	53152	96.00	98624	136.00	389	191.00	166
62.00	55840	97.00	3199	137.00	2490	193.00	83
63.00	43608	100.00	72	139.00	354	207.00	323
64.00	4046	103.00	685	140.00	987	253.00	17

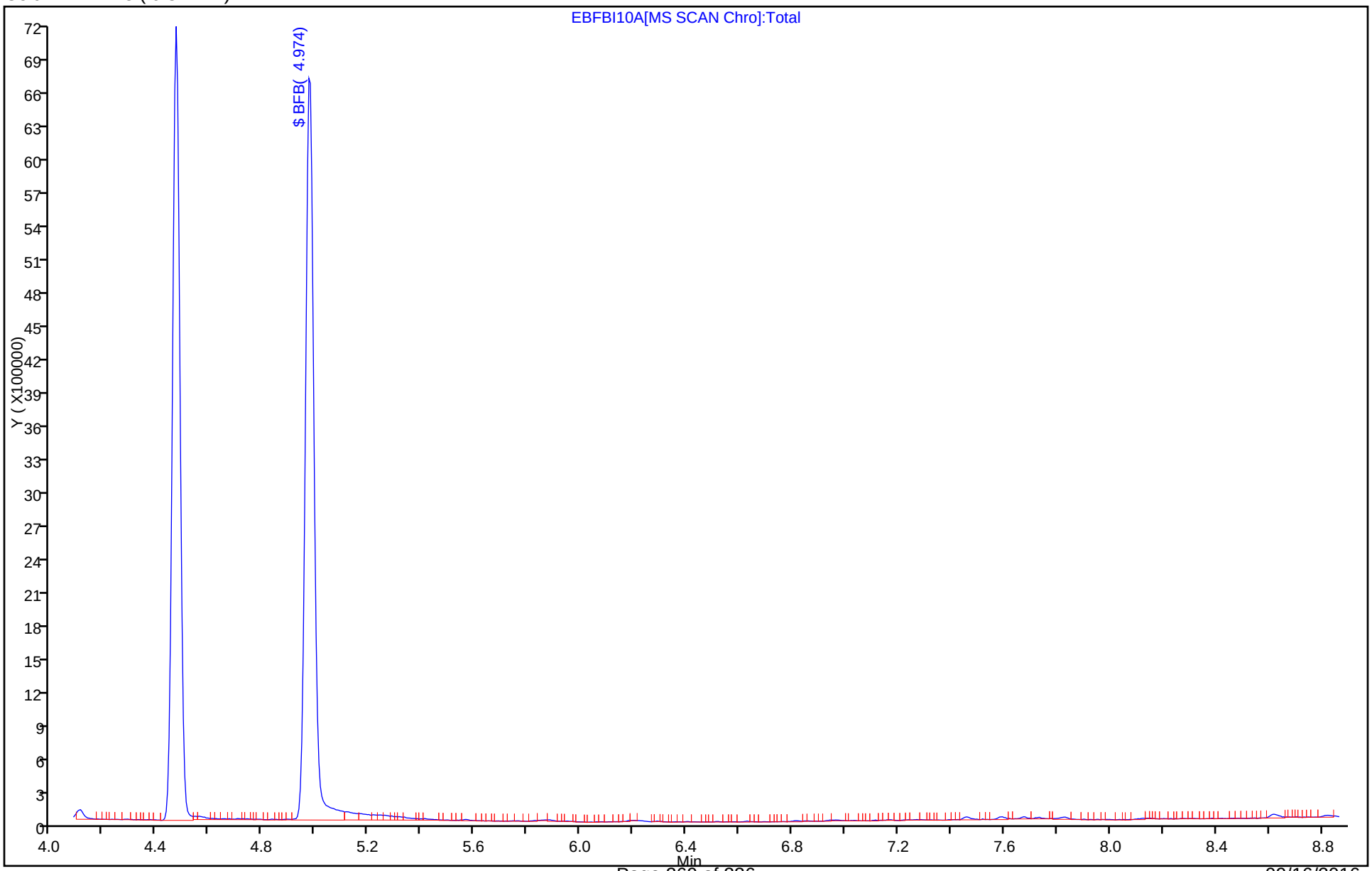
Report Date: 10-Sep-2016 17:09:16 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EBFBI10A.D

Injection Date:	10-Sep-2016 14:08:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	3
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EBFBI12.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	12-Sep-2016 10:12:30	ALS Bottle#:	16	Worklist Smp#:	1
Injection Vol:	500.0 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-001				
Misc. Info.:	BFB				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:41:26	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				
First Level Reviewer: barlozhetskayaa		Date:	12-Sep-2016 19:29:26		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
$ 5 BFB	95	4.980	4.980	0.000	0	2784610	NR	NR	8

QC Flag Legend

Processing Flags
NR - Missing Quant Standard
8 - Failed MS Tune Ratio Test

Reagents:

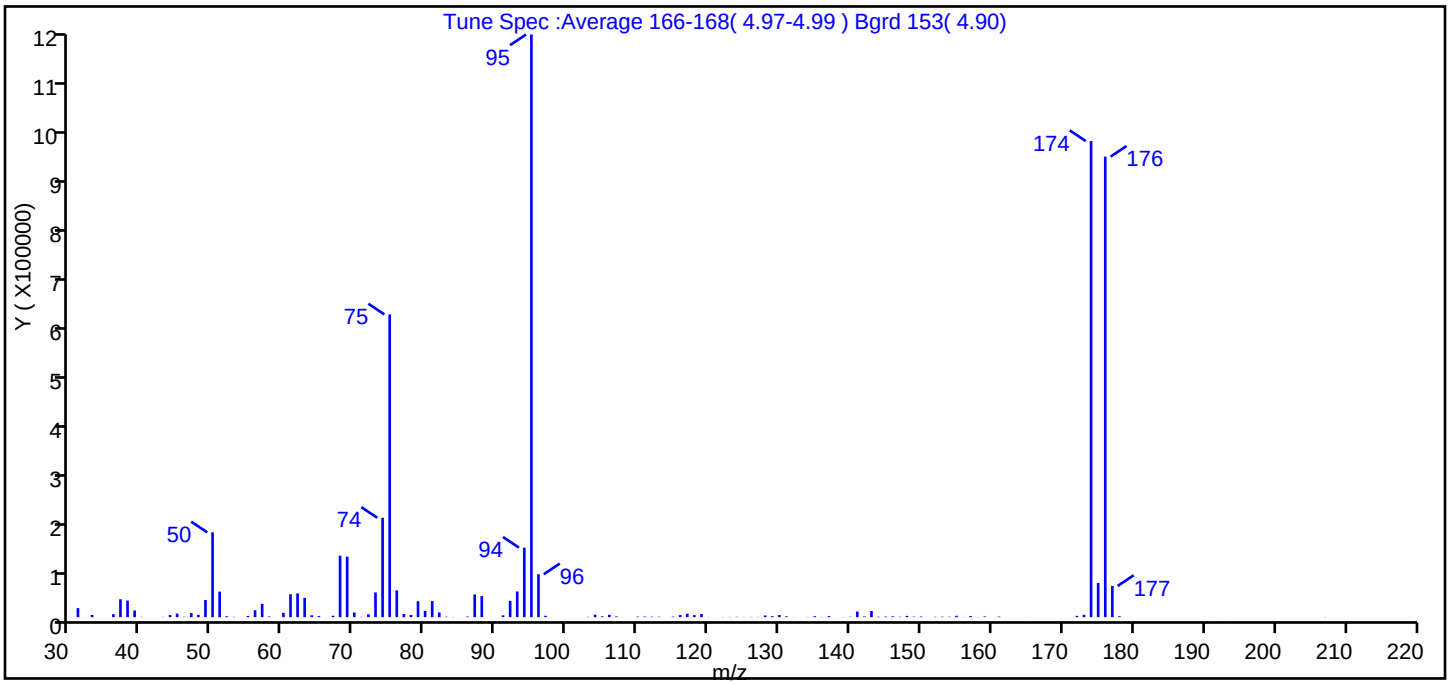
40MXSUR_00001 Amount Added: 40.00 Units: mL

MS Tune Report

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EBFBI12.D
Injection Date: 12-Sep-2016 10:12:30 Instrument ID: ME
Lims ID: BFB
Client ID:
Operator ID: 403648 ALS Bottle#: 16 Worklist Smp#: 1
Injection Vol: 500.0 mL Dil. Factor: 1.0000
Method: ME_TO15 Limit Group: MSA TO14A_15 Routine ICAL
Tune Method: BFB Method 8260

$ 5 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	14.6*
75	30 to 60% of m/z 95	52.0
96	5 to 9% of m/z 95	7.4
173	Less than 2% of m/z 174	0.4 (0.5)
174	50 to 120% of m/z 95	81.7
175	5 to 9% of m/z 174	5.9 (7.2)
176	Greater than 95% but less than 101% of m/z 174	79.0 (96.7)
177	5 to 9% of m/z 176	5.4 (6.8)

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EBFBI12.D\ME_TO15.rslt\spectra.d
Injection Date: 12-Sep-2016 10:12:30
Spectrum: Tune Spec :Average 166-168(4.97-4.99) Bgrd 153(4.90)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 130

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	89	68.00	126120	106.00	4790	144.00	884
31.00	18576	69.00	124168	107.00	1396	145.00	1225
32.00	123	70.00	9549	108.00	80	146.00	1597
33.00	4442	71.00	604	110.00	1097	147.00	749
34.00	70	72.00	5843	111.00	1174	148.00	2563
36.00	6170	73.00	50704	112.00	972	149.00	973
37.00	36720	74.00	203968	113.00	939	150.00	1191
38.00	33920	75.00	621440	115.00	1069	152.00	768
39.00	13662	76.00	55024	116.00	4296	153.00	924
40.00	468	77.00	6311	117.00	6842	154.00	797
43.00	399	78.00	4359	118.00	4239	155.00	2919
44.00	4331	79.00	32776	119.00	6265	156.00	320
45.00	7255	80.00	12958	120.00	366	157.00	2242
46.00	661	81.00	33096	122.00	292	158.00	293
47.00	8234	82.00	9612	123.00	382	159.00	1413
48.00	4484	83.00	894	124.00	681	161.00	1217
49.00	35264	84.00	319	125.00	431	162.00	82
50.00	174080	85.00	95	126.00	537	165.00	179
51.00	52464	86.00	1180	127.00	418	170.00	83
52.00	1913	87.00	46608	128.00	3460	171.00	102
53.00	555	88.00	43200	129.00	2076	172.00	2590
55.00	2414	90.00	86	130.00	4270	173.00	4788
56.00	14237	91.00	3715	131.00	1719	174.00	977280
57.00	27312	92.00	33392	132.00	218	175.00	70168
58.00	1326	93.00	52672	134.00	328	176.00	945280
60.00	8854	94.00	142656	135.00	1956	177.00	64008
61.00	47008	95.00	1196032	136.00	373	178.00	1902
62.00	48696	96.00	88080	137.00	2127	191.00	210
63.00	39616	97.00	2693	139.00	335	193.00	64
64.00	3888	98.00	95	140.00	722	207.00	280
65.00	2170	103.00	664	141.00	11565	219.00	79
66.00	110	104.00	4960	142.00	1433		
67.00	2767	105.00	1642	143.00	12571		

m/z	Y	m/z	Y	m/z	Y	m/z	Y
30.00	89	68.00	126120	106.00	4790	144.00	884
31.00	18576	69.00	124168	107.00	1396	145.00	1225
32.00	123	70.00	9549	108.00	80	146.00	1597
33.00	4442	71.00	604	110.00	1097	147.00	749
34.00	70	72.00	5843	111.00	1174	148.00	2563
36.00	6170	73.00	50704	112.00	972	149.00	973
37.00	36720	74.00	203968	113.00	939	150.00	1191
38.00	33920	75.00	621440	115.00	1069	152.00	768
39.00	13662	76.00	55024	116.00	4296	153.00	924
40.00	468	77.00	6311	117.00	6842	154.00	797
43.00	399	78.00	4359	118.00	4239	155.00	2919
44.00	4331	79.00	32776	119.00	6265	156.00	320
45.00	7255	80.00	12958	120.00	366	157.00	2242
46.00	661	81.00	33096	122.00	292	158.00	293
47.00	8234	82.00	9612	123.00	382	159.00	1413
48.00	4484	83.00	894	124.00	681	161.00	1217
49.00	35264	84.00	319	125.00	431	162.00	82
50.00	174080	85.00	95	126.00	537	165.00	179
51.00	52464	86.00	1180	127.00	418	170.00	83
52.00	1913	87.00	46608	128.00	3460	171.00	102
53.00	555	88.00	43200	129.00	2076	172.00	2590
55.00	2414	90.00	86	130.00	4270	173.00	4788
56.00	14237	91.00	3715	131.00	1719	174.00	977280
57.00	27312	92.00	33392	132.00	218	175.00	70168
58.00	1326	93.00	52672	134.00	328	176.00	945280
60.00	8854	94.00	142656	135.00	1956	177.00	64008
61.00	47008	95.00	1196032	136.00	373	178.00	1902
62.00	48696	96.00	88080	137.00	2127	191.00	210
63.00	39616	97.00	2693	139.00	335	193.00	64
64.00	3888	98.00	95	140.00	722	207.00	280
65.00	2170	103.00	664	141.00	11565	219.00	79
66.00	110	104.00	4960	142.00	1433		
67.00	2767	105.00	1642	143.00	12571		

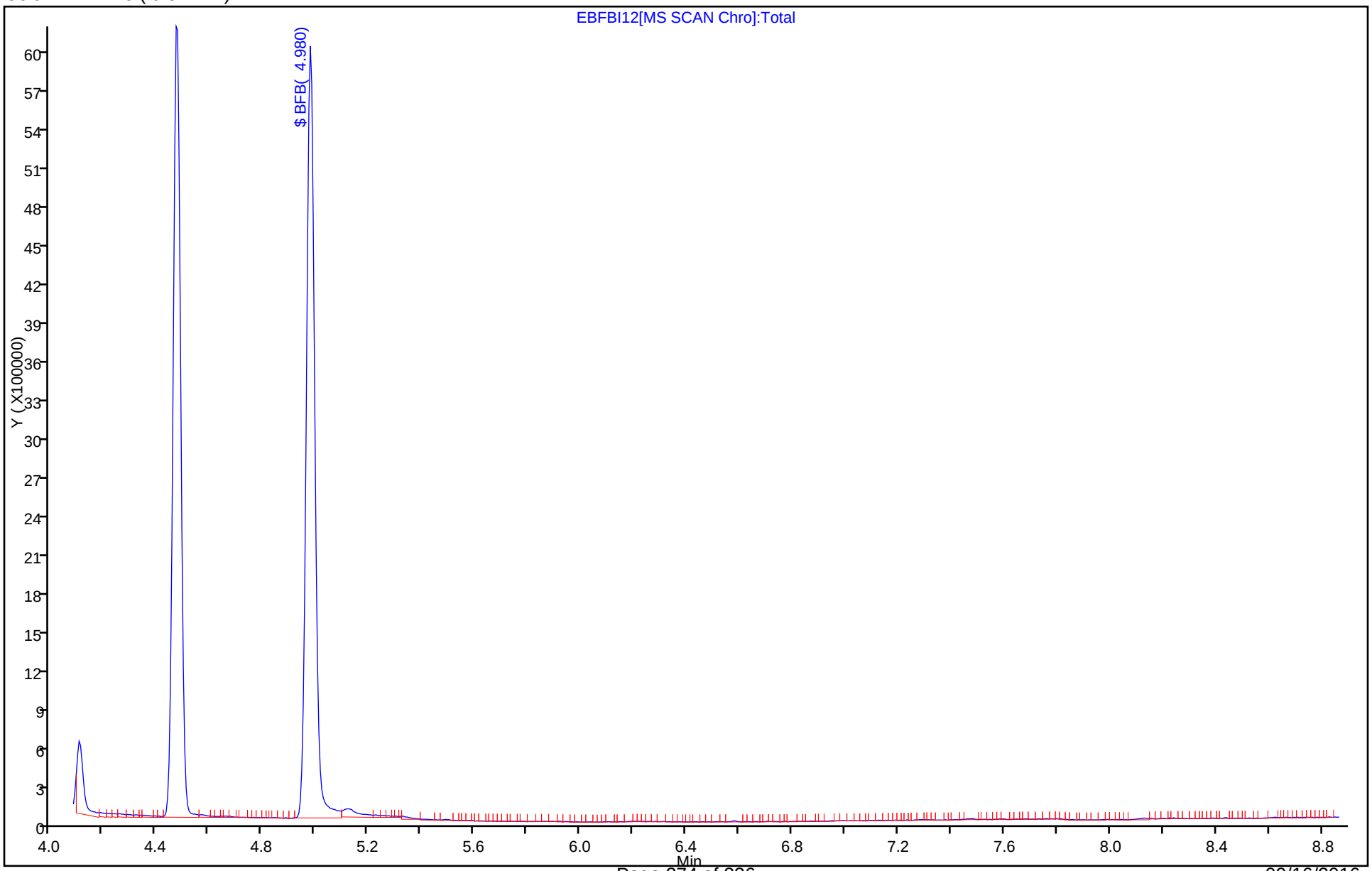
Report Date: 13-Sep-2016 11:41:27 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\EBFBI12.D

Injection Date:	12-Sep-2016 10:12:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	500.0 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6539/7

Matrix: Air Lab File ID: EMB500I10.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 09/10/2016 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6539/7

Matrix: Air Lab File ID: EMB500I10.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 09/10/2016 17:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EMB500I10.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 10-Sep-2016 17:31:30 ALS Bottle#: 16 Worklist Smp#: 7
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003405-007
Misc. Info.: MB500mL
Operator ID: 403648 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 12-Sep-2016 11:14:13 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK018

First Level Reviewer: tajh Date: 12-Sep-2016 11:14:13

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.557	7.568	-0.011	73	379492	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.805	-0.005	94	1719308	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	88	1621826	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	90	1321714	4.00	3.98	
31 Methylene Chloride	84	5.098	5.103	-0.005	75	7246		0.0609	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

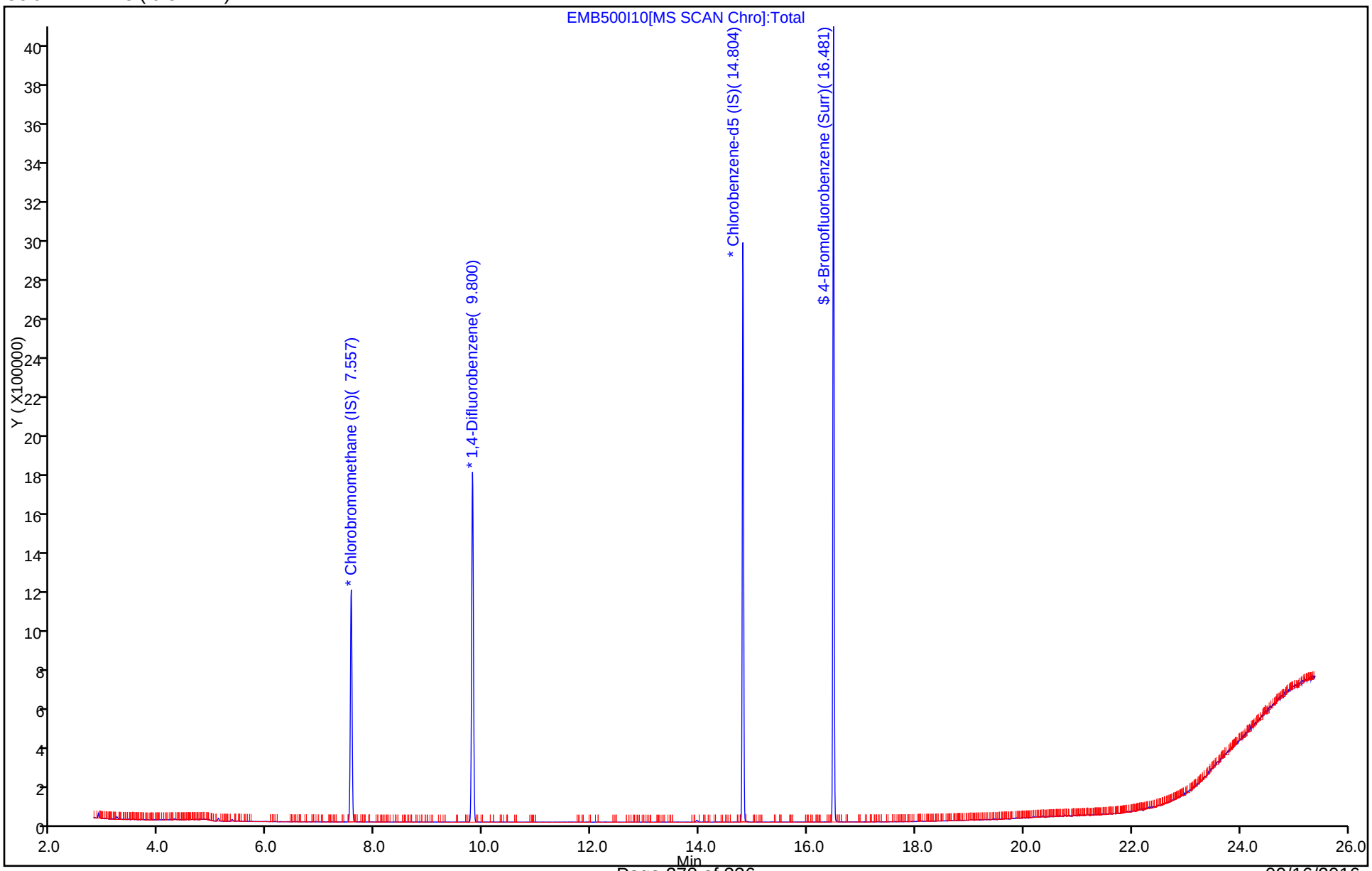
Report Date: 12-Sep-2016 11:14:14 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EMB500I10.D

Injection Date:	10-Sep-2016 17:31:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	MB			Worklist Smp#:	7
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\EMB500I10.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	10-Sep-2016 17:31:30	ALS Bottle#:	16	Worklist Smp#:	7
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003405-007				
Misc. Info.:	MB500mL				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	12-Sep-2016 11:14:13	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK018				

First Level Reviewer: tajh Date: 12-Sep-2016 11:14:13

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.98	99.57

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 140-6540/4

Matrix: Air Lab File ID: E500BI12.D

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 09/12/2016 12:21

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6540 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	ND		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	ND		0.080	0.015
67-66-3	Chloroform	119.38	ND		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	ND		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	ND		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	ND		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	ND		0.080	0.014
100-41-4	Ethylbenzene	106.17	ND		0.080	0.027
75-09-2	Methylene Chloride	84.93	ND		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	ND		0.40	0.068
91-20-3	Naphthalene	128.17	ND		0.040	0.040
127-18-4	Tetrachloroethene	165.83	ND		0.080	0.016
108-88-3	Toluene	92.14	ND		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.080	0.021
79-01-6	Trichloroethene	131.39	ND		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.080	0.026
75-01-4	Vinyl chloride	62.50	ND		0.040	0.029
1330-20-7	Xylenes, Total	106.17	ND		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5782-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 140-6540/4

Matrix: Air | Lab File ID: E500BI12.D

Analysis Method: TO 15 LL | Date Collected:

Sample wt/vol: 500(mL) | Date Analyzed: 09/12/2016 12:21

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6540 | Units: ug/m3

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	ND		0.26	0.073
56-23-5	Carbon tetrachloride	153.81	ND		0.50	0.094
75-45-6	Chlorodifluoromethane	86.47	ND		0.28	0.053
67-66-3	Chloroform	119.38	ND		0.39	0.073
156-59-2	cis-1,2-Dichloroethene	96.94	ND		0.32	0.095
75-71-8	Dichlorodifluoromethane	120.91	ND		0.40	0.13
75-34-3	1,1-Dichloroethane	98.96	ND		0.32	0.040
107-06-2	1,2-Dichloroethane	98.96	ND		0.32	0.077
75-35-4	1,1-Dichloroethene	96.94	ND		0.32	0.056
100-41-4	Ethylbenzene	106.17	ND		0.35	0.12
75-09-2	Methylene Chloride	84.93	ND		0.69	0.45
1634-04-4	Methyl tert-butyl ether	88.15	ND		1.4	0.25
91-20-3	Naphthalene	128.17	ND		0.21	0.21
127-18-4	Tetrachloroethene	165.83	ND		0.54	0.11
108-88-3	Toluene	92.14	ND		0.45	0.45
156-60-5	trans-1,2-Dichloroethene	96.94	ND		0.32	0.079
120-82-1	1,2,4-Trichlorobenzene	181.45	ND		0.59	0.29
71-55-6	1,1,1-Trichloroethane	133.41	ND		0.44	0.065
79-00-5	1,1,2-Trichloroethane	133.41	ND		0.44	0.11
79-01-6	Trichloroethene	131.39	ND		0.21	0.075
526-73-8	1,2,3-Trimethylbenzene	120.19	ND		0.39	0.17
95-63-6	1,2,4-Trimethylbenzene	120.20	ND		0.39	0.12
108-67-8	1,3,5-Trimethylbenzene	120.20	ND		0.39	0.13
75-01-4	Vinyl chloride	62.50	ND		0.10	0.074
1330-20-7	Xylenes, Total	106.17	ND		0.69	0.10

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		60-140

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\E500BI12.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	12-Sep-2016 12:21:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-004				
Misc. Info.:	500ML BLK				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:41:27	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				
First Level Reviewer: tajh		Date:	12-Sep-2016 13:07:22		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.557	7.562	-0.005	73	404519	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.800	9.805	-0.005	94	1875090	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.804	14.810	-0.006	88	1723834	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	90	1368562	4.00	3.88	
31 Methylene Chloride	84	5.103	5.103	0.000	76	7909		0.0623	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

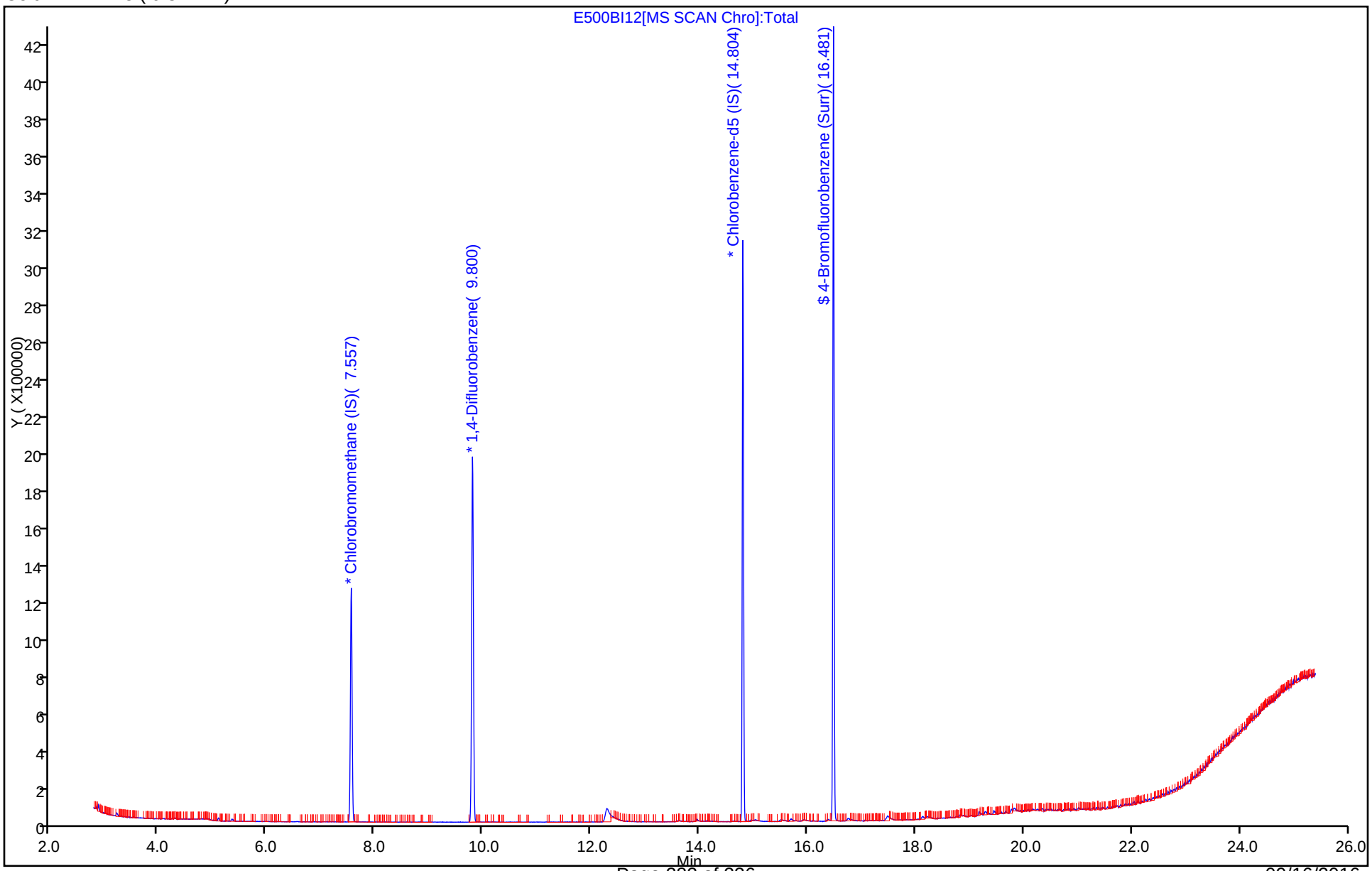
Report Date: 13-Sep-2016 11:41:32 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\E500BI12.D

Injection Date:	12-Sep-2016 12:21:30	Instrument ID:	ME	Operator ID:	007126
Lims ID:	MB			Worklist Smp#:	4
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Knoxville
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\E500BI12.D				
Lims ID:	MB				
Client ID:					
Sample Type:	MB				
Inject. Date:	12-Sep-2016 12:21:30	ALS Bottle#:	16	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-004				
Misc. Info.:	500ML BLK				
Operator ID:	007126	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:41:27	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				

First Level Reviewer: tajh Date: 12-Sep-2016 13:07:22

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.88	96.99

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-6539/1004

Matrix: Air Lab File ID: ECCVI10A-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 09/10/2016 14:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6539 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.15		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	2.07		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.15		0.080	0.015
67-66-3	Chloroform	119.38	2.12		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.25		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.32		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.21		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.07		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.16		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.18		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.12		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	2.06		0.40	0.068
91-20-3	Naphthalene	128.17	2.54		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.17		0.080	0.016
108-88-3	Toluene	92.14	2.15		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.24		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.55		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	2.08		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.17		0.080	0.021
79-01-6	Trichloroethene	131.39	2.15		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.23		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.25		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.26		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.44		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.52		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	100		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ECCVI10A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Sep-2016 14:39:30 ALS Bottle#: 3 Worklist Smp#: 1004
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003405-002
Misc. Info.: P22
Operator ID: 403648 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Sep-2016 17:12:48 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 10-Sep-2016 17:12:48

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.568	7.568	0.000	82	381284	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	92	1808529	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.810	14.810	0.000	88	1723895	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	90	1407188	4.00	3.99	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	95	97057	2.00	2.15	
7 Propene	41	2.909	2.909	0.000	97	149676	2.00	2.41	
8 Dichlorodifluoromethane	85	2.952	2.952	0.000	99	931575	2.00	2.32	
9 Chloromethane	52	3.097	3.097	0.000	100	58742	2.00	2.28	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.108	0.000	97	519445	2.00	2.44	
11 Acetaldehyde	44	3.227	3.227	0.000	97	256869	10.0	10.5	
12 Vinyl chloride	62	3.243	3.243	0.000	98	250850	2.00	2.44	
14 Butadiene	54	3.313	3.313	0.000	75	150279	2.00	2.31	
13 Butane	43	3.313	3.313	0.000	82	258493	2.00	2.31	
15 Bromomethane	94	3.577	3.577	0.000	98	285836	2.00	2.46	
16 Chloroethane	64	3.696	3.696	0.000	95	119453	2.00	2.18	
17 Ethanol	31	3.782	3.782	0.000	97	236203	10.0	8.74	
18 Vinyl bromide	106	3.944	3.944	0.000	98	259780	2.00	2.34	
19 2-Methylbutane	43	3.987	3.987	0.000	85	177446	2.00	2.07	
20 Trichlorofluoromethane	101	4.170	4.170	0.000	99	885569	2.00	2.28	
21 Acrolein	56	4.181	4.181	0.000	94	57023	2.00	2.25	
22 Acetonitrile	40	4.240	4.240	0.000	98	49440	2.00	2.00	
23 Acetone	58	4.278	4.278	0.000	97	213817	6.00	5.88	
25 Pentane	72	4.354	4.354	0.000	76	45559	2.00	2.23	
24 Isopropyl alcohol	45	4.354	4.354	0.000	79	562514	6.00	5.82	
26 Ethyl ether	31	4.499	4.499	0.000	78	119235	2.00	1.89	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	98	251204	2.00	2.16	
29 Acrylonitrile	53	4.882	4.882	0.000	95	99506	2.00	2.03	
28 2-Methyl-2-propanol	59	4.882	4.882	0.000	91	324321	2.00	2.05	
30 1,1,2-Trichloro-1,2,2-trif	101	4.947	4.947	0.000	97	555292	2.00	2.22	
31 Methylene Chloride	84	5.103	5.103	0.000	80	253873	2.00	2.12	
32 3-Chloro-1-propene	39	5.119	5.119	0.000	90	176625	2.00	1.82	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.249	5.249	0.000	97	828371	2.00	2.31	
34 trans-1,2-Dichloroethene	96	5.869	5.869	0.000	96	282639	2.00	2.24	
35 2-Methylpentane	43	5.885	5.885	0.000	86	338602	2.00	2.17	
36 Methyl tert-butyl ether	73	5.998	5.998	0.000	93	753852	2.00	2.06	
37 1,1-Dichloroethane	63	6.279	6.279	0.000	100	468341	2.00	2.21	
38 Vinyl acetate	43	6.392	6.392	0.000	98	408964	2.00	2.14	
39 2-Butanone (MEK)	72	6.829	6.829	0.000	99	106397	2.00	1.91	
40 Hexane	56	6.840	6.840	0.000	82	159447	2.00	2.14	
41 Isopropyl ether	45	7.012	7.012	0.000	90	495308	2.00	2.16	
42 cis-1,2-Dichloroethene	96	7.239	7.239	0.000	91	286823	2.00	2.25	
43 Ethyl acetate	43	7.449	7.449	0.000	98	307457	2.00	2.06	
44 Chloroform	83	7.584	7.584	0.000	97	673311	2.00	2.12	
45 Tert-butyl ethyl ether	59	7.681	7.681	0.000	90	607430	2.00	2.11	
46 Tetrahydrofuran	42	7.988	7.988	0.000	78	153763	2.00	2.06	
47 1,1,1-Trichloroethane	97	8.592	8.592	0.000	94	741178	2.00	2.08	
48 1,2-Dichloroethane	62	8.711	8.711	0.000	99	425263	2.00	2.07	
50 Cyclohexane	69	9.191	9.191	0.000	90	128085	2.00	2.09	
51 Benzene	78	9.196	9.196	0.000	94	797838	2.00	2.15	
54 Thiophene	84	9.196	9.196	0.000	66	481848	2.00	2.15	
49 n-Butanol	31	9.201	9.201	0.000	53	35568	2.00	1.60	
52 Carbon tetrachloride	117	9.223	9.223	0.000	97	740942	2.00	2.07	
53 2,3-Dimethylpentane	71	9.336	9.336	0.000	85	183839	2.00	2.13	
55 Tert-amyl methyl ether	73	9.735	9.735	0.000	97	708084	2.00	2.03	
56 Isooctane	57	10.037	10.037	0.000	97	964038	2.00	2.24	
57 n-Heptane	71	10.474	10.474	0.000	78	278240	2.00	2.11	
58 1,2-Dichloropropane	63	10.539	10.539	0.000	87	247917	2.00	2.24	
59 Trichloroethene	130	10.582	10.582	0.000	95	348476	2.00	2.15	
60 Dibromomethane	93	10.668	10.668	0.000	96	346548	2.00	2.14	
61 Dichlorobromomethane	83	10.830	10.830	0.000	97	673408	2.00	2.14	
62 1,4-Dioxane	88	10.873	10.873	0.000	77	102710	2.00	2.00	
63 Methyl methacrylate	41	10.976	10.976	0.000	85	193151	2.00	1.96	
64 Methylcyclohexane	83	11.407	11.407	0.000	89	616727	2.00	2.18	
65 4-Methyl-2-pentanone (MIBK	43	11.881	11.881	0.000	91	263874	2.00	1.82	
66 cis-1,3-Dichloropropene	75	11.925	11.925	0.000	89	489446	2.00	2.18	
67 trans-1,3-Dichloropropene	75	12.669	12.669	0.000	93	460007	2.00	2.11	
68 Toluene	91	12.777	12.777	0.000	94	889088	2.00	2.15	
69 1,1,2-Trichloroethane	83	12.868	12.868	0.000	97	276042	2.00	2.17	
70 2-Methylthiophene	97	12.933	12.933	0.000	96	776229	2.00	2.26	
71 3-Methylthiophene	97	13.143	13.143	0.000	97	754517	2.00	2.24	
72 2-Hexanone	58	13.294	13.294	0.000	99	156320	2.00	1.94	
73 n-Octane	85	13.526	13.526	0.000	78	320672	2.00	2.26	
74 Chlorodibromomethane	129	13.580	13.580	0.000	97	586435	2.00	2.20	
75 Ethylene Dibromide	107	13.877	13.877	0.000	98	501895	2.00	2.21	
76 Tetrachloroethene	129	13.958	13.958	0.000	95	349606	2.00	2.17	
77 Chlorobenzene	112	14.858	14.858	0.000	92	711603	2.00	2.23	
78 2,3-Dimethylheptane	43	14.907	14.907	0.000	77	475930	2.00	2.16	
79 Ethylbenzene	91	15.160	15.160	0.000	98	1210035	2.00	2.18	
80 2-Ethylthiophene	97	15.262	15.262	0.000	97	974420	2.00	2.25	
81 m-Xylene & p-Xylene	91	15.327	15.327	0.000	98	1884058	4.00	4.35	
83 Bromoform	173	15.764	15.764	0.000	96	602265	2.00	2.32	
82 n-Nonane	57	15.780	15.780	0.000	78	428205	2.00	2.31	
84 Styrene	104	15.802	15.802	0.000	96	663896	2.00	2.38	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	15.856	15.856	0.000	98	986009	2.00	2.17	
86 1,1,2,2-Tetrachloroethane	83	16.195	16.195	0.000	99	655437	2.00	2.27	
87 1,2,3-Trichloropropane	110	16.352	16.352	0.000	97	223235	2.00	2.16	
88 Isopropylbenzene	105	16.460	16.460	0.000	97	1307278	2.00	2.16	
89 N-Propylbenzene	120	17.010	17.010	0.000	99	353062	2.00	2.27	
90 2-Chlorotoluene	126	17.047	17.047	0.000	96	314553	2.00	2.23	
91 4-Ethyltoluene	105	17.171	17.171	0.000	98	1263695	2.00	2.24	
92 1,3,5-Trimethylbenzene	120	17.258	17.258	0.000	92	595744	2.00	2.26	
93 Alpha Methyl Styrene	118	17.506	17.506	0.000	87	475365	2.00	2.27	
94 n-Decane	57	17.592	17.592	0.000	94	521869	2.00	2.41	
95 tert-Butylbenzene	119	17.711	17.711	0.000	91	1152733	2.00	2.22	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	96	1096621	2.00	2.25	
98 1,3-Dichlorobenzene	146	18.007	18.007	0.000	98	670449	2.00	2.27	
97 sec-Butylbenzene	105	18.007	18.007	0.000	97	1507135	2.00	2.23	
99 Benzyl chloride	91	18.099	18.099	0.000	97	925278	2.00	2.35	
100 1,4-Dichlorobenzene	146	18.104	18.104	0.000	91	654512	2.00	2.28	
101 4-Isopropyltoluene	119	18.185	18.185	0.000	96	1281114	2.00	2.30	
102 1,2,3-Trimethylbenzene	105	18.234	18.234	0.000	98	821827	2.00	2.23	
103 Butylcyclohexane	83	18.298	18.298	0.000	95	829994	2.00	2.25	
104 1,2-Dichlorobenzene	146	18.487	18.487	0.000	91	640756	2.00	2.22	
105 2,3-Dihydroindene	117	18.487	18.487	0.000	93	933496	2.00	2.27	
106 Indene	116	18.622	18.622	0.000	92	678777	2.00	2.20	
107 n-Butylbenzene	91	18.649	18.649	0.000	99	1193822	2.00	2.33	
108 Undecane	57	18.994	18.994	0.000	88	524983	2.00	2.44	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.037	19.037	0.000	97	885611	2.00	2.26	
110 1,2-Dibromo-3-Chloropropan	157	19.123	19.123	0.000	95	271480	2.00	2.34	
111 1,2,4,5-Tetramethylbenzene	119	19.436	19.436	0.000	96	1028203	2.00	2.31	
112 1,2,3,5-Tetramethylbenzene	119	19.490	19.490	0.000	94	632744	2.00	2.32	
113 1,2,3,4-Tetramethylbenzene	119	19.889	19.889	0.000	96	821728	2.00	2.39	
114 Dodecane	57	20.072	20.072	0.000	94	325835	2.00	2.52	
115 1,2,4-Trichlorobenzene	180	20.223	20.223	0.000	93	493906	2.00	2.55	
116 Naphthalene	128	20.353	20.353	0.000	98	907536	2.00	2.54	
117 Benzo(b)thiophene	134	20.450	20.450	0.000	99	438436	2.00	2.28	
118 Hexachlorobutadiene	225	20.569	20.569	0.000	96	656227	2.00	2.37	
119 1,2,3-Trichlorobenzene	180	20.623	20.623	0.000	94	442723	2.00	2.78	
120 2-Methylnaphthalene	142	21.453	21.453	0.000	99	482733	6.25	6.58	
121 1-Methylnaphthalene	142	21.658	21.658	0.000	99	453976	6.25	7.33	
A 124 Toluene Range	1	12.777	(12.747-12.807)		0	2111197	2.00	2.16	
A 125 C8 Range	1	13.520	(13.496-13.556)		0	2139864	2.00	2.18	
S 126 Xylenes, Total	100				0		6.00	6.53	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.48	

Reagents:

40CV101P_00022	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

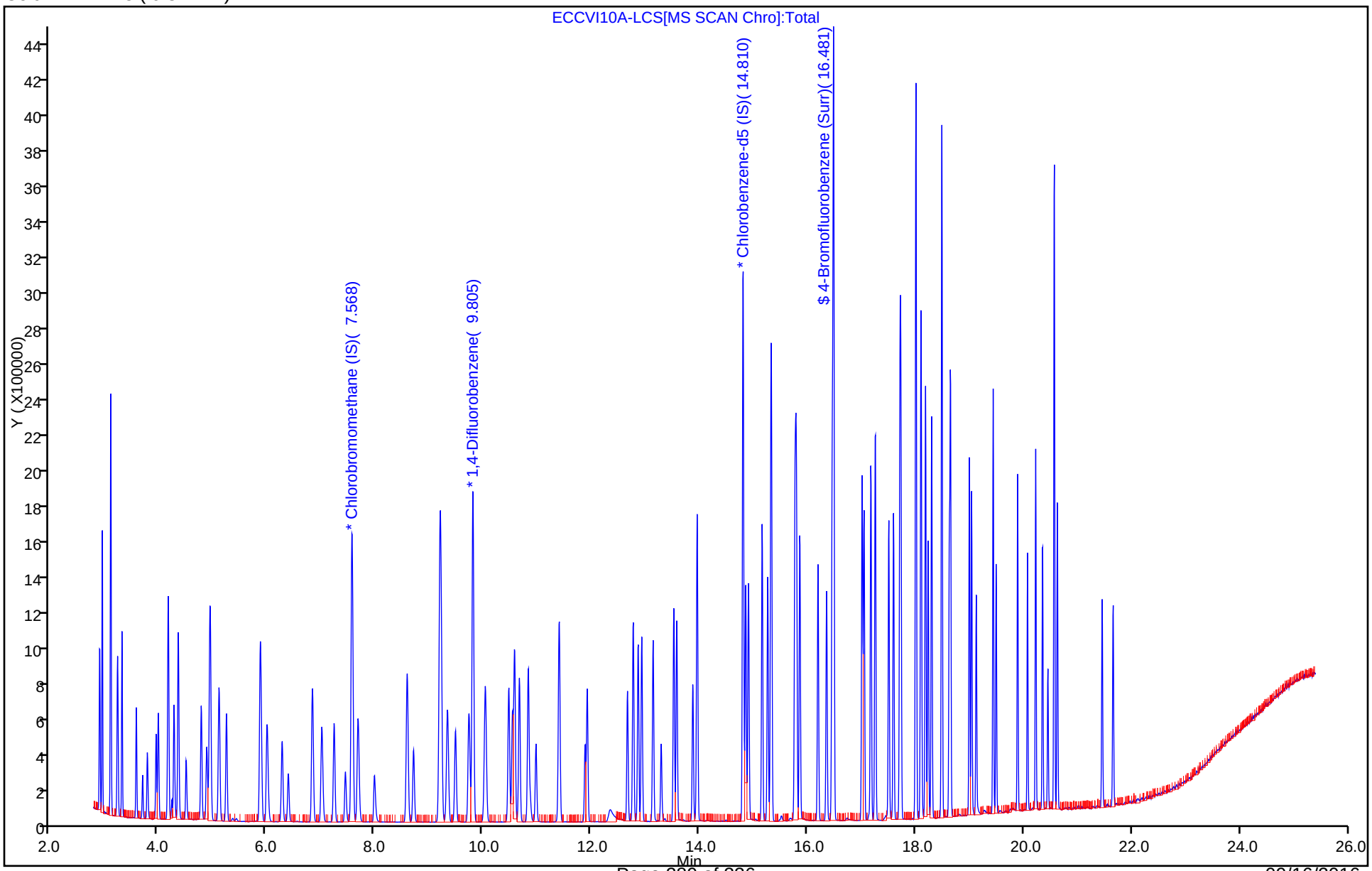
Report Date: 10-Sep-2016 17:12:51 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ECCVI10A-LCS.d

Injection Date:	10-Sep-2016 14:39:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	LCS			Worklist Smp#:	1004
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ECCVI10A-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 10-Sep-2016 14:39:30 ALS Bottle#: 3 Worklist Smp#: 1004
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003405-002
Misc. Info.: P22
Operator ID: 403648 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3405.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 10-Sep-2016 17:12:48 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK009

First Level Reviewer: barlozhetskayaa Date: 10-Sep-2016 17:12:48

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	3.99	99.73

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Client Sample ID: Lab Sample ID: LCS 140-6540/1002

Matrix: Air Lab File ID: ECCVI12-LCS.d

Analysis Method: TO 15 LL Date Collected:

Sample wt/vol: 500(mL) Date Analyzed: 09/12/2016 10:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6540 Units: ppb v/v

CAS NO.	COMPOUND NAME	MOLECULAR WEIGHT	RESULT	Q	RL	MDL
71-43-2	Benzene	78.11	2.12		0.080	0.023
56-23-5	Carbon tetrachloride	153.81	1.96		0.080	0.015
75-45-6	Chlorodifluoromethane	86.47	2.18		0.080	0.015
67-66-3	Chloroform	119.38	2.09		0.080	0.015
156-59-2	cis-1,2-Dichloroethene	96.94	2.20		0.080	0.024
75-71-8	Dichlorodifluoromethane	120.91	2.42		0.080	0.027
75-34-3	1,1-Dichloroethane	98.96	2.24		0.080	0.010
107-06-2	1,2-Dichloroethane	98.96	2.00		0.080	0.019
75-35-4	1,1-Dichloroethene	96.94	2.05		0.080	0.014
100-41-4	Ethylbenzene	106.17	2.09		0.080	0.027
75-09-2	Methylene Chloride	84.93	2.16		0.20	0.13
1634-04-4	Methyl tert-butyl ether	88.15	1.97		0.40	0.068
91-20-3	Naphthalene	128.17	2.25		0.040	0.040
127-18-4	Tetrachloroethene	165.83	2.04		0.080	0.016
108-88-3	Toluene	92.14	2.10		0.12	0.12
156-60-5	trans-1,2-Dichloroethene	96.94	2.23		0.080	0.020
120-82-1	1,2,4-Trichlorobenzene	181.45	2.22		0.080	0.039
71-55-6	1,1,1-Trichloroethane	133.41	1.99		0.080	0.012
79-00-5	1,1,2-Trichloroethane	133.41	2.16		0.080	0.021
79-01-6	Trichloroethene	131.39	2.01		0.040	0.014
526-73-8	1,2,3-Trimethylbenzene	120.19	2.08		0.080	0.034
95-63-6	1,2,4-Trimethylbenzene	120.20	2.10		0.080	0.025
108-67-8	1,3,5-Trimethylbenzene	120.20	2.10		0.080	0.026
75-01-4	Vinyl chloride	62.50	2.54		0.040	0.029
1330-20-7	Xylenes, Total	106.17	6.28		0.16	0.024

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	103		60-140

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ECCVI12-LCS.d
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 12-Sep-2016 10:43:30 ALS Bottle#: 15 Worklist Smp#: 1002
Purge Vol: 500.000 mL Dil. Factor: 1.0000
Sample Info: 140-0003406-002
Misc. Info.: P22
Operator ID: 403648 Instrument ID: ME

Method: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m
Limit Group: MSA TO14A_15 Routine ICAL
Last Update: 13-Sep-2016 11:41:27 Calib Date: 23-Aug-2016 23:02:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D

Column 1 : RTX-5 (0.32 mm) Det: MS SCAN
Process Host: XAWRK019

First Level Reviewer: barlozhetskayaa Date: 12-Sep-2016 19:33:18

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	7.562	7.562	0.000	83	380713	4.00	4.00	
* 2 1,4-Difluorobenzene	114	9.805	9.805	0.000	94	1831211	4.00	4.00	
* 3 Chlorobenzene-d5 (IS)	117	14.810	14.810	0.000	88	1718365	4.00	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	16.481	16.481	0.000	89	1453995	4.00	4.14	
6 Chlorodifluoromethane	67	2.898	2.898	0.000	94	98438	2.00	2.18	
7 Propene	41	2.903	2.903	0.000	97	158683	2.00	2.56	
8 Dichlorodifluoromethane	85	2.946	2.946	0.000	99	968899	2.00	2.42	
9 Chloromethane	52	3.097	3.097	0.000	98	60553	2.00	2.36	
10 1,2-Dichloro-1,1,2,2-tetra	135	3.108	3.108	0.000	96	520529	2.00	2.45	
11 Acetaldehyde	44	3.227	3.227	0.000	98	268410	10.0	11.0	
12 Vinyl chloride	62	3.237	3.237	0.000	99	260320	2.00	2.54	
14 Butadiene	54	3.313	3.313	0.000	75	155461	2.00	2.39	
13 Butane	43	3.313	3.313	0.000	82	265462	2.00	2.37	
15 Bromomethane	94	3.577	3.577	0.000	98	290195	2.00	2.50	
16 Chloroethane	64	3.696	3.696	0.000	95	122661	2.00	2.25	
17 Ethanol	31	3.777	3.777	0.000	98	232403	10.0	8.61	
18 Vinyl bromide	106	3.944	3.944	0.000	98	258167	2.00	2.33	
19 2-Methylbutane	43	3.982	3.982	0.000	84	178336	2.00	2.08	
20 Trichlorofluoromethane	101	4.165	4.165	0.000	99	889343	2.00	2.29	
21 Acrolein	56	4.176	4.176	0.000	95	56458	2.00	2.23	
22 Acetonitrile	40	4.235	4.235	0.000	98	47936	2.00	1.95	
23 Acetone	58	4.273	4.273	0.000	98	207983	6.00	5.73	
24 Isopropyl alcohol	45	4.348	4.348	0.000	93	528197	6.00	5.47	
25 Pentane	72	4.354	4.354	0.000	96	46215	2.00	2.26	
26 Ethyl ether	31	4.499	4.499	0.000	77	115281	2.00	1.83	
27 1,1-Dichloroethene	96	4.780	4.780	0.000	99	237825	2.00	2.05	
28 2-Methyl-2-propanol	59	4.877	4.877	0.000	92	299517	2.00	1.90	
29 Acrylonitrile	53	4.882	4.882	0.000	94	91804	2.00	1.87	
30 1,1,2-Trichloro-1,2,2-trif	101	4.941	4.941	0.000	96	535491	2.00	2.14	
31 Methylene Chloride	84	5.103	5.103	0.000	81	257857	2.00	2.16	
32 3-Chloro-1-propene	39	5.114	5.114	0.000	91	180519	2.00	1.87	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
33 Carbon disulfide	76	5.243	5.243	0.000	97	866817	2.00	2.42	
34 trans-1,2-Dichloroethene	96	5.869	5.869	0.000	96	282096	2.00	2.23	
35 2-Methylpentane	43	5.885	5.885	0.000	86	348632	2.00	2.23	
36 Methyl tert-butyl ether	73	5.998	5.998	0.000	93	720845	2.00	1.97	
37 1,1-Dichloroethane	63	6.273	6.273	0.000	99	473957	2.00	2.24	
38 Vinyl acetate	43	6.387	6.387	0.000	99	409958	2.00	2.14	
39 2-Butanone (MEK)	72	6.829	6.829	0.000	98	107543	2.00	1.94	
40 Hexane	56	6.840	6.840	0.000	85	160743	2.00	2.16	
41 Isopropyl ether	45	7.007	7.007	0.000	91	494112	2.00	2.16	
42 cis-1,2-Dichloroethene	96	7.239	7.239	0.000	91	280005	2.00	2.20	
43 Ethyl acetate	43	7.444	7.444	0.000	98	307989	2.00	2.07	
44 Chloroform	83	7.578	7.578	0.000	97	663432	2.00	2.09	
45 Tert-butyl ethyl ether	59	7.681	7.681	0.000	91	582805	2.00	2.03	
46 Tetrahydrofuran	42	7.983	7.983	0.000	77	151911	2.00	2.04	
47 1,1,1-Trichloroethane	97	8.592	8.592	0.000	94	708919	2.00	1.99	
48 1,2-Dichloroethane	62	8.705	8.705	0.000	99	416088	2.00	2.00	
50 Cyclohexane	69	9.191	9.191	0.000	91	129101	2.00	2.08	
54 Thiophene	84	9.191	9.191	0.000	67	469659	2.00	2.07	
51 Benzene	78	9.196	9.196	0.000	95	794616	2.00	2.12	
49 n-Butanol	31	9.201	9.201	0.000	53	34565	2.00	1.53	
52 Carbon tetrachloride	117	9.218	9.218	0.000	97	708715	2.00	1.96	
53 2,3-Dimethylpentane	71	9.336	9.336	0.000	85	185577	2.00	2.12	
55 Tert-amyl methyl ether	73	9.735	9.735	0.000	97	701586	2.00	2.02	
56 Isooctane	57	10.032	10.032	0.000	98	957799	2.00	2.20	
57 n-Heptane	71	10.469	10.469	0.000	78	281699	2.00	2.11	
58 1,2-Dichloropropane	63	10.539	10.539	0.000	87	250471	2.00	2.23	
59 Trichloroethene	130	10.576	10.576	0.000	95	329986	2.00	2.01	
60 Dibromomethane	93	10.663	10.663	0.000	95	342287	2.00	2.09	
61 Dichlorobromomethane	83	10.830	10.830	0.000	97	662372	2.00	2.08	
62 1,4-Dioxane	88	10.868	10.868	0.000	77	95128	2.00	1.83	
63 Methyl methacrylate	41	10.970	10.970	0.000	79	189595	2.00	1.90	
64 Methylcyclohexane	83	11.402	11.402	0.000	90	604343	2.00	2.11	
65 4-Methyl-2-pentanone (MIBK	43	11.881	11.881	0.000	91	259766	2.00	1.77	
66 cis-1,3-Dichloropropene	75	11.925	11.925	0.000	89	479766	2.00	2.11	
67 trans-1,3-Dichloropropene	75	12.669	12.669	0.000	93	451432	2.00	2.08	
68 Toluene	91	12.771	12.771	0.000	94	867492	2.00	2.10	
69 1,1,2-Trichloroethane	83	12.863	12.863	0.000	98	273726	2.00	2.16	
70 2-Methylthiophene	97	12.933	12.933	0.000	96	732935	2.00	2.14	
71 3-Methylthiophene	97	13.143	13.143	0.000	97	725049	2.00	2.16	
72 2-Hexanone	58	13.289	13.289	0.000	98	153894	2.00	1.92	
73 n-Octane	85	13.526	13.526	0.000	78	311389	2.00	2.20	
74 Chlorodibromomethane	129	13.580	13.580	0.000	96	554861	2.00	2.08	
75 Ethylene Dibromide	107	13.877	13.877	0.000	98	477614	2.00	2.11	
76 Tetrachloroethene	129	13.958	13.958	0.000	94	327271	2.00	2.04	
77 Chlorobenzene	112	14.858	14.858	0.000	91	665573	2.00	2.09	
78 2,3-Dimethylheptane	43	14.907	14.907	0.000	78	473086	2.00	2.16	
79 Ethylbenzene	91	15.160	15.160	0.000	98	1158251	2.00	2.09	
80 2-Ethylthiophene	97	15.262	15.262	0.000	98	929465	2.00	2.15	
81 m-Xylene & p-Xylene	91	15.327	15.327	0.000	99	1809114	4.00	4.19	
83 Bromoform	173	15.764	15.764	0.000	95	568767	2.00	2.19	
82 n-Nonane	57	15.780	15.780	0.000	78	421115	2.00	2.28	
84 Styrene	104	15.796	15.796	0.000	96	633296	2.00	2.28	

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ppb v/v	OnCol Amt ppb v/v	Flags
85 o-Xylene	91	15.856	15.856	0.000	98	944447	2.00	2.09	
86 1,1,2,2-Tetrachloroethane	83	16.195	16.195	0.000	99	644067	2.00	2.24	
87 1,2,3-Trichloropropane	110	16.352	16.352	0.000	98	213525	2.00	2.07	
88 Isopropylbenzene	105	16.454	16.454	0.000	97	1232906	2.00	2.04	
89 N-Propylbenzene	120	17.010	17.010	0.000	99	330718	2.00	2.13	
90 2-Chlorotoluene	126	17.047	17.047	0.000	96	298250	2.00	2.12	
91 4-Ethyltoluene	105	17.171	17.171	0.000	98	1194628	2.00	2.12	
92 1,3,5-Trimethylbenzene	120	17.252	17.252	0.000	92	551986	2.00	2.10	
93 Alpha Methyl Styrene	118	17.506	17.506	0.000	88	450986	2.00	2.16	
94 n-Decane	57	17.592	17.592	0.000	92	506556	2.00	2.35	
95 tert-Butylbenzene	119	17.711	17.711	0.000	91	1055479	2.00	2.04	
96 1,2,4-Trimethylbenzene	105	17.727	17.727	0.000	96	1022374	2.00	2.10	
97 sec-Butylbenzene	105	18.002	18.002	0.000	97	1413207	2.00	2.10	
98 1,3-Dichlorobenzene	146	18.007	18.007	0.000	98	611837	2.00	2.07	
99 Benzyl chloride	91	18.093	18.093	0.000	97	855784	2.00	2.18	
100 1,4-Dichlorobenzene	146	18.104	18.104	0.000	92	599482	2.00	2.09	
101 4-Isopropyltoluene	119	18.185	18.185	0.000	96	1158733	2.00	2.09	
102 1,2,3-Trimethylbenzene	105	18.234	18.234	0.000	98	762559	2.00	2.08	
103 Butylcyclohexane	83	18.298	18.298	0.000	95	796027	2.00	2.17	
104 1,2-Dichlorobenzene	146	18.482	18.482	0.000	90	588012	2.00	2.04	
105 2,3-Dihydroindene	117	18.487	18.487	0.000	94	853143	2.00	2.08	
106 Indene	116	18.622	18.622	0.000	91	628409	2.00	2.04	
107 n-Butylbenzene	91	18.643	18.643	0.000	98	1121302	2.00	2.20	
108 Undecane	57	18.994	18.994	0.000	88	494474	2.00	2.31	
109 1,2-Dimethyl-4-Ethylbenzen	119	19.037	19.037	0.000	97	800432	2.00	2.05	
110 1,2-Dibromo-3-Chloropropan	157	19.123	19.123	0.000	94	247881	2.00	2.15	
111 1,2,4,5-Tetramethylbenzene	119	19.436	19.436	0.000	96	921017	2.00	2.07	
112 1,2,3,5-Tetramethylbenzene	119	19.490	19.490	0.000	94	558261	2.00	2.05	
113 1,2,3,4-Tetramethylbenzene	119	19.889	19.889	0.000	96	720347	2.00	2.10	
114 Dodecane	57	20.072	20.072	0.000	94	284705	2.00	2.21	
115 1,2,4-Trichlorobenzene	180	20.223	20.223	0.000	93	427233	2.00	2.22	
116 Naphthalene	128	20.347	20.347	0.000	98	800119	2.00	2.25	
117 Benzo(b)thiophene	134	20.450	20.450	0.000	99	394136	2.00	2.06	
118 Hexachlorobutadiene	225	20.569	20.569	0.000	95	569656	2.00	2.07	
119 1,2,3-Trichlorobenzene	180	20.622	20.622	0.000	93	370032	2.00	2.33	
120 2-Methylnaphthalene	142	21.453	21.453	0.000	99	384125	6.25	5.25	
121 1-Methylnaphthalene	142	21.658	21.658	0.000	99	356305	6.25	5.77	
A 124 Toluene Range	1	12.771	(12.741-12.801)		0	2408532	2.00	2.43	
A 125 C8 Range	1	13.520	(13.496-13.556)		0	2136674	2.00	2.15	
S 126 Xylenes, Total	100				0		6.00	6.28	
S 127 1,2-Dichloroethene, Total	1				0		4.00	4.43	

Reagents:

40CV101P_00022	Amount Added: 100.00	Units: mL	
40MXISSURP_00001	Amount Added: 40.00	Units: mL	Run Reagent

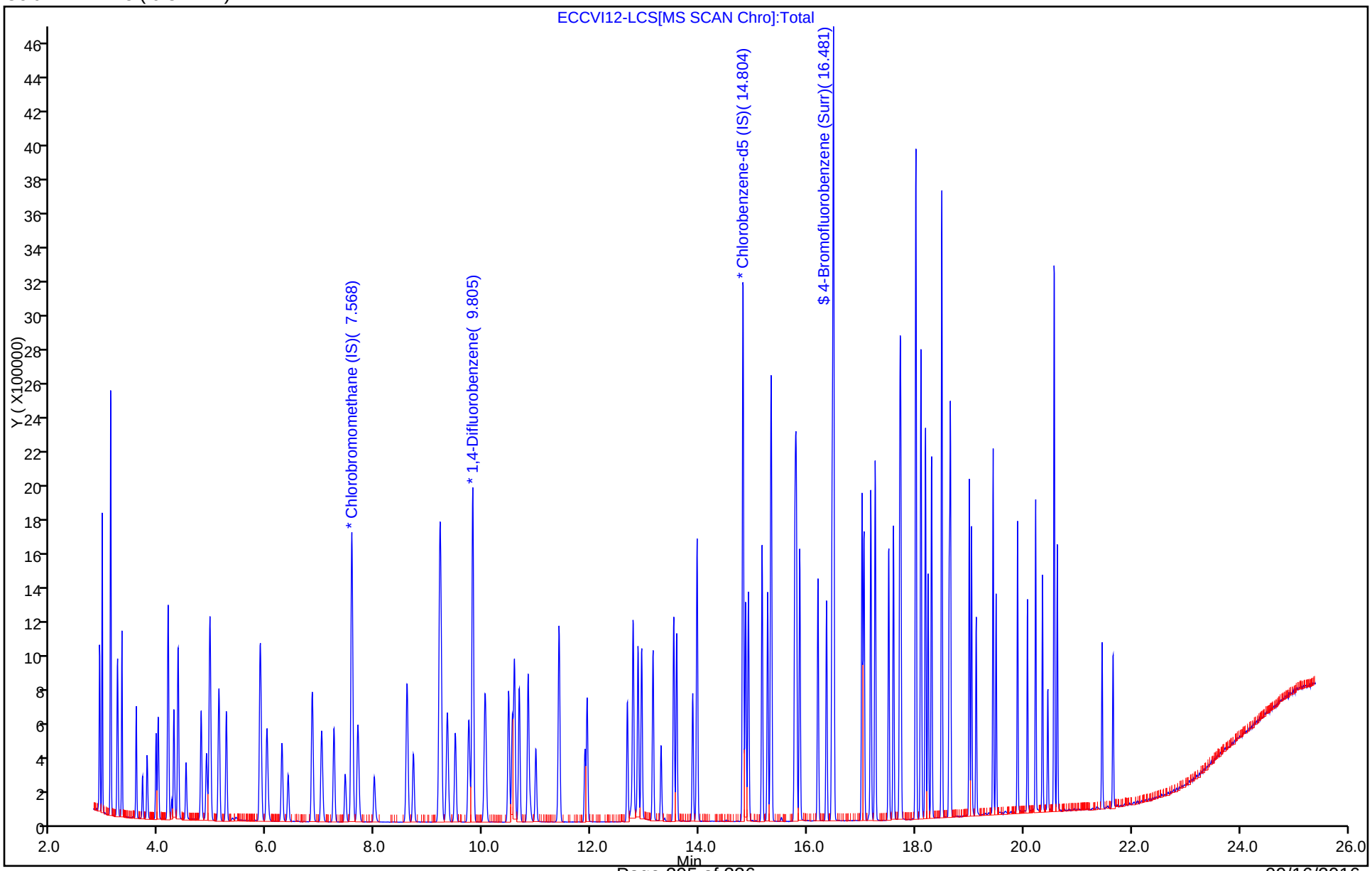
Report Date: 13-Sep-2016 11:41:30 Chrom Revision: 2.2 02-Sep-2016 12:39:46

TestAmerica Laboratories

Data File: \\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ECCVI12-LCS.d

Injection Date:	12-Sep-2016 10:43:30	Instrument ID:	ME	Operator ID:	403648
Lims ID:	LCS			Worklist Smp#:	1002
Client ID:					
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	ME_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



TestAmerica Laboratories
Recovery Report

Data File:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ECCVI12-LCS.d				
Lims ID:	LCS				
Client ID:					
Sample Type:	LCS				
Inject. Date:	12-Sep-2016 10:43:30	ALS Bottle#:	15	Worklist Smp#:	1002
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003406-002				
Misc. Info.:	P22				
Operator ID:	403648	Instrument ID:	ME		
Method:	\\ChromNA\Knoxville\ChromData\ME\20160909-3406.b\ME_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	13-Sep-2016 11:41:27	Calib Date:	23-Aug-2016 23:02:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\ME\20160822-3339.b\EH23IC09.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK019				
First Level Reviewer: barlozhetskayaa		Date:	12-Sep-2016 19:33:18		

Compound	Amount Added	Amount Recovered	% Rec.
$ 4 4-Bromofluorobenzene (Surr)	4.00	4.14	103.38

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Instrument ID: ME Start Date: 08/23/2016 15:48

Analysis Batch Number: 6379 End Date: 08/24/2016 00:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6379/1		08/23/2016 15:48	1	EBFBH23A.D	RTX-5 0.32(mm)
IC 140-6379/3		08/23/2016 17:03	1	EH23IC01A.D	RTX-5 0.32(mm)
IC 140-6379/4		08/23/2016 17:48	1	EH23IC02A.D	RTX-5 0.32(mm)
IC 140-6379/5		08/23/2016 18:32	1	EH23IC03A.D	RTX-5 0.32(mm)
IC 140-6379/6		08/23/2016 19:17	1	EH23IC04.D	RTX-5 0.32(mm)
IC 140-6379/7		08/23/2016 20:01	1	EH23IC05.D	RTX-5 0.32(mm)
ICIS 140-6379/8		08/23/2016 20:46	1	EH23IC06.D	RTX-5 0.32(mm)
IC 140-6379/9		08/23/2016 21:31	1	EH23IC07.D	RTX-5 0.32(mm)
IC 140-6379/10		08/23/2016 22:17	1	EH23IC08.D	RTX-5 0.32(mm)
IC 140-6379/11		08/23/2016 23:02	1	EH23IC09.D	RTX-5 0.32(mm)
ICV 140-6379/13		08/24/2016 00:30	1	EH23ICV.D	RTX-5 0.32(mm)

160823

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	31	8/23/2016	3:48:53 PM
BLANK	16 - 501 mL	30.4	8/23/2016	4:20:22 PM
ICAL01	7 - 101 mL	39.2	8/23/2016	5:03:52 PM
ICAL02	7 - 202 mL	38.3	8/23/2016	5:48:17 PM
ICAL03	8 - 201 mL	38.4	8/23/2016	6:32:48 PM
ICAL04	9 - 200 mL	39.8	8/23/2016	7:17:16 PM
ICAL05	10 - 200 mL	39.7	8/23/2016	8:01:47 PM
ICAL06	11 - 201 mL	38.9	8/23/2016	8:46:11 PM
ICAL07	12 - 200 mL	37.8	8/23/2016	9:31:47 PM
ICAL08	13 - 201 mL	36.4	8/23/2016	10:17:13 PM
ICAL09	14 - 201 mL	39.7	8/23/2016	11:02:13 PM
DNUprime	15 - 21 mL	40.5	8/23/2016	11:46:17 PM
ICV	15 - 100 mL	39.2	8/24/2016	12:30:13 AM
DNUflush	16 - 200 mL	30.2	8/24/2016	1:16:07 AM
BLANK	16 - 501 mL	29.4	8/24/2016	1:49:56 AM
MDLV	7 - 51 mL	38	8/24/2016	2:34:52 AM
LCS/ICV	1 - 100 mL	26.6	8/24/2016	3:19:07 AM
LCS	2 - 101 mL	37.3	8/24/2016	4:04:10 AM
EXP	3 - 51 mL	22.5	8/24/2016	4:50:02 AM
EXP	4 - 51 mL	21.3	8/24/2016	5:35:25 AM
EXP	5 - 50 mL	29.9	8/24/2016	6:20:30 AM
LCSD	6 - 102 mL	23.3	8/24/2016	7:06:45 AM

ME ICAL WL 3339

TestAmerica Knoxville GC/MS Air - Initial Calibration Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Analysis Date:	8/23/16	Instrument:	ME	Chrom WL #:	3339	TALS Batch & Event #	TO14/15: 6379 750	AFCEE: 6378/ 749
							DOD: 6376/ 747	OHIO: 6377/ 748

Chrom/Worklist Review	1st	Comments	2nd
1. Re-read each Limit Group [method editor-limit groups]	✓		
2. Verify LODV in Chrom [method editor -> edit -> MDL]	✓		
3. Are the reagents and init/final volumes correct and first level "unlock/clear"? (Verify reagents & amt. injected at each level) [WL Sample Reagents Tab vs. Entech]	✓		✓
4. Files linked properly to calibration levels? [Sample List- Lab ID vs. Info]	✓		✓
5. Did BFB meet tune criteria? [F8]	✓		✓
6. Were all standards injected within 24 hr of BFB? [F7]	✓		✓
7. High point checked for saturation and point removed if so? [Chrom]	✓		✓
8. If manual integrations performed, are they properly performed, correct, baseline clearly identified, and correct reason given? [Chrom]	✓		✓
9. RT for each IS ±20 sec avg. RT? [F6 IstdRec]	✓		✓
10. Area for each IS ± 40% avg. area? [F6 IstdRec]	✓		✓
11. Each analyte ± 0.06 RRT of avg. RRT? [F6 - RRT]	✓		✓
12. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4- and 1,2,3-trichlorobenzenes	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
13. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	✓	DNU TPH as Hexane	✓

MLG Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
14. Is %RSD for all target analytes ≤ 30%? (with up to 2 compounds with RSD ≤ 40%) 1& 2 methylnaphthalene ≤ 50% [F6 ∑]	✓	✓	✓	✓		✓	✓	✓	✓
15. Were at least 5 levels of each compound analyzed? [F6]	✓	✓	✓	✓		✓	✓	✓	✓
16. Is low level std at or <RL and are the remaining points consec.? [F6]	✓	✓	✓	✓		✓	✓	✓	
17. At least 6 consec. points used for quad curves; at least 5 consec. points for linear curves? Note: Ohio does not allow quad [F6]	NA	→	→	→		NA	→	→	→
18. If curves were used, is correlation coefficient ≥0.990? [F6]	NA	→	→	→		NA	→	→	→
19. Is the intercept less than the RL for each curve? [F6]	NA	→	→	→		NA	→	→	→
20. For quadratic: is a tangent's slope to the curve entirely positive or negative and continuous. [Cntrl-C, details]	NA	→	→			NA	→	→	
21. Is the second source analysis within limits? [F8 - icv]	✓	✓	✓	✓		✓	✓	✓	✓
22. Analyst/Date: AEB 8/24/16	2nd Level Reviewer/Date:							8/25/16	
Comments:									

TALS Review	TO-	AFC	DOD	OH	Comments	TO-	AFC	DOD	OH
23. Upload ICAL	✓			✓					
24. Graphics uploaded? [Sample List Tab]	✓	✓	✓	✓		✓	✓	✓	✓
25. All points are in the most recent active calibration event? [Calibration Events -'Fix ICAL linkage' if needed]	✓	✓	✓	✓		✓	✓	✓	✓
26. Runs linked to BFB? [QC Links]	✓	✓	✓	✓		✓	✓	✓	✓
27. If criteria not met, was a NCM generated?	NA	—	—	→		NA	—	—	→
28. After review in TALS, approve the method in TALS.						✓	✓	✓	✓
29. After verifying TALS is correct, lock method in Chrom <resolve any error issues>							✓		
30. Checklist & Entech report scanned, attached & assigned properly?						✓	✓	✓	✓
Analyst: Date: 8/25/16	2nd Level Reviewer: AEB					Date: 8/25/16			
Comments:	Comments:								

MS017r41, 5/25/2016

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Instrument ID: ME Start Date: 09/10/2016 14:08

Analysis Batch Number: 6539 End Date: 09/11/2016 05:34

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6539/3		09/10/2016 14:08	1	EBFBI10A.D	RTX-5 0.32(mm)
CCVIS 140-6539/4		09/10/2016 14:39	1	ECCVI10A.D	RTX-5 0.32(mm)
LCS 140-6539/1004		09/10/2016 14:39	1	ECCVI10A-LCS.d	RTX-5 0.32(mm)
ZZZZZ		09/10/2016 16:44	1		RTX-5 0.32(mm)
MB 140-6539/7		09/10/2016 17:31	1	EMB500I10.D	RTX-5 0.32(mm)
140-5782-2		09/10/2016 19:02	1	EI10p102.D	RTX-5 0.32(mm)
140-5782-3		09/10/2016 19:49	1	EI10p103.D	RTX-5 0.32(mm)
140-5782-4		09/10/2016 20:34	1	EI10p104.D	RTX-5 0.32(mm)
140-5782-5		09/10/2016 21:19	1	EI10p105.D	RTX-5 0.32(mm)
140-5782-6		09/10/2016 22:04	1	EI10p106.D	RTX-5 0.32(mm)
ZZZZZ		09/10/2016 22:50	588.76		RTX-5 0.32(mm)
ZZZZZ		09/10/2016 23:35	68.57		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 00:20	1.46		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 01:05	1.46		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 01:49	1.47		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 02:35	1.56		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 03:20	1.29		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 04:05	1.35		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 04:50	1.41		RTX-5 0.32(mm)
ZZZZZ		09/11/2016 05:34	74.96		RTX-5 0.32(mm)

160910

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	40.1	9/10/2016	2:08:21 PM
CCV	3 - 100 mL	30	9/10/2016	2:39:33 PM
DNUFLUSH	16 - 100 mL	39.9	9/10/2016	4:14:03 PM
MB200	16 - 200 mL	39.4	9/10/2016	4:44:42 PM
MB500	16 - 500 mL	39.1	9/10/2016	5:31:38 PM
5782-01	1 - 11 mL	12.5	9/10/2016	6:16:57 PM
5782-02	2 - 101 mL	9.6	9/10/2016	7:02:55 PM
5782-03	3 - 101 mL	9.6	9/10/2016	7:49:02 PM
5782-04	4 - 101 mL	10.3	9/10/2016	8:34:04 PM
5782-05	5 - 101 mL	9.4	9/10/2016	9:19:06 PM
5782-06	6 - 101 mL	9.9	9/10/2016	10:04:38 PM
116833-01	7 - 101 mL	16.5	9/10/2016	10:50:06 PM
5786-01	8 - 201 mL	15.4	9/10/2016	11:35:16 PM
5798-01DU	9 - 293 mL	14.8	9/11/2016	12:20:53 AM
5798-01	9 - 293 mL	13.3	9/11/2016	1:05:50 AM
5798-02	10 - 294 mL	14.6	9/11/2016	1:49:56 AM
5798-03	11 - 313 mL	14.7	9/11/2016	2:35:36 AM
5793-04	12 - 259 mL	13.8	9/11/2016	3:20:32 AM
5793-03	13 - 51 mL	14.4	9/11/2016	4:05:12 AM
5794-02	14 - 31 mL	13.7	9/11/2016	4:50:20 AM
116831-01	15 - 51 mL	16.6	9/11/2016	5:34:34 AM

ME WL 3405

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	ME 9/10/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3405	CCAL Batch #	6539			
ICAL Chrom WL #	3339	ICAL Batch # / Event #	6379 / 750	/	/	/

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓	50@ 14.8 Limit 14 13 (V) 15	✓
2. Did BFB meet tune criteria? [F8]	✓	☒ [Failed TO-14A, but passes TO-15] (NCM# 5040)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	□ CCV - %D - LCS criteria met (NCM#_____) □ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		N
7. Has the RT been updated to the method?	✓		✓
Analyst: AB Date: 9/10/16		2nd Level Reviewer : Date: 9/12/16	
Comments:		Comments:	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	□ Method Blank – Report, ND (NCM#_____) □ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		✓
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample ____ Reason ____ Sample ____ Reason ____	✓	□ (1) Surrogate – Matrix (NCM#_____) □ (2) Surrogate – High, ND (NCM#_____) □ (3) ISTD – RA/RA Concurs (NCM#_____) □ (4) Surrogate –RX concur, Report both (NCM#_____) □ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	□ ICAL – Range Exceeded; Minimum Dilution	✓

Chrom Review	1st	If No, why is data reportable?	2nd
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample Reason Sample Reason 500-116833 Elev ACM 5041	✓ N	□ (1) Reporting Limit – Dilution, Matrix (NCM#_____) □ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) □ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		NA
18. Obvious non-TPH peaks excluded?			✓

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?			
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 7 **200 mL blank ID:** 6	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 9/12/16	**2nd Level Reviewer :**	**Date:** 9/13/16
Comments:		**Comments:**	

Example Calculation: 500-116831-101

On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF

6.39933 x 50 x 79.96 = 4796.99

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5782-1

SDG No.:

Instrument ID: ME Start Date: 09/12/2016 10:12

Analysis Batch Number: 6540 End Date: 09/13/2016 06:58

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6540/1		09/12/2016 10:12	1	EBFBI12.D	RTX-5 0.32(mm)
CCVIS 140-6540/2		09/12/2016 10:43	1	ECCVI12.D	RTX-5 0.32(mm)
LCS 140-6540/1002		09/12/2016 10:43	1	ECCVI12-LCS.d	RTX-5 0.32(mm)
MB 140-6540/4		09/12/2016 12:21	1	E500BI12.D	RTX-5 0.32(mm)
ZZZZZ		09/12/2016 13:06	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 14:40	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 15:25	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 16:11	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 16:57	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 17:42	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 18:27	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 19:43	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 20:29	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 21:14	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 21:58	1		RTX-5 0.32(mm)
ZZZZZ		09/12/2016 22:43	1		RTX-5 0.32(mm)
140-5782-2 DL		09/12/2016 23:28	1	EI12P111.D	RTX-5 0.32(mm)
140-5782-1		09/13/2016 00:14	1	EI12P112.D	RTX-5 0.32(mm)
ZZZZZ		09/13/2016 00:58	1		RTX-5 0.32(mm)
ZZZZZ		09/13/2016 01:42	1		RTX-5 0.32(mm)
ZZZZZ		09/13/2016 02:27	1		RTX-5 0.32(mm)
ZZZZZ		09/13/2016 03:13	1		RTX-5 0.32(mm)
ZZZZZ		09/13/2016 05:27	1		RTX-5 0.32(mm)
ZZZZZ		09/13/2016 06:12	1		RTX-5 0.32(mm)
ZZZZZ		09/13/2016 06:58	1		RTX-5 0.32(mm)

160912

TA-Knoxville
TO-14 Autosampler Log

Sample	Position/Volume	psia	Date	Time
BFB	16 - 100 mL	38.3	9/12/2016	10:12:53 AM
CCV	12 - 102 mL	29.3	9/12/2016	10:43:01 AM
dnuleak	16 - 51 mL	38.2	9/12/2016	11:49:00 AM
MB500	16 - 501 mL	37.5	9/12/2016	12:21:35 PM
MB200	16 - 200 mL	37.3	9/12/2016	1:06:04 PM
dnuleak	16 - 50 mL	37.3	9/12/2016	2:09:45 PM
5803-14	1 - 202 mL	28.2	9/12/2016	2:40:50 PM
5795-01	2 - 201 mL	10.1	9/12/2016	3:25:23 PM
5795-02	3 - 201 mL	9.9	9/12/2016	4:11:37 PM
5795-03	4 - 201 mL	9.8	9/12/2016	4:57:23 PM
5795-04	5 - 201 mL	9.2	9/12/2016	5:42:18 PM
5795-05	6 - 201 mL	11.1	9/12/2016	6:27:39 PM
DNULEAK	16 - 21 mL	37.1	9/12/2016	7:13:07 PM
5795-06	7 - 201 mL	9.5	9/12/2016	7:43:39 PM
5795-06	7 - 201 mL	7.8	9/12/2016	8:29:42 PM
5791-02	8 - 200 mL	3.5	9/12/2016	9:14:22 PM
5796-02	9 - 21 mL	12	9/12/2016	9:58:34 PM
5796-01	10 - 21 mL	12.8	9/12/2016	10:43:27 PM
5782-02	11 - 41 mL	8.3	9/12/2016	11:28:50 PM
5782-01	12 - 41 mL	10	9/13/2016	12:14:03 AM
5803-01	13 - 201 mL	10.2	9/13/2016	12:58:19 AM
5803-02	14 - 201 mL	10	9/13/2016	1:42:57 AM
5803-03	15 - 201 mL	9	9/13/2016	2:27:57 AM
5803-04	1 - 201 mL	9.2	9/13/2016	3:13:13 AM
5803-05	2 - 201 mL	8.8	9/13/2016	3:58:03 AM
5803-06	3 - 201 mL	11.1	9/13/2016	4:42:14 AM
5803-07	4 - 201 mL	9.1	9/13/2016	5:27:04 AM
5803-08	5 - 201 mL	10	9/13/2016	6:12:49 AM
5803-09	6 - 201 mL	9.9	9/13/2016	6:58:04 AM

ME WL 3406

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

Instrument/Date	ME 9/12/16		Routine	AFCEE	DOD	OHIO
CCAL Chrom WL #	3406	CCAL Batch #	6540	NA	NA	NA
ICAL Chrom WL #	3339	ICAL Batch # / Event #	6379 , 750			

Chrom Review	1st	If No, why is data reportable?	2nd
1. Are the reagents & init/final volumes correct? (Verify reagents & amt. injected) [WL Sample Reagent Tab]	✓	man SOP 14.6 5045	✓
2. Did BFB meet tune criteria? [F8]	✓	☐ [Failed TO-14A, but passes TO-15] (NCM#_____)	✓
3. Was the CCAL compared to the most recent & correct ICAL (correct last ICal File batch #/start/end Cal date/time)? [F8]	✓		✓
4. Is the %D ≤ 30% for all target analytes? [≤ 40% for AFCEE non-table analytes] [≤ 50% for 1&2 methylnaphthalene] [Chrom-F8] [TALS-Sample Results Tab]	✓	☐ CCV - %D - LCS criteria met (NCM#_____) ☐ CCV - %D high - outside criteria, samples ND, Sample IDs Included (NCM#_____)	✓
5. Elution order checked on isomeric pairs? [Chrom]			
• dichlorodifluoromethane / 1,2-dichlorotetrafluoroethane	✓		✓
• 2-methyl butane / acrolein	✓		✓
• trichlorofluoromethane / 1,1,2-trichlorotrifluoroethane	✓		✓
• vinyl acetate / hexane	✓		✓
• cis- and trans- isomers	✓		✓
• ethyl benzene / m/p-xylene / o-xylene	✓		✓
• n-propylbenzene/4-ethyl toluene/1,3,5-trimethylbenzene/1,2,4-trimethylbenzene/sec-butylbenzene	✓		✓
• tert-butylbenzene/4-isopropyltoluene	✓		✓
• 1,3- , 1,4- , and 1,2-dichlorobenzene	✓		✓
• 1,2,4,5-, 1,2,3,5-, and 1,2,3,4-tetramethylbenzenes	✓		✓
• 1,2,4-trichlorobenzene/1,2,3-trichlorobenzene	✓		✓
• 2-, and 1-methylnaphthalene	✓		✓
6. "Range" analytes & internal standard RIC ID'd correctly, inspected for interferences & proper integration?	NA		NA
7. Has the RT been updated to the method?	✓		
Analyst: [signature] **Date:** 9/12/16		**2nd Level Reviewer :** [signature] **Date** 9/13/16	
Comments:		**Comments:**	
8. Has the vol injected been verified vs Entech & corrected if actual amount differs >5%? [WL Sample Info: init amt = sample amt; final amt = 500 mL]	✓		✓
9. Do the lab ID, Info 1 and Dilution Factor columns correlate in Chrom? [Sample List - Lab ID vs. Info 1 vs. Dilution]	✓		✓
10. Were all samples/QC analyzed within 24 hr of BFB? [F7]	✓		✓
11. Are all analytes present in the system blank < RL? (<1/2 RL for DoD). *If no, list blank ID:*	✓	☐ Method Blank – Report, ND (NCM#_____) ☐ Method Blank – Report, 10X (NCM#_____)	✓
12. All runs - peaks ID'd correctly and false positives removed?	✓		✓
13. If manual integrations performed, are they properly performed, correctly ID'd, baseline clearly identified, and reason given?	✓		NA
14. IS/Surr within limits? *List samples and reason (e.g., 1 thru 5):* [Batch Results IS & SUR Tab] Sample / Reason / Sample / Reason	✓	☐ (1) Surrogate – Matrix (NCM#_____) ☐ (2) Surrogate – High, ND (NCM#_____) ☐ (3) ISTD – RA/RA Concurs (NCM#_____) ☐ (4) Surrogate –RX concur, Report both (NCM#_____) ☐ (5) ISTD – Matrix, DL required (NCM#_____)	✓
15. Samples outside calibration range scheduled for dilution? *Samples:*	✓	☐ ICAL – Range Exceeded; Minimum Dilution	✓
Chrom Review	**1st**	**If No, why is data reportable?**	**2nd**
16. For first analysis that is at a dilution, is highest target analyte >20% cal range? *List samples and reason:* Sample / Reason / Sample / Reason	✓	☐ (1) Reporting Limit – Dilution, Matrix (NCM#_____) ☐ (2) Reporting Limit – Dilution, Non-Target (NCM#_____) ☐ (3) Issues with initial collection volume; see DRC.	✓
17. RIC inspected for proper integration for TPH?	✓		NA
18. Obvious non-TPH peaks excluded?	✓		NA

TestAmerica Knoxville GC/MS Air - Batch Data Review Checklist
Methods: TO-14 and TO-15 - KNOX-MS-0001, Rev 17 & KNOX-MS-0023, Rev 2

19. Individual TPH peak area < octane high point area?	NA		NA
TALS Review	**1st**	**If No, why is data reportable?**	**2nd**
20. Graphics uploaded? [Sample List Tab]	✓		✓
21. Undiluted volume analyzed meets the method requirement (200 mL vs. 500 mL)?	✓		
22. Sample special instructions verified?	✓		✓
23. Did the LCS meet criteria (70-130% with a limited # allowed 60-140% (see table) provisional analyte limit 60-140% with a limited # allowed 50-150%, and no two consecutive MEs). [Sample Results Tab] Note: No LCS required for OH VAP.	✓	□ Marginal Exceedances - Within ME Limits and Random; Report (NCM# ___) □ LCS/LCSD - %R High (NCM#_____)	✓
24. Suffixes assigned properly (DL/RE)? [Sample List Tab]	✓		✓
25. Each job has QC created (BFB, CCV, LCS, MB)? [Sample List Tab]	✓		✓
26. Analytes over calibration range set to secondary [Conditions Review Tab]	✓		✓
27. Samples not reported set to 'Acceptable' or 'Rejected'? [Sample Results Tab]	✓		✓
28. DUP done per 20 samples and are all RPDs within limits? (for target analytes >5x RL, <25% RPD; no criteria for n-butanol) *(If DUP not reported - set to 'Acceptable' for each job)*	✓		✓
29. Samples linked to proper blank (200 mL or 500 mL)? [QC links]	✓	**500 mL blank ID:** 4 **200 mL blank ID:** 5	✓
30. Samples linked to job's BFB/CCV/LCS/MB? [QC Links]	✓		✓
31. Correct ICV linked to each MB? [QC Links]	✓		✓
32. If criteria were not met, was a NCM generated, and assigned to proper QC & samples? [Also see Conditions Review Tab]	✓		✓
33. Runs set to 1st level review?	✓	Runs set to 2nd level review?	✓
34. QC checker run and items addressed?			✓
35. Checklist & Entech report scanned, attached & assigned properly?			✓

Analyst:	**Date:** 9/13/16	**2nd Level Reviewer :**	**Date:** 9/13/16
Comments:		**Comments:**	

Example Calculation: 57827 111
On-column ppbv x Final Vol (mL)/Entech Initial Vol (mL) x Canister Dilution Log DF
7.0778 x 40mL/1 = 88.47

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Client Sample ID: 09748 Lab Sample ID: 140-5602-1

Matrix: Air Lab File ID: LOT5602.D

Analysis Method: TO-15 Date Collected: 08/12/2016 15:00

Sample wt/vol: 200(mL) Date Analyzed: 08/15/2016 12:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6248 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
71-55-6	1,1,1-Trichloroethane	ND		0.20	
79-34-5	1,1,2,2-Tetrachloroethane	ND		0.20	
79-00-5	1,1,2-Trichloroethane	ND		0.20	
76-13-1	1,1,2-Trichlorotrifluoroethane	ND		0.20	
75-34-3	1,1-Dichloroethane	ND		0.20	
75-35-4	1,1-Dichloroethene	ND		0.20	
488-23-3	1,2,3,4-Tetramethylbenzene	ND		0.20	
527-53-7	1,2,3,5-Tetramethylbenzene	ND		0.20	
87-61-6	1,2,3-Trichlorobenzene	ND		1.0	
96-18-4	1,2,3-Trichloropropane	ND		0.50	
526-73-8	1,2,3-Trimethylbenzene	ND		0.20	
95-93-2	1,2,4,5-Tetramethylbenzene	ND		0.20	
120-82-1	1,2,4-Trichlorobenzene	ND		1.0	
95-63-6	1,2,4-Trimethylbenzene	ND		0.20	
106-93-4	1,2-Dibromoethane	ND		0.20	
95-50-1	1,2-Dichlorobenzene	ND		0.20	
107-06-2	1,2-Dichloroethane	ND		0.20	
78-87-5	1,2-Dichloropropane	ND		0.20	
76-14-2	1,2-Dichlorotetrafluoroethane	ND		0.20	
934-80-5	1,2-Dimethyl-4-Ethylbenzene	ND		0.20	
108-67-8	1,3,5-Trimethylbenzene	ND		0.20	
106-99-0	1,3-Butadiene	ND		0.40	
541-73-1	1,3-Dichlorobenzene	ND		0.20	
106-46-7	1,4-Dichlorobenzene	ND		0.20	
123-91-1	1,4-Dioxane	ND		0.50	
71-36-3	1-Butanol	ND		2.0	
90-12-0	1-Methylnaphthalene	ND		2.5	
540-84-1	2,2,4-Trimethylpentane	ND		0.50	
3074-71-3	2,3-Dimethylheptane	ND		0.20	
565-59-3	2,3-Dimethylpentane	ND		0.20	
78-93-3	2-Butanone	ND		1.0	
95-49-8	2-Chlorotoluene	ND		0.40	
872-55-9	2-Ethylthiophene	ND		0.20	
591-78-6	2-Hexanone	ND		0.50	
78-78-4	2-Methylbutane	ND		0.50	
91-57-6	2-Methylnaphthalene	ND		2.5	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville | Job No.: 140-5602-1

SDG No.:

Client Sample ID: 09748 | Lab Sample ID: 140-5602-1

Matrix: Air | Lab File ID: LOT5602.D

Analysis Method: TO-15 | Date Collected: 08/12/2016 15:00

Sample wt/vol: 200(mL) | Date Analyzed: 08/15/2016 12:19

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-5 ID: 0.32(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 6248 | Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
107-83-5	2-Methylpentane	ND		0.20	
554-14-3	2-Methylthiophene	ND		0.20	
107-05-1	3-Chloropropene	ND		0.20	
616-44-4	3-Methylthiophene	ND		0.20	
622-96-8	4-Ethyltoluene	ND		0.40	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		0.50	
75-07-0	Acetaldehyde	ND		10	
67-64-1	Acetone	ND		5.0	
75-05-8	Acetonitrile	ND		1.0	
107-02-8	Acrolein	ND		1.0	
107-13-1	Acrylonitrile	ND		2.0	
98-83-9	Alpha Methyl Styrene	ND		0.40	
71-43-2	Benzene	ND		0.20	
95-15-8	Benzo(b)thiophene	ND		0.40	
100-44-7	Benzyl chloride	ND		0.40	
75-27-4	Bromodichloromethane	ND		0.20	
75-25-2	Bromoform	ND		0.20	
74-83-9	Bromomethane	ND		0.20	
106-97-8	Butane	ND		0.40	
1678-93-9	Butylcyclohexane	ND		0.20	
75-15-0	Carbon disulfide	ND		0.50	
56-23-5	Carbon tetrachloride	ND	*	0.20	
108-90-7	Chlorobenzene	ND		0.20	
75-45-6	Chlorodifluoromethane	ND		0.20	
75-00-3	Chloroethane	ND		0.20	
67-66-3	Chloroform	ND		0.20	
74-87-3	Chloromethane	ND		0.50	
156-59-2	cis-1,2-Dichloroethene	ND		0.20	
10061-01-5	cis-1,3-Dichloropropene	ND		0.20	
98-82-8	Cumene	ND		0.40	
110-82-7	Cyclohexane	ND		0.50	
124-48-1	Dibromochloromethane	ND		0.20	
74-95-3	Dibromomethane	ND		0.40	
75-71-8	Dichlorodifluoromethane	ND		0.20	
64-17-5	Ethanol	ND		5.0	
141-78-6	Ethyl acetate	ND		2.0	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Client Sample ID: 09748 Lab Sample ID: 140-5602-1

Matrix: Air Lab File ID: LOT5602.D

Analysis Method: TO-15 Date Collected: 08/12/2016 15:00

Sample wt/vol: 200(mL) Date Analyzed: 08/15/2016 12:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6248 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
60-29-7	Ethyl ether	ND		2.0	
100-41-4	Ethylbenzene	ND		0.20	
87-68-3	Hexachlorobutadiene	ND		1.0	
110-54-3	Hexane	ND		0.50	
496-11-7	Indane	ND		0.20	
95-13-6	Indene	ND		0.40	
67-63-0	Isopropyl alcohol	ND		2.0	
179601-23-1	m&p-Xylene	ND		0.20	
80-62-6	Methyl methacrylate	ND		0.50	
1634-04-4	Methyl tert-butyl ether	ND		1.0	
108-87-2	Methylcyclohexane	ND		0.20	
75-09-2	Methylene Chloride	ND		0.50	
91-20-3	Naphthalene	ND		0.50	
104-51-8	n-Butylbenzene	ND		0.40	
124-18-5	n-Decane	ND		1.0	
112-40-3	n-Dodecane	ND		1.0	
142-82-5	n-Heptane	ND		0.50	
111-84-2	n-Nonane	ND		0.50	
111-65-9	n-Octane	ND		0.40	
103-65-1	N-Propylbenzene	ND		0.40	
1120-21-4	n-Undecane	ND		1.0	
95-47-6	o-Xylene	ND		0.20	
99-87-6	p-Cymene	ND		0.20	
109-66-0	Pentane	ND		1.0	
115-07-1	Propene	ND		0.50	
135-98-8	sec-Butylbenzene	ND		0.40	
100-42-5	Styrene	ND		0.20	
75-65-0	tert-Butanol	ND		2.0	
98-06-6	tert-Butylbenzene	ND		0.50	
127-18-4	Tetrachloroethene	ND		0.20	
109-99-9	Tetrahydrofuran	ND		1.0	
110-02-1	Thiophene	ND		0.20	
108-88-3	Toluene	ND		0.20	
156-60-5	trans-1,2-Dichloroethene	ND		0.20	
10061-02-6	trans-1,3-Dichloropropene	ND		0.20	
79-01-6	Trichloroethene	ND		0.20	

FORM I
AIR - GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Client Sample ID: 09748 Lab Sample ID: 140-5602-1

Matrix: Air Lab File ID: LOT5602.D

Analysis Method: TO-15 Date Collected: 08/12/2016 15:00

Sample wt/vol: 200(mL) Date Analyzed: 08/15/2016 12:19

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-5 ID: 0.32(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 6248 Units: ppb v/v

CAS NO.	COMPOUND NAME	RESULT	Q	RL	
75-69-4	Trichlorofluoromethane	ND		0.20	
108-05-4	Vinyl acetate	ND		1.0	
593-60-2	Vinyl bromide	ND		0.20	
75-01-4	Vinyl chloride	ND		0.20	

TestAmerica Knoxville
Target Compound Quantitation Report

Data File:	\\ChromNA\Knoxville\ChromData\MG\20160811-3296.b\LOT5602.D				
Lims ID:	140-5602-A-1				
Client ID:	09748				
Sample Type:	Client				
Inject. Date:	15-Aug-2016 12:19:30	ALS Bottle#:	5	Worklist Smp#:	4
Purge Vol:	500.000 mL	Dil. Factor:	1.0000		
Sample Info:	140-0003296-004				
Misc. Info.:	09748				
Operator ID:	7126	Instrument ID:	MG		
Method:	\\ChromNA\Knoxville\ChromData\MG\20160811-3296.b\MG_TO15.m				
Limit Group:	MSA TO14A_15 Routine ICAL				
Last Update:	16-Aug-2016 12:11:44	Calib Date:	20-Jul-2016 20:22:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\ChromNA\Knoxville\ChromData\MG\20160719-3204.b\GG20ICL9.D				
Column 1 :	RTX-5 (0.32 mm)		Det: MS SCAN		
Process Host:	XAWRK014				
First Level Reviewer: tajh		Date:	15-Aug-2016 13:28:06		

Compound	Sig	RT (min.)	Adj RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ppb v/v	Flags
* 1 Chlorobromomethane (IS)	128	8.470	8.481	-0.011	97	347917	4.00	
* 2 1,4-Difluorobenzene	114	10.638	10.644	-0.006	96	1443797	4.00	
* 3 Chlorobenzene-d5 (IS)	117	15.416	15.421	-0.005	90	1434180	4.00	
$ 4 4-Bromofluorobenzene (Surr	95	17.071	17.077	-0.006	95	966544	3.86	
31 Methylene Chloride	84	6.065	6.071	-0.006	97	4692	0.0554	
51 n-Butanol	31	10.104	10.072	0.032	93	2480	0.0581	
59 Trichloroethene	130	11.361	11.361	0.000	94	1968	0.0147	
65 4-Methyl-2-pentanone (MIBK	43	12.558	12.547	0.011	99	24581	0.0669	

Reagents:

40MXISSURP_00001 Amount Added: 40.00 Units: mL Run Reagent

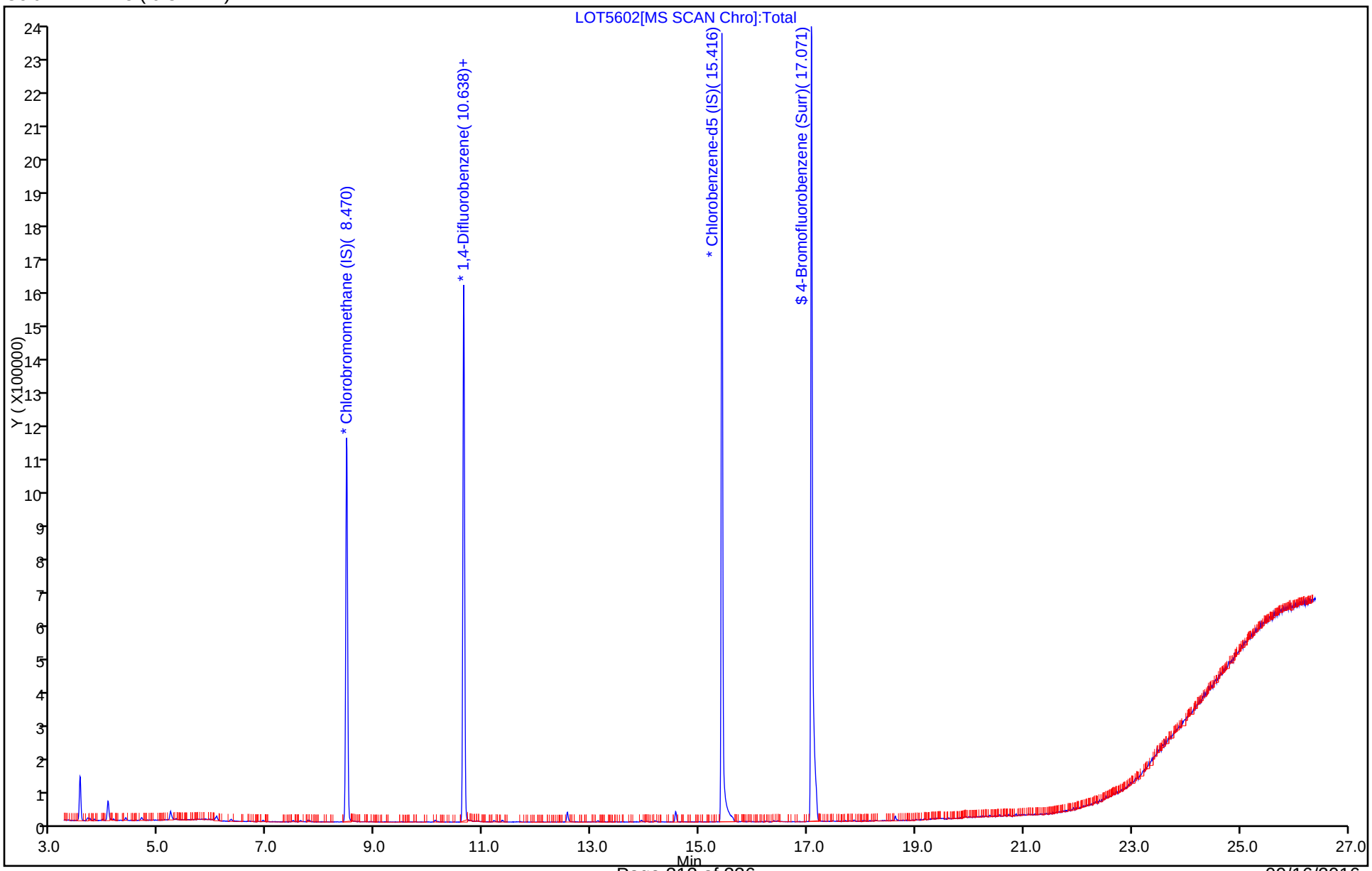
Report Date: 16-Aug-2016 12:15:41 Chrom Revision: 2.2 18-Jul-2016 15:30:42

TestAmerica Knoxville

Data File: \\ChromNA\Knoxville\ChromData\MG\20160811-3296.b\LOT5602.D

Injection Date:	15-Aug-2016 12:19:30	Instrument ID:	MG	Operator ID:	7126
Lims ID:	140-5602-A-1	Lab Sample ID:	140-5602-1	Worklist Smp#:	4
Client ID:	09748				
Purge Vol:	500.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MG_TO15	Limit Group:	MSA TO14A_15 Routine ICAL		

Column: RTX-5 (0.32 mm)



FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5925/2	GG20ICL1.D
Level 2	IC 140-5925/3	GG20ICL2.D
Level 3	IC 140-5925/4	GG20ICL3.D
Level 4	IC 140-5925/5	GG20ICL4.D
Level 5	IC 140-5925/6	GG20ICL5.D
Level 6	ICIS 140-5925/7	GG20ICL6.D
Level 7	IC 140-5925/8	GG20ICL7.D
Level 8	IC 140-5925/9	GG20ICL8.D
Level 9	IC 140-5925/10	GG20ICL9.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorodifluoromethane	0.4176 0.3715	0.3314 0.3158	0.2752 0.3389	0.2816 0.3059	0.3534	Ave		0.3324				13.5		30.0			
Propene	1.9018 1.3612	1.6567 1.2036	1.6806 1.2095	1.3925 1.1119	1.3024	Ave		1.4245				18.6		30.0			
Dichlorodifluoromethane	4.0679 3.5253	3.6296 3.1789	3.5575 3.2621	3.3450 3.0355	3.3547	Ave		3.4396				8.8		30.0			
Chloromethane	+++++ 0.4044	0.4314 0.3689	0.4505 0.3690	0.3908 0.3259	0.3753	Ave		0.3895				10.1		30.0			
1,2-Dichlorotetrafluoroethane	2.4258 2.1948	2.2175 2.0397	2.2075 2.1131	2.0987 2.0292	2.0970	Ave		2.1581				5.6		30.0			
Acetaldehyde	+++++ 0.5796	+++++ 0.4680	+++++ 0.4427	1.0795 +++++	0.6495	Ave		0.6438				40.0	*	30.0			
Vinyl chloride	1.5206 1.2776	1.2740 1.2203	1.3485 1.1967	1.2046 1.0598	1.2243	Ave		1.2585				10.0		30.0			
1,3-Butadiene	1.2974 1.0489	1.0617 1.0024	1.0853 0.9757	0.9723 0.8721	0.9924	Ave		1.0342				11.3		30.0			
Butane	2.6625 2.2597	2.2558 2.1541	2.4672 2.0816	2.2794 1.8242	2.1462	Ave		2.2368				10.6		30.0			
Bromomethane	1.3106 1.0597	1.1154 1.0397	1.0725 1.0420	0.9964 0.9496	1.0166	Ave		1.0670				9.6		30.0			
Chloroethane	0.7275 0.6086	0.6032 0.6136	0.6314 0.5986	0.5778 0.5436	0.5878	Ave		0.6102				8.3		30.0			
Ethanol	+++++ 0.5761	+++++ 0.5603	0.6964 0.5058	0.5994 0.4913	0.5869	Ave		0.5737				11.8		30.0			
Vinyl bromide	1.2086 1.0161	1.0451 1.0267	1.0333 1.0162	0.9776 0.9332	0.9847	Ave		1.0268				7.4		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Methylbutane	1.8562 1.4717	1.5492 1.5440	1.5973 1.4483	1.4121 1.2609	1.4527	Ave		1.5103				10.7		30.0			
Acrolein	+++++ 0.3099	+++++ 0.3033	0.4666 0.2763	0.3756 0.2502	0.3560	LinF		0.2587							0.9920		0.9900
Trichlorofluoromethane	3.7804 3.2737	3.2330 3.1786	3.3182 3.1339	3.0837 2.9455	3.1391	Ave		3.2318				7.2		30.0			
Acetonitrile	+++++ 0.4866	0.6128 0.5158	0.5802 0.4494	0.5092 0.4484	0.5064	Ave		0.5136				11.3		30.0			
Acetone	+++++ 0.5322	+++++ 0.4690	+++++ 0.4236	0.8796 0.4264	0.6092	Ave		0.5566				31.1	*	30.0			
Isopropyl alcohol	1.9972 1.7874	1.7803 1.8183	1.8708 1.5904	1.7726 1.5335	1.8433	Ave		1.7771				7.9		30.0			
Pentane	0.2192 0.1876	0.1849 0.1924	0.1863 0.1846	0.1876 0.1618	0.1866	Ave		0.1879				7.8		30.0			
Ethyl ether	1.3881 1.2487	1.2528 1.4318	1.1904 1.2184	1.2581 1.1807	1.3081	Ave		1.2752				6.7		30.0			
1,1-Dichloroethene	1.2070 0.9536	0.9879 0.9949	1.0087 0.9359	0.8875 0.8797	0.9263	Ave		0.9757				10.0		30.0			
Acrylonitrile	0.8198 0.6105	0.6678 0.6996	0.6558 0.5960	0.6070 0.6028	0.6284	Ave		0.6542				10.9		30.0			
tert-Butanol	1.9088 1.7837	1.7108 1.8163	1.8433 1.4381	1.7437 1.6532	1.8283	Ave		1.7474				7.9		30.0			
1,1,2-Trichlorotrifluoroethane	2.3070 1.9812	1.9444 2.0228	1.9867 1.9189	1.8393 1.8662	1.9127	Ave		1.9755				7.0		30.0			
Methylene Chloride	+++++ 0.9231	+++++ 0.9538	1.2994 0.8944	0.9736 0.8450	0.9255	Ave		0.9736				15.4		30.0			
3-Chloropropene	1.8681 1.3955	1.8157 1.3215	1.3157 1.2967	1.3322 1.1171	1.3275	Ave		1.4211				17.6		30.0			
Carbon disulfide	3.4656 3.4017	3.1082 3.0673	3.0217 3.2077	2.9856 2.9316	3.2357	Ave		3.1584				5.8		30.0			
trans-1,2-Dichloroethene	1.2769 1.2358	1.1873 1.1271	1.2174 1.1341	1.1330 1.0853	1.1667	Ave		1.1737				5.2		30.0			
2-Methylpentane	3.6371 3.1924	2.9202 2.8568	3.0981 2.8539	2.9140 2.6417	3.0595	Ave		3.0193				9.3		30.0			
Methyl tert-butyl ether	3.0459 3.2543	3.0206 3.0849	2.8762 2.9711	3.2007 3.1976	3.2723	Ave		3.1026				4.4		30.0			
1,1-Dichloroethane	2.7908 2.4400	2.4190 2.2440	2.4363 2.2501	2.3103 2.2508	2.3616	Ave		2.3892				7.2		30.0			
Vinyl acetate	3.2076 3.8168	3.3105 3.5951	3.0796 3.5582	3.6186 3.5879	3.8022	Ave		3.5085				7.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Butanone	+++++ 0.5856	+++++ 0.5150	0.8579 0.5053	0.7586 0.5481	0.6034	Lin1	0.0636	0.5273							0.9970		0.9900
Hexane	1.3236 1.0709	1.1242 0.9679	1.0332 0.9843	1.0176 0.9484	1.0435	Ave		1.0571				10.7		30.0			
Isopropyl ether	4.4971 4.8101	4.5987 4.5038	4.3829 4.3067	4.9179 4.5444	4.8377	Ave		4.5999				4.6		30.0			
cis-1,2-Dichloroethene	1.4002 1.2766	1.2083 1.1882	1.2772 1.1904	1.1954 1.1896	1.2090	Ave		1.2372				5.7		30.0			
Ethyl acetate	2.7241 3.1329	2.5922 2.9287	2.5262 2.8410	3.0035 3.0992	3.1280	Ave		2.8862				8.0		30.0			
Chloroform	3.0248 2.7275	2.7773 2.5389	2.6719 2.5163	2.6051 2.5351	2.6486	Ave		2.6717				6.0		30.0			
Tert-butyl ethyl ether	3.2929 3.8929	3.5952 3.6795	3.3458 3.5484	3.8535 3.7899	3.8823	Ave		3.6534				6.2		30.0			
Tetrahydrofuran	1.6108 1.6329	1.6045 1.5190	1.3847 1.4660	1.6202 1.5852	1.6201	Ave		1.5604				5.5		30.0			
1,1,1-Trichloroethane	3.2767 3.0505	2.9523 2.8050	2.9284 2.8299	2.8902 2.8586	2.9315	Ave		2.9470				4.9		30.0			
1,2-Dichloroethane	0.4504 0.4252	0.3890 0.3700	0.4369 0.3802	0.3751 0.3714	0.3760	Ave		0.3971				7.9		30.0			
1-Butanol	+++++ 0.1369	0.1155 0.1121	0.1400 0.0975	0.1200 0.1052	0.1188	Ave		0.1182				12.3		30.0			
Benzene	0.8697 0.7924	0.7384 0.6785	0.8106 0.6816	0.7129 0.6130	0.7132	Ave		0.7345				10.7		30.0			
Cyclohexane	+++++ 0.1381	0.1437 0.1147	0.1539 0.1141	0.1215 0.0997	0.1198	Ave		0.1257				14.3		30.0			
Carbon tetrachloride	0.6350 0.6757	0.5186 0.5861	0.5522 0.6117	0.5659 0.5838	0.4787	Ave		0.5786				10.3		30.0			
2,3-Dimethylpentane	+++++ 0.1919	0.1795 0.1598	0.2092 0.1648	0.1672 0.1533	0.1654	Ave		0.1739				10.7		30.0			
Thiophene	0.5028 0.4542	0.4257 0.3897	0.4773 0.4041	0.3987 0.3822	0.3962	Ave		0.4257				10.1		30.0			
Tert-amyl methyl ether	+++++ 0.7508	0.6078 0.6556	0.7163 0.6454	0.6946 0.6605	0.6737	Ave		0.6756				6.6		30.0			
2,2,4-Trimethylpentane	1.7666 1.4893	1.3656 1.2311	1.6012 1.2595	1.3040 1.1554	1.2845	Ave		1.3841				14.3		30.0			
n-Heptane	0.3572 0.2968	0.2733 0.2459	0.3167 0.2561	0.2535 0.2358	0.2575	Ave		0.2770				14.2		30.0			
1,2-Dichloropropane	0.3755 0.3168	0.2798 0.2721	0.3290 0.2733	0.2836 0.2624	0.2851	Ave		0.2975				12.2		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Trichloroethene	0.4750 0.3874	0.3763 0.3326	0.4323 0.3434	0.3262 0.3305	0.3271	Ave		0.3701				14.4		30.0			
Dibromomethane	0.4034 0.3383	0.3155 0.2839	0.3568 0.2916	0.2910 0.2776	0.2901	Ave		0.3165				13.3		30.0			
Bromodichloromethane	0.6258 0.6381	0.5199 0.5551	0.6151 0.5684	0.5295 0.5395	0.5434	Ave		0.5705				7.8		30.0			
1,4-Dioxane	0.1071 0.1215	0.0957 0.1018	0.1108 0.0983	0.1039 0.0964	0.1038	Ave		0.1044				7.8		30.0			
Methyl methacrylate	0.3261 0.4401	0.3260 0.3867	0.3739 0.3856	0.6251 0.3969	0.3945	Ave		0.4061				22.0		30.0			
Methylcyclohexane	+++++ 0.6290	0.5956 0.5254	0.6820 0.5324	0.5427 0.4909	0.5477	Ave		0.5682				11.0		30.0			
4-Methyl-2-pentanone (MIBK)	0.8339 0.7201	0.7096 0.6048	1.3212 0.6271	0.7336 0.6278	0.7820	Lin1	0.0257	0.6334							0.9930		0.9900
cis-1,3-Dichloropropene	0.4556 0.4795	0.4206 0.4160	0.4602 0.4280	0.3995 0.4145	0.4217	Ave		0.4329				6.0		30.0			
trans-1,3-Dichloropropene	0.3919 0.4364	0.3907 0.4025	0.4072 0.4159	0.3880 0.4213	0.4136	Ave		0.4075				3.9		30.0			
Toluene Range	+++++ 2.3056	+++++ 1.9961	+++++ 2.0204	1.9927 1.9892	2.0422	Ave		2.0577				6.0		30.0			
Toluene	0.9278 0.9238	0.8626 0.8343	0.9087 0.8392	0.8548 0.8403	0.8772	Ave		0.8743				4.2		30.0			
1,1,2-Trichloroethane	0.2811 0.2682	0.2542 0.2443	0.2689 0.2438	0.2451 0.2426	0.2539	Ave		0.2558				5.4		30.0			
2-Methylthiophene	0.7431 0.7591	0.7199 0.7059	0.7476 0.7259	0.6901 0.7253	0.7391	Ave		0.7284				3.0		30.0			
3-Methylthiophene	0.7505 0.7723	0.6755 0.6891	0.7186 0.7171	0.6719 0.7166	0.7129	Ave		0.7138				4.6		30.0			
2-Hexanone	+++++ 0.3141	0.2521 0.2711	0.2760 0.2794	0.2870 0.2952	0.2949	Ave		0.2837				6.6		30.0			
C8 Range	+++++ 3.4189	+++++ 2.8452	+++++ 2.8230	3.4694 2.5862	3.0118	Ave		3.0258				11.6		30.0			
n-Octane	0.3733 0.3244	0.3086 0.2836	0.3568 0.2833	0.2916 0.2697	0.2937	Ave		0.3095				11.4		30.0			
Dibromochloromethane	0.4930 0.6097	0.4441 0.5869	0.5221 0.6014	0.5093 0.6091	0.5525	Ave		0.5476				10.8		30.0			
1,2-Dibromoethane	0.4693 0.5263	0.4072 0.4777	0.4918 0.4940	0.4665 0.5021	0.4868	Ave		0.4802				6.8		30.0			
Tetrachloroethene	0.4071 0.3571	0.3499 0.3196	0.3921 0.3331	0.3230 0.3355	0.3275	Ave		0.3494				8.9		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Chlorobenzene	0.7417 0.7232	0.6915 0.6703	0.7191 0.6813	0.6619 0.6896	0.6823	Ave		0.6957				3.8		30.0			
2,3-Dimethylheptane	1.2726 1.0846	1.0563 0.9485	1.1751 0.9199	1.0154 0.8291	1.0072	Ave		1.0343				12.9		30.0			
Ethylbenzene	1.2055 1.2320	1.0840 1.1239	1.1606 1.1299	1.1580 1.1504	1.1842	Ave		1.1587				3.8		30.0			
2-Ethylthiophene	0.9316 0.9684	0.8379 0.8851	0.9112 0.8962	0.8678 0.9275	0.9194	Ave		0.9050				4.3		30.0			
m&p-Xylene	0.9207 0.9598	0.8465 0.8817	0.9090 0.8590	0.8842 0.8849	0.9204	Ave		0.8963				3.9		30.0			
Bromoform	+++++ 0.6523	0.3529 0.6710	0.4855 0.7217	0.4740 0.8409	0.5757	Ave		0.5968				26.2		30.0			
n-Nonane	0.7249 0.6759	0.6310 0.5854	0.7228 0.5482	0.6202 0.4829	0.6317	Ave		0.6248				12.6		30.0			
Styrene	0.5093 0.6620	0.5535 0.6159	0.5802 0.6128	0.5438 0.6422	0.6157	Ave		0.5928				8.4		30.0			
o-Xylene	1.0587 1.0217	0.9572 0.9179	0.9560 0.9069	0.9299 0.9281	0.9785	Ave		0.9617				5.3		30.0			
1,1,2,2-Tetrachloroethane	0.6523 0.7122	0.6377 0.6389	0.6673 0.6243	0.6559 0.6192	0.6850	Ave		0.6548				4.6		30.0			
1,2,3-Trichloropropane	0.1922 0.2191	0.1892 0.1991	0.2065 0.1977	0.2073 0.2103	0.2112	Ave		0.2036				4.8		30.0			
Cumene	1.4614 1.4060	1.3224 1.2815	1.3560 1.2619	1.3243 1.3222	1.3497	Ave		1.3428				4.5		30.0			
N-Propylbenzene	0.3461 0.3747	0.3341 0.3439	0.3512 0.3401	0.3453 0.3628	0.3613	Ave		0.3511				3.7		30.0			
2-Chlorotoluene	0.3366 0.3437	0.3136 0.3182	0.3319 0.3191	0.3146 0.3341	0.3282	Ave		0.3267				3.3		30.0			
4-Ethyltoluene	1.2466 1.3806	1.2010 1.2828	1.2758 1.2664	1.2451 1.3490	1.3128	Ave		1.2845				4.3		30.0			
1,3,5-Trimethylbenzene	0.6124 0.6480	0.5917 0.5884	0.6318 0.5764	0.6087 0.6284	0.6228	Ave		0.6121				3.8		30.0			
Alpha Methyl Styrene	0.3662 0.5549	0.4035 0.5283	0.4070 0.5262	0.4441 0.5705	0.5163	Ave		0.4797				15.6		30.0			
n-Decane	0.8274 0.8333	0.7524 0.7290	0.8405 0.6869	0.7696 0.6662	0.7843	Ave		0.7655				8.3		30.0			
tert-Butylbenzene	1.1853 1.2571	1.1305 1.1511	1.1987 1.1243	1.1845 1.2497	1.2234	Ave		1.1894				4.1		30.0			
1,2,4-Trimethylbenzene	1.1108 1.2166	1.0560 1.0958	1.1344 1.0759	1.1141 1.1565	1.1606	Ave		1.1245				4.3		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
sec-Butylbenzene	1.6429 1.7364	1.5639 1.5725	1.6822 1.5386	1.6145 +++++	1.6773	Ave		1.6285				4.2		30.0			
1,3-Dichlorobenzene	0.6765 0.7717	0.6327 0.7290	0.6862 0.7726	0.6299 0.9476	0.7142	Ave		0.7289				13.3		30.0			
Benzyl chloride	0.7603 0.9945	0.7638 0.9134	0.7063 0.9467	0.7379 1.0434	0.9119	Ave		0.8643				14.3		30.0			
1,4-Dichlorobenzene	0.6459 0.7505	0.6127 0.7087	0.6499 0.7428	0.6112 0.8548	0.6967	Ave		0.6970				11.3		30.0			
p-Cymene	1.2649 1.4498	1.2683 1.3103	1.3698 1.2768	1.3241 1.4000	1.3875	Ave		1.3391				4.9		30.0			
1,2,3-Trimethylbenzene	0.8804 0.9359	0.8384 0.8449	0.8913 0.8269	0.8678 0.8847	0.9011	Ave		0.8746				3.9		30.0			
Butylcyclohexane	0.9563 0.9136	0.8657 0.7994	0.9551 0.7674	0.8442 0.7643	0.8682	Ave		0.8593				8.5		30.0			
1,2-Dichlorobenzene	0.6588 0.7505	0.6277 0.7027	0.6743 0.7291	0.6320 0.8988	0.7090	Ave		0.7092				11.6		30.0			
Indane	0.9680 1.0796	0.9192 0.9844	1.0010 0.9759	0.9476 1.1123	1.0305	Ave		1.0021				6.2		30.0			
Indene	0.5695 0.7969	0.6069 0.7457	0.6656 0.7418	0.6609 0.8331	0.7472	Ave		0.7075				12.4		30.0			
n-Butylbenzene	1.1243 1.3635	1.0927 1.1916	1.2116 1.1438	1.1787 1.2151	1.2901	Ave		1.2012				7.0		30.0			
n-Undecane	0.8031 0.9273	0.7883 0.7411	0.8546 0.7319	0.8125 0.7280	0.8786	Ave		0.8072				8.6		30.0			
1,2-Dimethyl-4-Ethylbenzene	0.8739 1.0763	0.8610 0.9414	0.9433 0.9268	0.9342 1.0413	1.0185	Ave		0.9574				7.7		30.0			
1,2-Dibromo-3-Chloropropane	0.1783 0.3426	0.1906 0.3279	0.2449 0.3394	0.2412 +++++	0.3210	Ave		0.2733				24.8		30.0			
1,2,4,5-Tetramethylbenzene	1.0955 1.3016	1.0574 1.1032	1.1326 1.1193	1.1334 1.2562	1.2498	Ave		1.1610				7.4		30.0			
1,2,3,5-Tetramethylbenzene	0.6856 0.7923	0.6642 0.6718	0.7120 0.6771	0.6935 0.7564	0.7657	Ave		0.7132				6.5		30.0			
1,2,3,4-Tetramethylbenzene	0.9112 1.0789	0.8782 0.8751	0.9517 0.8984	0.9110 1.0300	1.0335	Ave		0.9520				8.0		30.0			
n-Dodecane	0.6773 0.8283	0.6538 0.4968	0.7791 0.4692	0.5943 0.6402	0.7685	Ave		0.6564				18.8		30.0			
1,2,4-Trichlorobenzene	0.2733 0.5215	0.3050 0.4401	0.3447 0.5438	0.2940 +++++	0.4490	Ave		0.3964				26.7		30.0			
Naphthalene	0.6518 1.1684	0.7006 0.9879	0.8244 1.0580	0.7401 1.2641	1.0340	Ave		0.9366				23.1		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzo(b)thiophene	+++++ 0.5837	0.3528 0.4916	0.3835 0.5651	0.3363 0.7172	0.4970	Ave		0.4909				26.7		30.0			
Hexachlorobutadiene	0.7109 0.7850	0.6191 0.5998	0.6932 0.7538	0.5881 1.0662	0.7201	Ave		0.7262				19.9		30.0			
1,2,3-Trichlorobenzene	0.3325 0.5481	0.3491 0.4290	0.4014 0.4822	0.3206 0.7020	0.4693	Ave		0.4483				27.1		30.0			
2-Methylnaphthalene	0.0751 0.1278	0.0728 0.0695	0.0974 0.0585	0.0494 0.1386	0.0927	Ave		0.0869				34.9		50.0			
1-Methylnaphthalene	0.0908 0.1245	0.0843 0.0603	0.1173 0.0464	0.0489 0.1088	0.0963	Ave		0.0864				33.5		50.0			
4-Bromofluorobenzene (Surr)	0.6829 0.7120	0.6883 0.7011	0.6876 0.7138	0.6850 0.7107	0.7027	Ave		0.6982				1.8		30.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 140-5925/2	GG20ICL1.D
Level 2	IC 140-5925/3	GG20ICL2.D
Level 3	IC 140-5925/4	GG20ICL3.D
Level 4	IC 140-5925/5	GG20ICL4.D
Level 5	IC 140-5925/6	GG20ICL5.D
Level 6	ICIS 140-5925/7	GG20ICL6.D
Level 7	IC 140-5925/8	GG20ICL7.D
Level 8	IC 140-5925/9	GG20ICL8.D
Level 9	IC 140-5925/10	GG20ICL9.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Chlorodifluoromethane	CBM	Ave	1547 75728	2694 140925	4318 294779	11690 572180	39289	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Propene	CBM	Ave	7045 277489	13468 537146	26368 1052036	57800 2080056	144801	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dichlorodifluoromethane	CBM	Ave	15069 718672	29507 1418649	55817 2837454	138848 5678698	372975	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloromethane	CBM	Ave	+++++ 82440	3507 164623	7069 320957	16220 609751	41724	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorotetrafluoroethane	CBM	Ave	8986 447434	18027 910251	34635 1838047	87116 3796193	233143	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetaldehyde	CBM	Ave	+++++ 590744	+++++ 1044207	+++++ 1925305	224034 +++++	361069	+++++ 9.99	+++++ 20.0	+++++ 40.0	2.00 +++++	5.01
Vinyl chloride	CBM	Ave	5633 260455	10357 544569	21158 1040943	50003 1982700	136120	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3-Butadiene	CBM	Ave	4806 213821	8631 447350	17029 848637	40358 1631451	110336	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butane	CBM	Ave	9863 460671	18339 961293	38711 1810606	94615 3412597	238615	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromomethane	CBM	Ave	4855 216035	9068 463986	16828 906390	41360 1776563	113027	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroethane	CBM	Ave	2695 124069	4904 273844	9907 520661	23985 1017022	65347	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethanol	CBM	Ave	+++++ 587204	+++++ 1250268	54635 2199820	124400 4595132	326275	+++++ 9.99	+++++ 20.0	0.793 40.0	2.00 80.0	5.01
Vinyl bromide	CBM	Ave	4477 207147	8496 458193	16212 883890	40581 1745819	109477	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylbutane	CBM	Ave	6876 300017	12594 689050	25061 1259754	58613 2358887	161516	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Acrolein	CBM	LinF	+++++ 63175	+++++ 135357	7321 240321	15589 468106	39576	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Trichlorofluoromethane	CBM	Ave	14004 667379	26283 1418491	52062 2725911	128002 5510367	349002	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetonitrile	CBM	Ave	+++++ 99206	4982 230175	9104 390880	21135 838856	56302	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acetone	CBM	Ave	+++++ 325482	+++++ 628006	+++++ 1105348	109538 2393008	203195	+++++ 5.99	+++++ 12.0	+++++ 24.0	1.20 48.0	3.01
Isopropyl alcohol	CBM	Ave	22197 1093196	43421 2434453	88063 4150358	220750 8606848	614867	0.118 5.99	0.235 12.0	0.476 24.0	1.20 48.0	3.01
Pentane	CBM	Ave	812 38243	1503 85847	2923 160577	7785 302707	20748	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl ether	CBM	Ave	5142 254567	10185 638944	18677 1059778	52222 2208901	145434	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethene	CBM	Ave	4471 194396	8031 443982	15826 814101	36839 1645708	102984	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Acrylonitrile	CBM	Ave	3037 124462	5429 312198	10289 518387	25197 1127607	69861	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butanol	CBM	Ave	7071 363626	13908 810529	28922 1250840	72380 3092811	203267	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichlorotrifluoroethane	CBM	Ave	8546 403883	15807 902704	31171 1669094	76349 3491297	212654	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylene Chloride	CBM	Ave	+++++ 188182	+++++ 425652	20388 777986	40414 1580832	102893	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
3-Chloropropene	CBM	Ave	6920 284484	14761 589745	20643 1127926	55298 2089875	147592	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon disulfide	CBM	Ave	12838 693483	25268 1368836	47411 2790120	123930 5484341	359745	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,2-Dichloroethene	CBM	Ave	4730 251928	9652 502964	19101 986464	47030 2030259	129717	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylpentane	CBM	Ave	13473 650811	23740 1274908	48610 2482383	120956 4941904	340158	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl tert-butyl ether	CBM	Ave	11283 663433	24556 1376698	45127 2584305	132856 5982006	363810	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1-Dichloroethane	CBM	Ave	10338 497421	19665 1001436	38225 1957183	95899 4210745	262566	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Vinyl acetate	CBM	Ave	11882 778099	26913 1604346	48319 3094950	150204 6712117	422728	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Butanone	CBM	Lin1	+++++ 119374	+++++ 229829	13460 439503	31487 1025422	67091	+++++ 2.00	+++++ 4.00	0.159 8.00	0.400 16.0	1.00
Hexane	CBM	Ave	4903 218307	9139 431943	16211 856144	42238 1774228	116017	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
Isopropyl ether	CBM	Ave	16659 980591	37385 2009900	68768 3746031	204136 8501575	537857	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,2-Dichloroethene	CBM	Ave	5187 260240	9823 530257	20039 1035396	49621 2225389	134412	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethyl acetate	CBM	Ave	10091 638678	21073 1306969	39636 2471172	124671 5797784	347773	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chloroform	CBM	Ave	11205 556042	22578 1133039	41922 2188702	108133 4742496	294470	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-butyl ethyl ether	CBM	Ave	12198 793620	29227 1642030	52496 3086444	159955 7089983	431629	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrahydrofuran	CBM	Ave	5967 332891	13044 677897	21726 1275131	67253 2965552	180124	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,1-Trichloroethane	CBM	Ave	12138 621890	24001 1251755	45947 2461478	119970 5347673	325924	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloroethane	DFBZ	Ave	6849 393288	14976 809613	28027 1583306	76599 3499068	210827	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1-Butanol	DFBZ	Ave	+++++ 126607	4445 245344	8982 406109	24496 991421	66599	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzene	DFBZ	Ave	13226 732930	28428 1484756	52001 2838374	145581 5775788	399902	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cyclohexane	DFBZ	Ave	+++++ 127761	5532 251038	9873 475270	24808 939796	67178	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Carbon tetrachloride	DFBZ	Ave	9657 624993	19965 1282659	35421 2547091	115559 5501066	268449	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylpentane	DFBZ	Ave	+++++ 177513	6909 349602	13420 686138	34150 1444072	92759	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Thiophene	DFBZ	Ave	7646 420121	16390 852768	30615 1682868	81409 3601663	222144	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tert-amyl methyl ether	DFBZ	Ave	+++++ 694426	23398 1434776	45948 2687722	141838 6223941	377757	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,2,4-Trimethylpentane	DFBZ	Ave	26865 1377507	52574 2694094	102712 5244819	266288 10887075	720267	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
n-Heptane	DFBZ	Ave	5432 274520	10522 538079	20319 1066635	51772 2221989	144372	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichloropropane	DFBZ	Ave	5710 293000	10773 595427	21105 1138252	57902 2472759	159885	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Trichloroethene	DFBZ	Ave	7224 358275	14488 727892	27731 1429915	66604 3113764	183406	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromomethane	DFBZ	Ave	6134 312941	12148 621397	22886 1214275	59418 2615273	162667	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Bromodichloromethane	DFBZ	Ave	9516 590155	20014 1214803	39458 2366858	108128 5083580	304736	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DFBZ	Ave	1628 112404	3686 222885	7108 409399	21217 908509	58194	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methyl methacrylate	DFBZ	Ave	4959 407019	12550 846160	23982 1605533	127638 3739985	221214	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Methylcyclohexane	DFBZ	Ave	+++++ 581742	22930 1149693	43751 2217029	110813 4625071	307120	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Methyl-2-pentanone (MIBK)	DFBZ	Lin1	12681 666019	27317 1323566	84756 2611294	149808 5915451	438520	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
cis-1,3-Dichloropropene	DFBZ	Ave	6929 443518	16193 910486	29520 1782292	81576 3905805	236450	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
trans-1,3-Dichloropropene	CBZd 5	Ave	5941 402450	14284 849574	25766 1677211	75230 3770631	218178	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Toluene Range	DFBZ	Ave	+++++ 2132546	+++++ 4368368	+++++ 8413253	406910 18742881	1145129	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
Toluene	CBZd 5	Ave	14065 852047	31541 1761024	57498 3384555	165721 7519659	462787	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2-Trichloroethane	CBZd 5	Ave	4261 247379	9296 515736	17015 983320	47519 2170821	133925	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylthiophene	CBZd 5	Ave	11265 700124	26322 1490032	47302 2927517	133790 6490287	389913	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
3-Methylthiophene	CBZd 5	Ave	11377 712290	24697 1454544	45467 2892255	130260 6413165	376064	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Hexanone	CBZd 5	Ave	+++++ 289691	9218 572249	17461 1126926	55647 2641649	155597	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
C8 Range	DFBZ	Ave	+++++ 3162250	+++++ 6226546	+++++ 11755297	708459 24368798	1688858	+++++ 2.00	+++++ 4.00	+++++ 8.00	0.400 16.0	1.00
n-Octane	CBZd 5	Ave	5659 299170	11283 598665	22579 1142582	56540 2413902	154948	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Dibromochloromethane	CBZd 5	Ave	7473 562305	16239 1238836	33035 2425380	98747 5451229	291449	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromoethane	CBZd 5	Ave	7114 485372	14887 1008425	31118 1992293	90434 4493523	256814	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Tetrachloroethene	CBZd 5	Ave	6171 329333	12793 674647	24811 1343401	62615 3002504	172789	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Chlorobenzene	CBZd 5	Ave	11244 666986	25284 1414763	45504 2747935	128321 6171401	359928	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2,3-Dimethylheptane	CBZd 5	Ave	19292 1000338	38621 2001984	74353 3710240	196860 7419854	531352	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Ethylbenzene	CBZd 5	Ave	18275 1136311	39636 2372349	73440 4557088	224500 10294945	624704	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Ethylthiophene	CBZd 5	Ave	14123 893182	30635 1868171	57658 3614530	168245 8300460	485035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
m&p-Xylene	CBZd 5	Ave	27916 1770385	61905 3722315	115035 6929038	342866 15838618	971074	0.0784 3.99	0.157 8.00	0.317 16.0	0.800 32.0	2.00
Bromoform	CBZd 5	Ave	+++++ 601639	12903 1416425	30723 2910893	91899 7524757	303734	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
n-Nonane	CBZd 5	Ave	10989 623372	23073 1235680	45737 2210826	120238 4321223	333247	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Styrene	CBZd 5	Ave	7721 610607	20239 1300041	36710 2471335	105426 5746685	324812	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
o-Xylene	CBZd 5	Ave	16050 942362	34999 1937561	60491 3657474	180292 8305827	516225	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,1,2,2-Tetrachloroethane	CBZd 5	Ave	9889 656848	23315 1348615	42226 2517756	127160 5541318	361387	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichloropropane	CBZd 5	Ave	2914 202045	6919 420291	13068 797241	40193 1881891	111415	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Cumene	CBZd 5	Ave	22155 1296789	48351 2704962	85804 5089295	256740 11832651	712035	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
N-Propylbenzene	CBZd 5	Ave	5247 345580	12215 725883	22225 1371697	66953 3246664	190613	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Chlorotoluene	CBZd 5	Ave	5103 317015	11465 671656	21002 1286773	60992 2989697	173151	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
4-Ethyltoluene	CBZd 5	Ave	18898 1273340	43914 2707804	80730 5107728	241403 12071934	692578	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,3,5-Trimethylbenzene	CBZd 5	Ave	9284 597652	21634 1241970	39980 2324615	118008 5623085	328580	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Alpha Methyl Styrene	CBZd 5	Ave	5552 511817	14755 1115202	25754 2122184	86107 5105195	272377	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
n-Decane	CBZd 5	Ave	12543 768564	27512 1538826	53182 2770165	149202 5961718	413745	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
tert-Butylbenzene	CBZd 5	Ave	17969 1159460	41335 2429755	75848 4534578	229646 11183849	645407	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trimethylbenzene	CBZd 5	Ave	16840 1122054	38609 2312993	71780 4339254	216004 10349390	612274	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
sec-Butylbenzene	CBZd 5	Ave	24906 1601492	57180 3319123	106444 6205351	313009 +++++	884851	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,3-Dichlorobenzene	CBZd 5	Ave	10256 711708	23134 1538740	43420 3115909	122127 8479970	376750	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzyl chloride	CBZd 5	Ave	11526 917217	27926 1927976	44693 3818134	143068 9337492	481091	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,4-Dichlorobenzene	CBZd 5	Ave	9791 692146	22401 1495925	41125 2995986	118493 7649318	367560	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
p-Cymene	CBZd 5	Ave	19176 1337200	46373 2765837	86672 5149340	256709 12528309	731974	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (PPB V/V)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,2,3-Trimethylbenzene	CBZd 5	Ave	13347 863187	30656 1783307	56396 3334853	168236 7917381	475356	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Butylcyclohexane	CBZd 5	Ave	14497 842624	31653 1687274	60434 3094954	163667 6839303	458033	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dichlorobenzene	CBZd 5	Ave	9987 692181	22949 1483244	42668 2940684	122531 8043047	374034	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indane	CBZd 5	Ave	14675 995741	33608 2077957	63339 3935778	183718 9954063	543635	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Indene	CBZd 5	Ave	8633 734983	22189 1574119	42119 2991580	128140 7455713	394183	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
n-Butylbenzene	CBZd 5	Ave	17044 1257550	39952 2515175	76663 4612993	228522 10873634	680564	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
n-Undecane	CBZd 5	Ave	12174 855225	28821 1564414	54075 2951690	157514 6514704	463504	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dimethyl-4-Ethylbenzene	CBZd 5	Ave	13248 992689	31480 1987013	59691 3737734	181126 9318425	537320	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2-Dibromo-3-Chloropropane	CBZd 5	Ave	2703 315944	6970 692179	15497 1368982	46771 +++++	169349	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
1,2,4,5-Tetramethylbenzene	CBZd 5	Ave	16608 1200509	38662 2328684	71665 4514417	219745 11241452	659341	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,5-Tetramethylbenzene	CBZd 5	Ave	10394 730752	24284 1418105	45051 2730948	134443 6768797	403928	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3,4-Tetramethylbenzene	CBZd 5	Ave	13813 995050	32110 1847176	60221 3623503	176627 9217215	545244	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
n-Dodecane	CBZd 5	Ave	10268 763908	23904 1048634	49301 1892159	115217 5728932	405424	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,4-Trichlorobenzene	CBZd 5	Ave	4143 480973	11153 928916	21812 2193038	56997 +++++	236858	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 +++++	1.00
Naphthalene	CBZd 5	Ave	9881 1077641	25617 2085327	52166 4267074	143483 11312702	545497	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Benzo(b)thiophene	CBZd 5	Ave	+++++ 538371	12900 1037580	24268 2279072	65199 6418518	262210	+++++ 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
Hexachlorobutadiene	CBZd 5	Ave	10777 724015	22637 1266018	43865 3039984	114011 9541683	379882	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
1,2,3-Trichlorobenzene	CBZd 5	Ave	5041 505500	12765 905583	25402 1944963	62151 6282415	247563	0.0392 2.00	0.0784 4.00	0.159 8.00	0.400 16.0	1.00
2-Methylnaphthalene	CBZd 5	Ave	3556 368362	8318 458682	19263 737024	29920 3876064	152873	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
1-Methylnaphthalene	CBZd 5	Ave	4302 358836	9634 397822	23188 584180	29603 3041176	158788	0.122 6.24	0.245 12.5	0.496 25.0	1.25 50.0	3.13
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	1056433 1315155	1284073 1479778	1096848 1439373	1328113 1590043	1480535	4.00 4.00	4.00 4.00	4.00 4.00	4.00 4.00	4.00

FORM VI
AIR - GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1 Analy Batch No.: 5925

SDG No.:

Instrument ID: MG GC Column: RTX-5 ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 07/20/2016 14:35 Calibration End Date: 07/20/2016 20:22 Calibration ID: 721

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
LinF = Linear ISTD forced zero

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Lab Sample ID: CCVIS 140-6248/2 Calibration Date: 08/15/2016 10:51

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVF15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Chlorodifluoromethane	Ave	0.3324	0.4148		2.50	2.00	24.8	30.0
Propene	Ave	1.424	1.318		1.85	2.00	-7.4	30.0
Dichlorodifluoromethane	Ave	3.440	3.918		2.28	2.00	13.9	30.0
Chloromethane	Ave	0.3895	0.4079		2.09	2.00	4.7	30.0
1,2-Dichlorotetrafluoroethane	Ave	2.158	2.473		2.29	2.00	14.6	30.0
Acetaldehyde	Ave	0.6438	0.4062		6.31	10.0	-36.9*	30.0
Vinyl chloride	Ave	1.259	1.360		2.16	2.00	8.1	30.0
1,3-Butadiene	Ave	1.034	1.059		2.05	2.00	2.4	30.0
Butane	Ave	2.237	2.420		2.16	2.00	8.2	30.0
Bromomethane	Ave	1.067	1.150		2.16	2.00	7.8	30.0
Chloroethane	Ave	0.6102	0.6580		2.16	2.00	7.8	30.0
Ethanol	Ave	0.5737	0.5187		9.04	10.0	-9.6	30.0
Vinyl bromide	Ave	1.027	1.207		2.35	2.00	17.5	30.0
2-Methylbutane	Ave	1.510	1.702		2.25	2.00	12.7	30.0
Acrolein	LinF		0.3407		2.63	2.00	31.7*	30.0
Trichlorofluoromethane	Ave	3.232	3.870		2.39	2.00	19.7	30.0
Acetonitrile	Ave	0.5136	0.4786		1.86	2.00	-6.8	30.0
Acetone	Ave	0.5566	0.4272		4.60	6.00	-23.3	30.0
Isopropyl alcohol	Ave	1.777	1.477		4.99	6.00	-16.9	30.0
Pentane	Ave	0.1879	0.2179		2.32	2.00	16.0	30.0
Ethyl ether	Ave	1.275	1.348		2.11	2.00	5.7	30.0
1,1-Dichloroethene	Ave	0.9757	1.069		2.19	2.00	9.6	30.0
Acrylonitrile	Ave	0.6542	0.6660		2.04	2.00	1.8	30.0
tert-Butanol	Ave	1.747	1.867		2.14	2.00	6.8	30.0
1,1,2-Trichlorotrifluoroethane	Ave	1.975	2.279		2.31	2.00	15.4	30.0
Methylene Chloride	Ave	0.9736	0.9546		1.96	2.00	-1.9	30.0
3-Chloropropene	Ave	1.421	1.487		2.09	2.00	4.6	30.0
Carbon disulfide	Ave	3.158	3.241		2.05	2.00	2.6	30.0
trans-1,2-Dichloroethene	Ave	1.174	1.202		2.05	2.00	2.4	30.0
2-Methylpentane	Ave	3.019	3.361		2.23	2.00	11.3	30.0
Methyl tert-butyl ether	Ave	3.103	2.906		1.87	2.00	-6.3	30.0
1,1-Dichloroethane	Ave	2.389	2.404		2.01	2.00	0.6	30.0
Vinyl acetate	Ave	3.508	3.426		1.95	2.00	-2.4	30.0
2-Butanone	Lin1		0.4549		1.60	2.00	-19.8	30.0
Hexane	Ave	1.057	1.051		1.99	2.00	-0.6	30.0
Isopropyl ether	Ave	4.600	4.170		1.81	2.00	-9.3	30.0
cis-1,2-Dichloroethene	Ave	1.237	1.291		2.09	2.00	4.4	30.0
Ethyl acetate	Ave	2.886	2.574		1.78	2.00	-10.8	30.0
Chloroform	Ave	2.672	2.834		2.12	2.00	6.1	30.0
Tert-butyl ethyl ether	Ave	3.653	3.450		1.89	2.00	-5.6	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Lab Sample ID: CCVIS 140-6248/2 Calibration Date: 08/15/2016 10:51

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVF15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Tetrahydrofuran	Ave	1.560	1.423		1.82	2.00	-8.8	30.0
1,1,1-Trichloroethane	Ave	2.947	3.243		2.20	2.00	10.0	30.0
1,2-Dichloroethane	Ave	0.3971	0.4496		2.26	2.00	13.2	30.0
1-Butanol	Ave	0.1182	0.1220		2.06	2.00	3.1	30.0
Benzene	Ave	0.7345	0.7935		2.16	2.00	8.0	30.0
Cyclohexane	Ave	0.1257	0.1406		2.24	2.00	11.9	30.0
Carbon tetrachloride	Ave	0.5786	0.7832		2.71	2.00	35.4*	30.0
2,3-Dimethylpentane	Ave	0.1739	0.1788		2.06	2.00	2.8	30.0
Thiophene	Ave	0.4257	0.4703		2.21	2.00	10.5	30.0
Tert-amyl methyl ether	Ave	0.6756	0.6899		2.04	2.00	2.1	30.0
2,2,4-Trimethylpentane	Ave	1.384	1.534		2.22	2.00	10.9	30.0
n-Heptane	Ave	0.2770	0.2988		2.16	2.00	7.9	30.0
1,2-Dichloropropane	Ave	0.2975	0.3010		2.02	2.00	1.2	30.0
Trichloroethene	Ave	0.3701	0.4353		2.35	2.00	17.6	30.0
Dibromomethane	Ave	0.3165	0.3604		2.28	2.00	13.9	30.0
Bromodichloromethane	Ave	0.5705	0.6807		2.39	2.00	19.3	30.0
1,4-Dioxane	Ave	0.1044	0.0979		1.88	2.00	-6.2	30.0
Methyl methacrylate	Ave	0.4061	0.3961		1.95	2.00	-2.5	30.0
Methylcyclohexane	Ave	0.5682	0.5191		1.83	2.00	-8.6	30.0
4-Methyl-2-pentanone (MIBK)	Lin1		0.6109		1.89	2.00	-5.6	30.0
cis-1,3-Dichloropropene	Ave	0.4329	0.4865		2.25	2.00	12.4	30.0
trans-1,3-Dichloropropene	Ave	0.4075	0.4333		2.13	2.00	6.3	30.0
Toluene	Ave	0.8743	0.8828		2.02	2.00	1.0	30.0
1,1,2-Trichloroethane	Ave	0.2558	0.2515		1.97	2.00	-1.7	30.0
2-Methylthiophene	Ave	0.7284	0.7581		2.08	2.00	4.1	30.0
3-Methylthiophene	Ave	0.7138	0.7963		2.23	2.00	11.6	30.0
2-Hexanone	Ave	0.2837	0.2420		1.71	2.00	-14.7	30.0
n-Octane	Ave	0.3095	0.3182		2.06	2.00	2.8	30.0
Dibromochloromethane	Ave	0.5476	0.6287		2.30	2.00	14.8	30.0
1,2-Dibromoethane	Ave	0.4802	0.5094		2.12	2.00	6.1	30.0
Tetrachloroethene	Ave	0.3494	0.3824		2.19	2.00	9.4	30.0
Chlorobenzene	Ave	0.6957	0.7289		2.10	2.00	4.8	30.0
2,3-Dimethylheptane	Ave	1.034	1.092		2.11	2.00	5.6	30.0
Ethylbenzene	Ave	1.159	1.196		2.06	2.00	3.2	30.0
2-Ethylthiophene	Ave	0.9050	0.9118		2.01	2.00	0.7	30.0
m&p-Xylene	Ave	0.8963	0.9416		4.20	4.00	5.1	30.0
Bromoform	Ave	0.5968	0.6471		2.17	2.00	8.4	30.0
n-Nonane	Ave	0.6248	0.6674		2.14	2.00	6.8	30.0
Styrene	Ave	0.5928	0.6443		2.17	2.00	8.7	30.0
o-Xylene	Ave	0.9617	0.9634		2.00	2.00	0.2	30.0
1,1,2,2-Tetrachloroethane	Ave	0.6548	0.6613		2.02	2.00	1.0	30.0

FORM VII
AIR - GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Lab Sample ID: CCVIS 140-6248/2 Calibration Date: 08/15/2016 10:51

Instrument ID: MG Calib Start Date: 07/20/2016 14:35

GC Column: RTX-5 ID: 0.32(mm) Calib End Date: 07/20/2016 20:22

Lab File ID: GCCVF15.D Conc. Units: ppb v/v Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichloropropane	Ave	0.2036	0.2155		2.12	2.00	5.8	30.0
Cumene	Ave	1.343	1.404		2.09	2.00	4.5	30.0
N-Propylbenzene	Ave	0.3511	0.3714		2.12	2.00	5.8	30.0
2-Chlorotoluene	Ave	0.3267	0.3525		2.16	2.00	7.9	30.0
4-Ethyltoluene	Ave	1.284	1.291		2.01	2.00	0.5	30.0
1,3,5-Trimethylbenzene	Ave	0.6121	0.6240		2.04	2.00	1.9	30.0
Alpha Methyl Styrene	Ave	0.4797	0.5187		2.16	2.00	8.1	30.0
n-Decane	Ave	0.7655	0.8123		2.12	2.00	6.1	30.0
tert-Butylbenzene	Ave	1.189	1.250		2.10	2.00	5.1	30.0
1,2,4-Trimethylbenzene	Ave	1.125	1.174		2.09	2.00	4.4	30.0
sec-Butylbenzene	Ave	1.629	1.690		2.08	2.00	3.8	30.0
1,3-Dichlorobenzene	Ave	0.7289	0.7877		2.16	2.00	8.1	30.0
Benzyl chloride	Ave	0.8643	0.9678		2.24	2.00	12.0	30.0
1,4-Dichlorobenzene	Ave	0.6970	0.7745		2.22	2.00	11.1	30.0
p-Cymene	Ave	1.339	1.384		2.07	2.00	3.4	30.0
1,2,3-Trimethylbenzene	Ave	0.8746	0.9517		2.18	2.00	8.8	30.0
Butylcyclohexane	Ave	0.8593	0.8440		1.96	2.00	-1.8	30.0
1,2-Dichlorobenzene	Ave	0.7092	0.7662		2.16	2.00	8.0	30.0
Indane	Ave	1.002	0.9545		1.91	2.00	-4.7	30.0
Indene	Ave	0.7075	0.9203		2.60	2.00	30.1*	30.0
n-Butylbenzene	Ave	1.201	1.287		2.14	2.00	7.1	30.0
n-Undecane	Ave	0.8072	0.8838		2.19	2.00	9.5	30.0
1,2-Dimethyl-4-Ethylbenzene	Ave	0.9574	1.194		2.50	2.00	24.8	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.2733	0.2062		1.51	2.00	-24.6	30.0
1,2,4,5-Tetramethylbenzene	Ave	1.161	1.232		2.12	2.00	6.1	30.0
1,2,3,5-Tetramethylbenzene	Ave	0.7132	0.7765		2.18	2.00	8.9	30.0
1,2,3,4-Tetramethylbenzene	Ave	0.9520	0.9723		2.04	2.00	2.1	30.0
n-Dodecane	Ave	0.6564	0.7786		2.37	2.00	18.6	30.0
1,2,4-Trichlorobenzene	Ave	0.3964	0.5293		2.67	2.00	33.5*	30.0
Naphthalene	Ave	0.9366	1.085		2.32	2.00	15.8	30.0
Benzo(b)thiophene	Ave	0.4909	0.5219		2.13	2.00	6.3	30.0
Hexachlorobutadiene	Ave	0.7262	0.8024		2.21	2.00	10.5	30.0
1,2,3-Trichlorobenzene	Ave	0.4483	0.5311		2.37	2.00	18.5	30.0
2-Methylnaphthalene	Ave	0.0869	0.1178		8.48	6.25	35.6	50.0
1-Methylnaphthalene	Ave	0.0864	0.1093		7.91	6.25	26.5	50.0
4-Bromofluorobenzene (Surr)	Ave	0.6982	0.7058		4.04	4.00	1.1	30.0

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Instrument ID: MG Start Date: 07/20/2016 14:02

Analysis Batch Number: 5925 End Date: 07/20/2016 21:45

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-5925/1		07/20/2016 14:02	1	GBFBG20.D	RTX-5 0.32(mm)
IC 140-5925/2		07/20/2016 14:35	1	GG20ICL1.D	RTX-5 0.32(mm)
IC 140-5925/3		07/20/2016 15:19	1	GG20ICL2.D	RTX-5 0.32(mm)
IC 140-5925/4		07/20/2016 16:03	1	GG20ICL3.D	RTX-5 0.32(mm)
IC 140-5925/5		07/20/2016 16:46	1	GG20ICL4.D	RTX-5 0.32(mm)
IC 140-5925/6		07/20/2016 17:27	1	GG20ICL5.D	RTX-5 0.32(mm)
ICIS 140-5925/7		07/20/2016 18:08	1	GG20ICL6.D	RTX-5 0.32(mm)
IC 140-5925/8		07/20/2016 18:53	1	GG20ICL7.D	RTX-5 0.32(mm)
IC 140-5925/9		07/20/2016 19:37	1	GG20ICL8.D	RTX-5 0.32(mm)
IC 140-5925/10		07/20/2016 20:22	1	GG20ICL9.D	RTX-5 0.32(mm)
ICV 140-5925/12		07/20/2016 21:45	1		RTX-5 0.32(mm)

AIR - GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Knoxville Job No.: 140-5602-1

SDG No.:

Instrument ID: MG Start Date: 08/15/2016 10:19

Analysis Batch Number: 6248 End Date: 08/16/2016 03:29

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 140-6248/1		08/15/2016 10:19	1	GBFBF15.D	RTX-5 0.32(mm)
CCVIS 140-6248/2		08/15/2016 10:51	1	GCCVF15.D	RTX-5 0.32(mm)
ZZZZZ		08/15/2016 10:51	1		RTX-5 0.32(mm)
140-5602-1		08/15/2016 12:19	1	LOT5602.D	RTX-5 0.32(mm)
ZZZZZ		08/15/2016 15:04	1		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 15:47	1		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 16:28	602.4		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 17:09	13.68		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 17:49	1542.86		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 18:34	9.83		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 19:16	11.3		RTX-5 0.32(mm)
ZZZZZ		08/15/2016 19:58	11.72		RTX-5 0.32(mm)
ZZZZZ		08/16/2016 02:02	1		RTX-5 0.32(mm)
ZZZZZ		08/16/2016 02:46	1		RTX-5 0.32(mm)
ZZZZZ		08/16/2016 03:29	1.56		RTX-5 0.32(mm)

Shipping and Receiving Documents

TAL Knoxville
5815 Middlebrook Pike
Knoxville, TN 37921
phone 865-291-3000 fax 865-584-4315

180326

Canister Samples Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

BALTIMORE

TestAmerica assumes no liability with respect to the collection and shipment of these samples.

Client Contact Information
Company: Tetra Tech
Address: 51 Franklin St. Suite 400
City/State/Zip Annapolis, MD 21403
Phone: 410-990-4607
FAX:
Project Name: LMMRC-SSDS
Site/location: Middle River, MD
PO #

Project Manager: Peter Rich
Phone: 410-990-4607
Site Contact: Dawn Monico
TAL Contact: Terry Walker Wasmund

Sampled By: Dawn Monico

1 of 1 COCs

140-5782 Chain of Custody

Analysis Turnaround Time
Standard (Specify) X
Rush (Specify)

Sample Identification	Sample Date(s)	Time Start	Time Stop	Canister Vacuum in Field, "Hg (Start)	Canister Vacuum in Field, 'Hg (Stop)	Flow Controller ID	Canister ID	TO-15	TO-14A	EPA 3C	EPA 25C	ASTM D-1946	Other (Please specify in notes section)	Sample Type	Indoor Air	Ambient Air	Soil Gas	Landfill Gas	Other (Please specify in notes section)
A-INFLUENT	9/7/16	1000	N/A	-28	0	71	11127	X											
A-MID GAC	↓	0958	↓	-30	0	28	11493	X											
A-EFFLUENT	↓	0956	↓	-30	0	195	10796	X											
C-INFLUENT	↓	1024	↓	-29	0	74	10501	X											
C-MID GAC	↓	1022	↓	-29.5	0	99	09646	X											
C-EFFLUENT	↓	1020	↓	-30	-1	139	10965	X											

Sampled by :

Temperature (Fahrenheit)

	Interior	Ambient	
Start			
Stop			

Pressure (inches of Hg)

	Interior	Ambient	
Start			
Stop			

Received @ ambient, 1 cooler
Fedex SQ, trK# 7771 7472 3108
Custody seal intact, KW 9/8/16
ambient temp is 20°C

Special Instructions/QC Requirements & Comments:

Canisters Shipped by: [signature]	Date/Time: 9/7/16 @ 1630	Canisters Received by:
Samples Relinquished by:	Date/Time:	Received by: [signature] TestAmerica
Relinquished by: [signature]	Date/Time: 9-7-2016/1513	Received by: [signature] 9/8/16 0925

6 cans
6 KR

09/16/2016

Loc: 140
5782

TESTAMERICA KNOXVILLE SAMPLE RECEIPT/CONDITION UPON RECEIPT ANOMALY CHECKLIST

Log In Number:

Review Items	Yes	No	NA	If No, what was the problem?
1. Are the shipping containers intact?	/			☐ **Containers, Broken**
2. Were ambient air containers received intact?			/	☑ Checked in lab
3. The coolers/containers custody seal if present, is it intact?	/			☐ Yes ☐ NA
4. Is the cooler temperature within limits? (> freezing temp. of water to 6 °C, VOST: 10°C) Thermometer ID :_____ Correction factor: _____			/	☐ **Cooler Out of Temp, Client Contacted, Proceed/Cancel** ☐ **Cooler Out of Temp, Same Day Receipt**
5. Were all of the sample containers received intact?	/			☐ **Containers, Broken**
6. Were samples received in appropriate containers?	/			☐ **Containers, Improper; Client Contacted; Proceed/Cancel**
7. Do sample container labels match COC? (IDs, Dates, Times)	/			☐ **COC & Samples Do Not Match** ☐ **COC Incorrect/Incomplete** ☐ **COC Not Received**
8. Were all of the samples listed on the COC received?	/			☐ **Sample Received, Not on COC** ☐ **Sample on COC, Not Received**
9. Is the date/time of sample collection noted?	/			☐ **COC; No Date/Time; Client Contacted**
10. Was the sampler identified on the COC?	/			☐ **Sampler Not Listed on COC**
11. Is the client and project name/# identified?	/			☐ **COC Incorrect/Incomplete**
12. Are tests/parameters listed for each sample?	/			☐ **COC No tests on COC**
13. Is the matrix of the samples noted?	/			☐ **COC Incorrect/Incomplete**
14. Was COC relinquished? (Signed/Dated/Timed)	/			☐ **COC Incorrect/Incomplete**
15. Were samples received within holding time?	/			☐ **Holding Time - Receipt**
16. Were samples received with correct chemical preservative (excluding Encore)?			/	☐ **pH Adjusted, pH Included (See box 16A)** ☐ **Incorrect Preservative**
17. Were VOA samples received without headspace?			/	☐ **Headspace (VOA only)**
18. Did you check for residual chlorine, if necessary? (e.g. 1613B, 1668) Chlorine test strip lot number:_____			/	☐ **Residual Chlorine**
19. For 1613B water samples is pH<9?			/	☐ If no, lab will adjust
20. For rad samples was sample activity info. Provided?			/	☐ Project missing info

Comments/Actions Taken

Labeling Verified by: **Date:**

pH test strip lot number:

	Box 16A: pH Preservation	Box 18A: Residual Chlorine
Preservative:		
Lot Number:		
Exp Date:		
Analyst:		
Date:		
Time:		

Project #: 14002921 PM Instructions: _____

Sample Receiving Associate: [signature] Date: 9/8/16

QA026R30.doc, 080916

09/16/2016

140-5782

TestAmerica Knoxville - Air Canister Initial Pressure Check

Gauge ID: G5
Date: 9/8/2016

Analyst	Sample ID	Asset #	Cleaning Job	Cert	Size (L)	Pressure @ Receipt (-in Hg or +psig)	Time	Comments
AFB	140-5782-a-1	11127	5602	B	1	0	1750	
AFB	140-5782-a-2	11493	5602	B	1	0	1751	
AFB	140-5782-a-3	10796	5602	B	1	0	1752	
AFB	140-5782-a-4	10501	5602	B	1	0	1753	
AFB	140-5782-a-5	09646	5602	B	1	0	1754	
AFB	140-5782-a-6	10965	5602	B	1	0	1755	

FIGURES

TABLES

APPENDIX A— BIWEEKLY AND QUARTERLY SYSTEM CHECK FORMS

APPENDIX B— ANALYTICAL REPORTS FOR SYSTEM SAMPLES